Lecture 3: *From the Critique of the Iconicity Critique to Pictorality*

In order to show why Eco, Goodman, and others were wrong in their classical critique of iconicity, we will pursue a close reading of Peirce, but we will interpret his text in accordance with more recent findings in cognitive and perceptual psychology. We will arrive at the conclusion that there are two very different kinds of iconicity, which we will call primary and secondary iconicity. Even so, pictorial iconicity has its peculiarities, which we will also try to elucidate. We will also consider to what extent the linguistic model may still be helpful, and in which respects it is misleading.

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So far, it has been argued that there is a place (although hardly prepared before-hand), as well as some precedents, for such a speciality as pictorial semiotics (first lecture), and that pictures are signs, which is not true of all meanings (second lecture). Notably, signs were shown to be meanings which are differentiated from the point of view of the subject, and which connect something that is directly present and non-thematic with something else that is only indirectly present and thematic. This is a definition, which, by combining criteria formulated by Piaget and Husserl, goes beyond both Saussure and Peirce. It remains to be shown, however, that pictures are iconic signs, but also that they are a peculiar kind of iconic signs.

Unlike most others domains of study nowadays integrated into semiotics, the semiotics of pictures has hardly any precedents outside of semiotics proper: if we take pictorial semiotics to be involved with the study of pictorial signs per se, of some general property, more peculiar to pictures than iconicity, which may be termed pictorality, or picturehood, and if we suppose it to apply empirical methods to this study, then it certainly is a novel endeavour, far more so than linguistics, more, in fact, than literary semiotics, film semiotics and even the semiotics of architecture, all of which have known some more or less elaborate theoretical approaches before the coming of semiotics. This is so because the only other domain ever devoted to pictures, art history, always has been, and mostly continues to be, fascinated by the singularity of the individual work of art, which explains (without necessary justifying) the fact that it tends to shun all kinds of conceptual analysis.

Indeed, pictorial semiotics is something of a newcomer within semiotics itself, for although Peirce gave us one of our most important theoretical tools for understanding the picture sign, i.e. the concept of iconicity, he himself hardly took any interest in pictures, and even the sub-category which he introduced to take care of them, the image, on closer scrutiny does not appear to adequately characterise pictorial iconicity. As for the other founding-father of semiotics, Saussure, he repeatedly insisted on linearity being one of the peculiar properties of verbal language, and at least once he opposed this feature to the multi-dimensionality found in pictures (cf. Saussure 1974:39); but though he was right in pointing to the differences in the ways in which signs are organised in verbal and pictorial "texts", multi-dimensionality is not specific to pictures, and, on one

interpretation, it may even be found in verbal language.[1]

The question concerning the *specificity* of the picture sign, as compared to other signs, and as related to its sub-types, in contrast, has been a central issue of general semiotics since it rebirth in the 1960ies. It *does* involve the Peircean notion of iconicity, less as it has been safeguarded by the true Peirceans, than as it emerges from half a century of criticism, by philosophers such as Bierman and Goodman, as well as semioticians such as Eco and Lindekens; and then rehabilitated, by, among others, Groupe μ, and the present author; and it also concerns the Saussurean idea of the way meanings may be organised, again as it was put to confused, and confusing, uses by Eco and others, and then completely reconceived in the light of the findings of perceptual psychology, in particular by the present author.

3.1. Reading Peirce ecologically: From iconicity to iconic signs

The point of departure of the present approach to pictorial semiotics, variously known as "the Swedish school", "the ecological school", and "the phenomenological school" (cf. Saint-Martin 1994; Carani 1999; Nordström 2000), is neither Peirce nor Saussure, but the phenomenology of Edmund Husserl, as developed by, among others, Aron Gurwitsch, Alfred Schütz, and Maurice-Merleau-Ponty.[2] In particular, this means that I will take the *Lifeworld,* also known as the *world-taken-for-granted,* the *common sense world,* or, in the adaptation of the psychologist James Gibson, as *ecological physics,* as the foundation for all possible meaning. It also imposes particular requirements on us to explicate basic notions such as those of sign, iconicity, and pictorality. In many ways, ecological semiotics is closer to, and more compatible with, the basic tenets of Peirceans semiotics than with the Saussurean brand, in particular as the latter was transposed outside language by French structuralism. In this framework, many of the concepts of Saussure-inspired semiotics retain their import, but only on a secondary level. However, one basic notion of Saussurean linguistics, hardly taken into account by French structuralism (but certainly by the Prague school), the notion of pertinence or *relevance,* will turn out to be a fundamental ingredient in our interpretation of iconicity. It is in fact relevance, together with the notion of the Lifeworld, which will turn out to

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1   An argument could however be made for Lessing being the real pioneer of pictorial semiotics. Cf. Wellbery 1984; Sonesson 1988:105ff. amd Lecture 4.

2   For those in the know (others may ignore this remark), I would like to add that I am not interested in the transcendental and constitutive aspects of phenomenology, but only in what Husserl himself calls "phenomenological psychology".

save the notion of iconicity from the criticism directed at it from outside orthodox Peircean quarters.

Ecological semiotics is, unlike Husserlean phenomenology, but similarly to Gibson's study of ecological physics, an empirical science. If, along with Gibson (1978:228), we describe pictorial semiotics as "the science of depiction", where the latter is considered to be a peculiar mode of conveying information, its purview will involve, at the very least, a demonstration of the semiotic character of pictures, a study of the peculiarities which differentiate pictorial meanings from other kinds of signification (particularly from other visual meanings, and/or other meanings based on iconicity, or intrinsic motivation), and an assessment of the ways (from some or other point of view) in which the several species of pictorial meaning may differ without ceasing to inhere in the category of picture. In the following, we will have a look, first, at the notion of iconicity, not only to show that it exists, and is involved in pictorial meaning, but that there are at least two kinds of iconicity, and that pictures must be attributed to the first sub-category. The paradoxical nature of the kind of iconicity ascribed to picture, *primary iconicity,* forces us to reconsider the picture sign as such, taking our inspiration in a very direct way from Husserlean writings. Fortunately, the groundwork for this analysis was laid already in the second lecture. We will then see how the idea of a visual syntax was exaggerated into the idea of a double pictorial articulation, and, at the other extreme, was dissolved into the conception of density and repleteness; and we will introduce *resemanticization* as a peculiar feature of pictorial, as against other kinds of visual and iconic, meaning. The questions of what distinguishes different picture categories, such as photographs and drawings, advertisements and caricatures, or picture post cards and posters, will be taken up in a later lecture.

In the following, I will first delineate a particular interpretation of Peirce's division of signs, and then proceed to elucidate the ways in which the criticism levelled against iconicity, as well as against the common sense notion of picture, which it includes, can be eluded. This argument will critically involve a very explicit notion of sign, which is absent from Peirce's work, but is suggested by Husserlean phenomenology in combination with the psychology of Piaget; and it will also require us to introduce a concept of relevance, which is foreshadowed, rather ambiguously, in the musings about the "ground" which Peirce sometimes entertained, but is more clearly suggested by the Saussurean notion of pertinence. I will then indicate one further way in which Peirce's conception of iconicity has to be amended in order to account for the kind of iconicity (which I will call *primary*

iconicity) instantiated in, among other things, picture signs, and I will go on to approach some even more peculiar traits of pictorality, which is were we will make contact with the Saussurean tradition in semiotics, as well as, more intimately, with Husserl's seminal work on pictorial consciousness.

During the second half of the last century, the claim that there can be no iconic signs came from two rather different quarters. Philosophers like Bierman and Goodman, only the first of which explicitly refers to Peirce, started out from logical considerations, together with a set of proto-ethnological anecdotes, according to which so-called primitive tribes were incapable of interpreting pictures; out-right semioticians such as Eco and Lindekens, on the other hand, wanted to show that pictures conformed to the ideal of the perfect sign, as announced by Saussure, by being as arbitrary or conventional as the sign studied by the "most advanced" of the semiotic sciences, general linguistics. Since then, the question has largely gone out of fashion, but the results of those disquisitions have, rather undeservedly, been taken for granted by later researchers. In my own work on iconicity, which dates from the period of low tide in the debate (Sonesson 1989a, 1992a, b, c, 1993a, b 1994a, b, 1995a, 1996d, 1997b, 1998b, 2000a; in press a), I have quoted evidence from psychology and ethnol-

ogy, which tend to show that these conclusions are unfeasible. More importantly, however, I have also suggested that the arguments against iconicity were mistaken, mainly because they construed language and pictures, as well as the world of our experience, i.e. the Lifeworld, in a fashion which is incompatible with our empirical knowledge, i.e. with that which we have good reasons to believe to be true about the world.

Rather than making iconic signs semiotically uninteresting, contrary to what is suggested by these critiques of iconicity, it is only by the recognition of the reality of iconic motivation that iconicity is opened up as a domain for semiotics. This is so at least for three reasons: first of all, since an iconic sign is indeed similar to what it represents, it may be used to manipulate and transform in numerous ways the ideas we hold about its referent, which is what gives rise to *visual rhetoric* (cf. Sonesson 1990; 1994b; 1996a, b, c; 1997a). In the second place, a little investigation will show us that iconicity may inhere in signs in several different ways, the main two of which we will call *primary* and *secondary iconic signs*, but the sub-species of which may be very numerous (cf. Sonesson 1993a; 1998a, b, in press a). Finally, and perhaps most importantly, iconic signs presuppose an uneasy equilibrium between being the same and being different which may explain that, to all appearance, pictorality

(and perhaps other iconic representations) is a late-comer in the process by means of which human beings distinguish themselves from other animals, and which may account for the unique feats of the human race, just as much as verbal language (cf. Donald 1999; Sonesson 2003a; in press d, e). Nevertheless, it will be useful to start out by revisiting the old iconicity debate, not, however, before having returned to the original definition of the concept made by Charles Sanders Peirce.

The night of all iconicities

The iconicity debate has not been immune to some simple confusions. It should be clear that, in semiotics, the term "icon" is not normally to be taken in its most common religious and art historical acception, to refer to a pictorial representation of persons or events derived from the sacred history of Christianity, which is normally used as an aid to devotion. In fact, icons in the religious sense are not particularly good instances of icons in the semiotical sense, for they are, as Uspenskij (1976) has shown, subject to several conventions determining the kind of perspective which may be employed, and the kind of things and persons which may be represented in different parts of the picture. It seems to be less clear that the term is not to be used to refer to all things visible, or to everything whose elements are graphically disposed, as in the jargon

of computer programming, or in cognitive psychology, where "iconic" and "verbal codes" are opposed to each other (e.g. Kolers 1977). Contrary to the latter usage, iconic signs, in the sense of semiotics, appear in any sense modality, e.g. in audition, notably in verbal language (not only onomatopoetic words, but also in the form of such regularities and symmetries which Jakobson 1965a,b terms "the poetry of grammar") and music (cf. Osmond-Smith 1972).

Nor does iconicity in the Peircean sense have anything specifically to do with what in art history, following Panofsky, is called "iconography", which is potentially relevant to all pictures, but precisely in their non-iconic sense, as guided by an (explicit) reading program.[3] In a parallel fashion, not all visual signs are iconic in the semiotic sense; indeed, many icons found in computer programs, as well as a great amount of visual signs appearing in public space, are actually aniconic visual signs.[4] Finally, the sense in which iconicity is discussed here is quite distinct from that appearing in the

3   More will be said about iconography and iconology in Lectures 4 and 5, when discussing the parallel to Barthes often noted (which is really not so straight-forward).

4   Many semioticians also are guilty of such a confusion of these two quite different senses attributed to the term 'iconic': thus still in Eco 1999:100, in spite of admitting his error in 1998: 10; 1999:340. And all through Vaillant & Castaing in press.

expression "cultural icon" – where it seems to refer to just about anything (no matter the sign character or the sense modality) which occupies a central position in a (popular sub)culture.

Sometimes, criticism levelled against Peirce's conception of iconicity rest on obvious misinterpretations: for instance, iconicity is not limited to the rendering of the appearances of the ordinary perceptual Lifeworld, as many theories would have it (as in many passages by Eco, as well as in the definitions used by the Greimas school and Groupe μ), but includes much more abstract relations of similarity. In other cases, the criticism (e.g. that of Bierman and Goodman) turns out to be valid on one, but not another, possible, interpretation of what Peirce's says: for instance, it is often not clear whether Peirce wants to say that there are three kinds of relationships, iconicity, indexicality, and symbolicity, *which each one alone are sufficient* to transform something into a sign; or whether he is rather suggesting that, among those things we call signs, for some other reason (the existence of a sign relation), *some also have the property* of iconicity or indexicality.[5] If we accept the second alternative, for which some indirect arguments may be given, much criticism of ico-

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5   I exclude "symbolicity" under the supposition of it being identical to the sign relation (but we will later see that this may not be all that it is).

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nicity simply become irrelevant.

Some other readings of Peirce, which I am going to make, are more controversial. Peirce is often taken to say that, given the class of all existing signs, we can make a subdivision into three sub-classes, containing icons, indices, and symbols. But it is of course easy to show that many signs may have iconical, indexical, and symbolic features at the same time. This seems to mean that, at least as applied to signs, iconicity, indexicality, and symbolicity *do not separate things,* such as signs, *but relationships between things,* such as parts of signs. While Peirce never seems to pronounce himself on this issue, he has said that the perfect sign should include iconical and indexical as well as symbolic traits. We may not care whether there are such things as perfect signs, but this affirmation clearly implies (whether Peirce was aware of it or not) that iconicity, indexicality and symbolicity are relationships rather than objects. This is why I will conceive of them in terms of "grounds" (which I will take to mean foundations).

It should also be realised that there is an important *structural* (but of course not binary) argument in Peirce's whole conception. He clearly tells us there are three kinds of signs (or rather, sign relationships), at least from the point of view that he has chosen (i.e. what *motivates* the relationship between expression and content). As far as I understand,

this implies (again, whether Peirce was aware of it or not) that we are not free to add further kinds of signs using quite different criteria (as for instance Sebeok and Helbo have done); nor to interpret some of these sign types in such a narrow way (e.g. indices as motivated by causality, or icons as rendering perceptual appearances, the first of which is very common, and the second of which characterises the Greimas school and Groupe μ) that the domain of possible signs relations is not exhausted. Two ways stand open to us: either we accept that there can only be three kinds of relationships between expression and content in a sign, and then this will severely restrict our options for choosing among the numerous definitions of the three sign relationship given by Peirce. Or else we have to demonstrate that, *from this same point of view,* further sign relationships may be established.[6] Here, I have decided to follow the first path.

In will be noted that Klinkenberg (in press) and Blanke (in press), both take a stand on this latter issue, but by refusing the very conundrum: referring to the bewildering variety which the term "iconicity" covers in the Peircean tradition, if we are to believe Eco's first iconicity critique, they decide to use the term simply to mean pictorality. I find this posi-

tion regrettable, not only because I am not at all convinced that the notion of iconicity is incoherent (and, indeed, Goodman 1968 claimed the same thing about the common sense notion of picture), if we do not try to understand it taking the picture as our prime example, but also because it means giving up what I believe is the positive part of the Peircean, as well as Saussurean, heritage in semiotics, the search for a *system*: it means discussing picture signs without relating them to other iconical signs (or whatever you want to call them), nor to signs in general. In short, it means giving up semiotics as a comprehensive enterprise (or a "totalizing" one, as the postmodernists were wont to say, a term which we in our post-postmodern age should be able to reclaim in a positive sense). The very point of semiotics, I take it, is to continuously relate the kind of signs we are investigating to all other kinds of signs.[7] Semiotics first and foremost is a comparative science.

Iconicity in its tripartite structure

In Peircean parlance, to put it simply (but we will later see that this is all too simple a manner of putting it), an icon is a sign in which the "thing" serving as expression in

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6   In fact, some predecessors of Peirce, such as Degérando, thought that to be possible.

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7   It must however be said, as I noted above, that, contrary to other domains of semiotics, pictorial semiotics is justified as such, since there is no comparable discipline otherwise interested in pictures at a general level.

one respect or another is similar to, or shares properties with, another "thing", which serves as its content. In fact, according to Peirce, there are two further requirements: not only should the relation connecting the two "things" exist independently of the sign relation, just as is the case with the index, but, in addition, the properties of the two "things" should inhere in them independently.[8]

Contrary to what is suggested by Groupe μ: s (1992) quotation from Dubois' dictionary, iconicity, in the Peircean sense, is thus not limited to a resemblance with the external world ("avec la réalité extérieure"). When conceiving iconicity as engendering a "referential illusion" and as forming a stage in the generation of "figura-

tive" meaning out of the abstract base structure, Greimas & Courtés (1979: 148, 177) similarly identify iconicity with perceptual appearance. In fact, however, not only is iconicity not particularly concerned with "optical illusion" or "realistic rendering", but it does not necessarily involve perceptual predicates: many of Peirce's examples have to do with mathematical formulae, and even the fact of being American, as in the Franklin and Rumford example, is not really perceptual, even though some of its manifestations may be (cf. Sonesson 1989a: 204ff). It is also common to confound iconicity and picturehood, when in actual fact, if we rely on Peirce's definition, pictures constitute only one variety of iconicity and are not even supposed to form the best instances of it. On the contrary, as we shall see, something additional in necessary to account for the pictorality of pictures.

If iconicity is part of a (trinary) structure, then it cannot be discussed outside the framework of Peirce's division of signs into icons, indices, and symbols.[9] Within philosophy,

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8   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.

9   The Peircean use the term "symbol" is of course problematic, since it contrasts with another sense, more common in the European tradition, and found for instance in the work of Saussure and Piaget, where it is a peculiar kind of icon, or, as in the work of Cassirer, a synonym for "sign". However, it appears that "conventional sign" is not an adequate term for what Peirce means by "symbol", which may involve "law-like" relationships of other kinds (perhaps those

many divisions of signs have preceded the one proposed by Peirce, ending up with two, or four, or more categories. In some ways, these divisions may be more justified than the Peircean one. However, there are two reasons for taking our point of departure in Peirce: first, it is within these frames that most of the discussion has been conducted; and secondly, when we look beyond those elements which have usually been addressed in the discussion, we will find that Peirce's theory offers some help for developing a more subtle approach to iconicity.

Many semioticians, in particular those who deny the existence of iconic signs, apparently believes 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 seems, then, that a pure icon is not a sign, in the sense that the latter term is commonly understood (although Peirce will sometimes state the contrary). At first, it may seem that although the icon is not a socially *instituted* sign, i.e. not

which are observed to obtain).

something which is accepted by a community of sign uses, it could at least, for a short time span, become a sign to a single observer. But even this is contrary to the very conditions described by Peirce: he specifically refers to the case in which the sign loses its sign character, when it is not seen as a sign but is confused with reality itself (which could actually happen when looking at a picture through a key hole with a single eye, producing what Husserl dismisses as a "Jahrmakteffekte"), when, as Piaget would have said, there is no differentiation between expression and content (cf. Sonesson 1989a,I.2.5.; 1992b). Indeed, at least sometimes, the pure icon is taken to be something even less substantial: an impression of reality, which does not necessarily correspond to anything in the real world, for "it affords no assurance that there is any such thing in nature" (4.447). Thus, it seems to be very close to the "phaneron", the unit of Peircean phenomenology (itself close to the Husserlean "noema"), which is anything appearing to the mind, irrespective of its reality status (cf. Johansen 1993:94ff). In this sense, the Peircean icon is somewhat similar to that of cognitive psychology, for it involves "sensible objects" (4.447), not signs in any precise sense: however, it comprises all sense modalities.

In most cases, when reference is made to icons in semiotics what is actually meant is what Peirce termed

hypo-icons, that is, signs which involve iconicity but also, to a great extent, indexical and/or "symbolic" (that is, conventional, or perhaps more generally, rule-like) properties. There are supposed to be three kinds of hypo-icons: *images*, in which case the similarity between expression and content is one of "simple qualities"; *diagrams,* where the similarity is one of "analogous relations in their parts"; and *metaphors,* in which the relations of similarity are brought to an even further degree of mediation. Diagrams in the sense of ordinary language are also diagrams in the Peircean sense, e.g. the population curve that rises to the extent that the population does so. The Peircean concept is however much broader, as is the notion of metaphor, which would, for instance, also include the thermometer. Contrary to the way in which icons have been conceived in the later semiotic tradition, diagrams, rather than pictures, are at the core of Peircean iconicity; at least, they are of most interest to Peirce himself. Indeed, mathematical formulae and deductive schemes, which are based on conventional signs, are those most often discussed in his work. Moreover, no matter how we choose to understand the simplicity of "simple qualities", the Peircean category of images will not include ordinary pictures (which would actually appear to be metaphors of metaphors), although Peirce sometimes seems to say so: if anything, a Peircean image

might be a colour sample used when picking out the paint to employ in repainting the kitchen wall. Indeed, not only is it true that any picture involves the representation of numerous relationships (though certainly not all) obtaining in the perceptual world reproduced, as Stjernfeldt (in press) points out. More importantly, it is only at this level that there is a real similarity between the picture and the world, as James Gibson (1982) has shown.

In order to make sense of the theory of iconicity, we have to introduce a distinction between *iconicity per se*, the *iconical ground*, and the *iconical sign*, which is partly, but certainly not unambiguously, supported by Peirce's writings. This can only be done by starting out from the concept of sign (characterised in lecture two), which is certainly nowhere made explicit in Peirce's work, or, for that matter, in that of Saussure – and then develop it by means of the Peircean notion of "ground"

The ground as abstraction and relevance

To go from the concept of iconicity to the iconic sign, we have to ponder the meaning of a notion, sporadically, but often significantly, used by Peirce, i.e. the notion of *ground.* 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
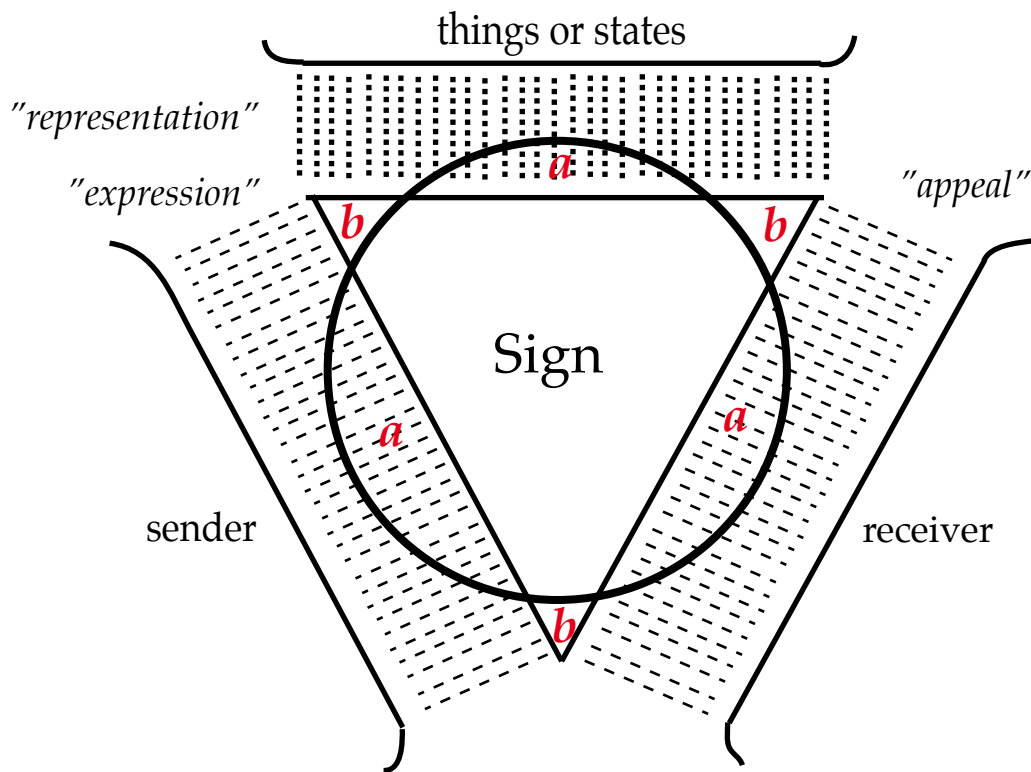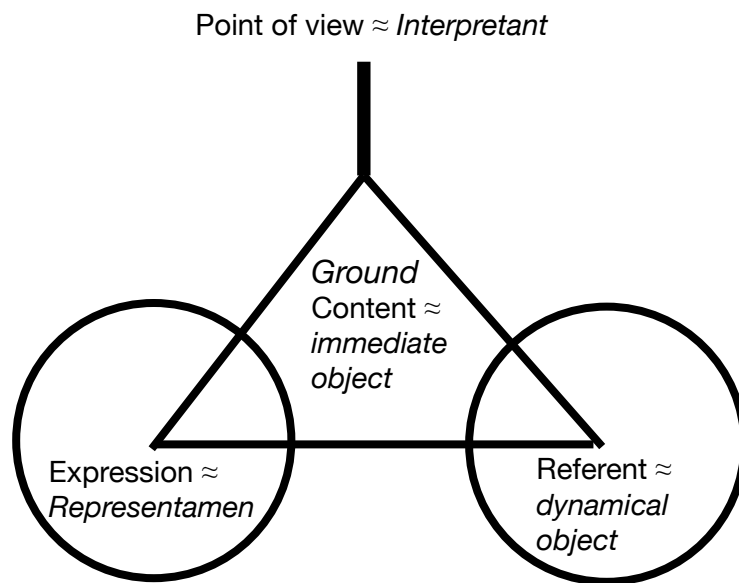
things or states

"representation"

"expression"   "appeal"

b   *a*   *b*

Sign

a   *a*

sender   receiver

b

Fig. 1. a) Bühler's
Organon model
(with "abstractive
relevance" and
"abstractive
supplementation" ;
b) our model
of the Peircean
sign (the ground
as "abstractive
relevance" and

Point of view ≈ *Interpretant*

Ground
Content ≈
immediate
object

Expression ≈
Representamen

Referent ≈
dynamical
object

be taken as the "ground" for their forming a sign: 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 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 representamen".[10]

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10   On the ground as Firstness and, paradoxically, as abstraction and comparison, and its relation to the "correlate", cf. the discussion in the second lecture.

According to one of Peirce's commentators, Greenlee (1975:64), the ground is that aspect of the *referent* that 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. Although Greenlee does not say so, this would seem to make the ground into that which separates the "immediate object" (that part of the content which is directly given through the sign) from the "dynamical object" (roughly, the referent, i.e. meaning connected to the content but not given in the sign but present in other past or future signs). 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 placed on a church steeple. If we have to choose between Greenlee's and Savan's interpretations, all quotations from Peirce which have some bearing on the issue would seem to favour the latter. And yet, it seems to me that, in order to make sense of the notion of iconic signs, we must admit that both Greenlee and Savan are right: the ground involves both expression and content (cf. Fig. 1b). Rather than being simply a "potential sign-vehicle" (Bruss 1978:87),

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the ground would then be a potential sign. Indeed, if we take seriously Peirce's claim that the concept of "ground" is indispensable, "because we cannot comprehend an agreement of two things, except as an agreement in some *respect*." (I.551), then it must be taken to operate a modification on both the things involved.

The operation in question, I submit, must be *abstraction* or, as I would prefer to say, *typification.* In one passage, Peirce himself identifies "ground" with "abstraction" exemplifying it with the blackness of two black things (1.293).[11] It therefore seems that the term *ground* could 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

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11   I would not like to conceal the fact that there are many other passages in Peirce's work (many of which are given by Eco 1998: 44ff; 1999:59ff) which seem to state rather clearly that the ground is Firstness, which means that it cannot be a relation, nor any kind of abstraction, as I understand it, that is, no typification. For discussion, see Lecture 2.

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. This phenomena in well-known from linguistics, where often conventional rules serve to pick out some properties of the physical continuum, differently in different languages, which have the property of separating meanings, i.e. of isolating features of the expression on the basis of the content, and vice-verse. The difference is, of course, that in the iconic ground, the relation that determines one object from the point of view of the other, is basically non-conventional (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. 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). But we could take this idea further, adding to the notion of ground a more explicitly constructive aspect. To many structuralists (the Prague school notably), relevance is a double movement, which both serves to downplay non-essential elements and to add others which were anticipated but not perceived: thus, it depends on the twin principles of "abstractive relevance" and "apperceptive supplementation" embodied in Bühler's *Organon model* (cf. Fig 1a and Sonesson 1989a,II.4.2.), as well as in the Piagetean dialectic between accommodation and assimilation (cf. Sonesson 1988,I.3.1).

On different types of types

In some ways, our model (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, as I have pointed out elsewhere (cf. Sonesson 1996a; in press a), rather curious. Indeed, the signifier (and the corresponding signified, absent here, in favour of the referent) is

already a type, in the Saussurean conception. One might suggest that the referent and the type of the μ model should be related to each other in the same way 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. If so, however, the terminology is confusing.[12]

As I noted above, the ground seems to account for the division between the immediate and the dynamical object on the side of content; but I then proceeded to argue that there must be a similar division on the side of 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. It may seems that this is exactly what Klinkenberg (1996: 291ff; in press) suggests, when transforming the erstwhile triangle into a square comprising a stimulus, as well as a signifier, a referent, and a type, in particular since the signifier is now defined, in contradistinction to the stimulus, as "un ensemble modélisé de stimuli visuels correspondant à un type stable" (1996: 293). Yet it seems

confusing that only the typification on the side of the content is termed type, while the same procedure on the expression side gets hidden within a strange mixture of Saussurean and behaviourist terminology: for, although the signifier, to Saussure, was certainly a type, this property is not topical in the term as given.[13]

Börries Blanke (1998; in press) has formulated a similar critique of Groupe μ;s first model, suggesting that the double process of abstraction, which (as he points out) I have diagnosed, should be added to the model. I must confess that I have long had trouble seeing the point of this amalgamation, since by adding double abstraction to Groupe μ: s model of iconicity we would simply end up with my model. This is no doubt failing to take into account the greater degree of explicitness of the μ-model, as well as the dynamical character suggested by the processes of stabilisation and conformity between the type and the referent, and of recognition and conformity, between the signifier and the type

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12   Strangely, Klinkenberg (1996: 299f) points out that the type is not simply identical to the signified!

13   Indeed, in relation to the examples, it appears to make more sense to relate the type to the kind of "transformation" connecting the expression ("signifier") and the content ("referent"); however, this is not congruent with the definition. It does, however, correspond to the following passage (where also the stimulus has its type): "Le stimulus, comme le référent, sont tous deux des actualisations du type. Mais entre eux, ils entertiennent des relations que l'on nommera ci-après transformations" (Klinkenberg 1996: 293).
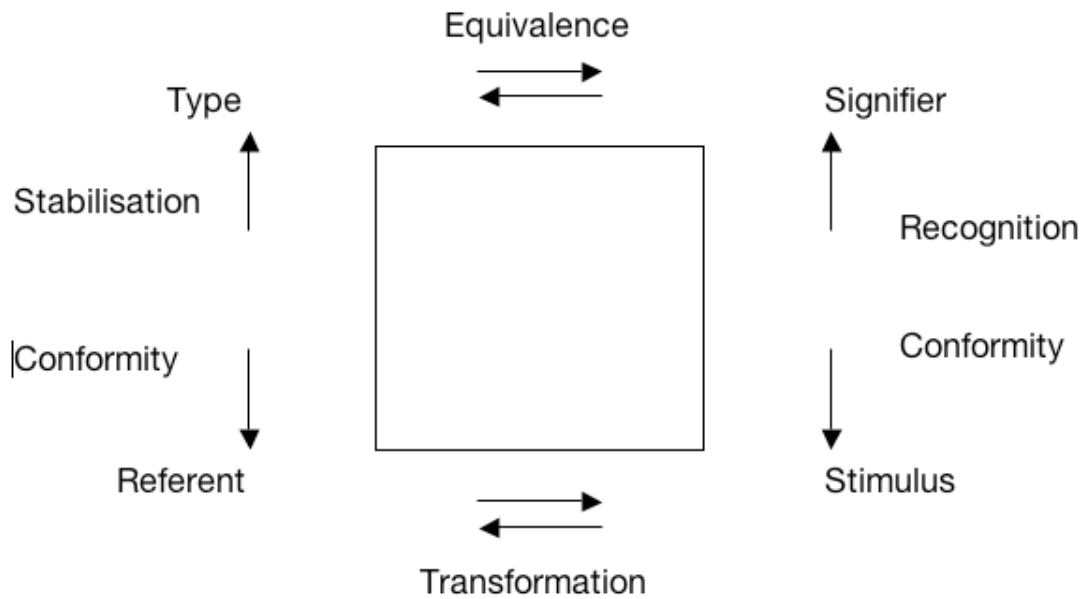
Fig.2. Structure of the "iconic sign", according to Klinkenberg 1996: 291

(in the first version), or the stimulus and the signifier (in the more recent version; Fig. 2.).[14] On closer consideration, however, I think that there would also be something still lacking when adding double abstraction (as Klinkenberg 1996; in press and Blanke 1998; in press do) to the μ-model: i.e. the relational character of the two instances of abstraction, in other words, the fact that the expression is subjected to abstraction *with respect to the content* which it represents, and vice-versa.[15]

It should not be forgotten that, to both Klinkenberg and Blanke, iconicity means pictorality. For us, however, this very peculiar case will have to await later discussion. Therefore, let us now consider some cases, which are clearly iconic, without being pictorial. The weathercock contains, as we have noted, apart form the indexical ground connecting it to the direction of the wind, an iconical ground, which has as its other relatum the perceptual impression produced by a cock, which is thus not only an iconic, but also a pictorial, ground. For the moment, however, we should consider such instances as the balance as a representation of justice, or the signs used in Blissymbolics to indicate the properties of being above or below. There is a similar-

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14   It is not clear to me, however, why it should be necessary to distinguish stabilisation and recognition on the two axes. We will treat them as equivalent.

15   In a way, this is better suggested by the original μ-model of iconicity, in which the type presided over the apex of the triangle, and thus over the process of transformation between (what I here call) expression and content. However, the arrows do not seem to justify this interpretation, nor does the text. As

we shall see later, when turning to pictorality, there may really be several different processes of abstraction and/or transformation involved.

ity between the balance and justice (although we would of course not notice it if this had not been pointed out to us before, and indeed if there were not a convention for attending to this similarity): just as the balance is used to weigh material things, justice has the task of weighing different arguments, claims, and other mental objects. Whereas the expression consists of a perceptual impression, which is at least virtually dynamic, the content is an abstract property, which cannot be perceived in any direct way, but can only be derived from a long sequence of verbal acts and other stretches of behaviour. It is the postulated relationship between a balance and justice as such which operates an abstraction in both objects involved, picking out the property of equilibrium or equity. The case of Blissymbolics (Fig. 3.) is somewhat different: here both expression and content seem to be clearly material, but what connects them is nevertheless an abstract property. The sign for "above" is a line inscribed above what is the level at which the signs of Bliss are customarily inscribed; it represents "aboveness" in any other material (and no doubt indirectly

also mental) domain. Thus, once again, of all the properties possessed by the material mark, only one is singled out by its association to the corresponding content.

Given these 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

Fig. 3. The signs of Blissymbolics meaning "man", "above", "woman" and "below". The first and the third sign is a kind of depiction, however schematic, but the second and the fourth are clearly abstract.

	Firstness	Secondness	Thirdness
Principle	Iconicity	—	—
Ground	Iconic ground	Indexicality = indexical ground	—
Sign	Iconic sign (icon)	Indexical sign (index)	Symbolicity = symbolic ground = symbolic sign (symbol)

Fig. 4. The relations between principles, grounds, and signs, in the present interpretation of Peirce.

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 (Cf. Fig. 4.).[16]

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, do 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.

Projecting the distinctions made in accordance with the preceding interpretation of Peirce onto the μ-tological square (Fig. 2.), we end up with a model that has at least the

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16   This, no doubt, is what Peirce must have meant – but I have my doubts about this idea. Some iconical signs seem to rely on pre-existing conventions and/or habits, which exist in the Lifeworld prior to any signs. Thus, for instance, the sign meaning "woman" in the gesture system of the North American Indians consists in describing the braids on both sides of the head. This sign is of course iconical to the extent that it imitates the braids, and indexical, because it relates to the head of the sign producer; but it only means "woman" because there is a pre-existing convention in the society of North American Indians for women to wear their hair braided. Of course, the reason for this discrepancy is not doubt the vague character of the Peircean sign concept.

advantage of distinguishing the expression type, the content type, and the transformation type (Fig. 5.). It is difficult to know to what extent this model, as proposed here, still conforms to the intentions of Groupe μ. From our point of view, however, it helps clarifying the issues involved. It still does not say very much about the *specificity* of the iconic, let alone the pictorial, sign. This specificity resides in the nature of the transformations and the different kinds of conformity.

Summary

So far, I have tried to show that the concept of iconicity may still be rendered useful in modern semiotics, conceived as an empirical science, involved with pictures and other signs as we encounter them in our everyday world. In part, this section has consisted in a reading of Peirce's writings, which, as all readings, but rather more explicitly, is made from a particular angle of vision, that of ecological semiotics. In order to render possible this reading, we have relied on a concept of sign which is very much more specific than that found in Peirce's work, and we have had recourse to the notion of ground, with rather scant evidence, in the sense of the structural principle of relevance and the Husserlean process of typification. As a result, we have established a distinction between the properties of iconicity and indexicality *per se*, and the signs to which they give rise, with the iconical and indexical grounds constituting some kind of intermediate level. As we shall see later on in this course, the establishment of such a separation of iconicity and indexicality, the grounds that they form and their corresponding signs, has the added advantage of liberating indexicality and iconicity for other tasks than that of constituting signs. For the moment, however, this discussion has permitted us to clarify the structure of the sign, separating the various instances of typicality from the corresponding tokens.

3.2. Iconicity regained. The logic of the Lifeworld

The two most important arguments against the possibility of iconic signs were given by Arthur Bierman (1963), in the form of a direct critique of Peirce. They were later repeated, independently, as it seems, in a much more well-known version, and without any direct address to Peirce, by Nelson Goodman (1968; 1970). These arguments have later been called the *arguments of regression* and *of symmetry*, respectively (Sebeok 1976:128). Both arguments can be evaded, I believe, the first simply by accepting the specific concept of sign which I introduced in the second lecture, the second, more laboriously, by taking the Lifeworld, or ecological physics, as being the presupposed background of all ordinary
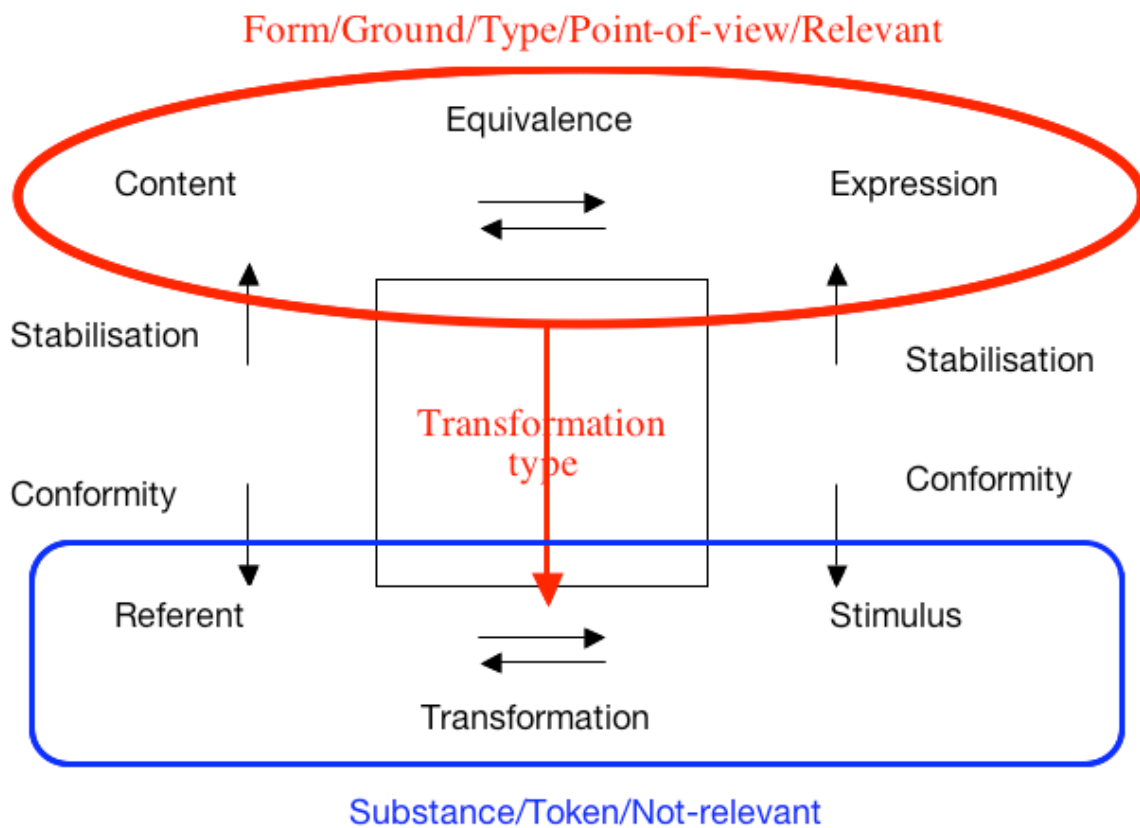
Fig.5. Structure of the (pictorial) sign, as conceived here

sign process. To take care of the argument of symmetry, therefore, we will not only have to introduce the idea of a Lifeworld hierarchy of prototypicality, but we will have to distinguish between two kinds of iconical signs, one of which seems to change the nature of iconicity in ways which Peirce could never have foreseen. Then we will see that both primary and secondary iconical signs, though for very different reasons, do not fulfil Peirce's requirement that iconicity should be independent of the sign function.

Regressive iconicity and the sign function

According to *argument of regression*, all things in the world can be classified into a number of very general categories, such as "thing", "animal", "human being", etc., and therefore everything in the universe can refer to, and be referred to, everything else. Thus, if iconicity is at the origin of signs, all things in the world will be signs. Peirce himself would probably not be in the least impressed by these consequences: he certainly seems to think that Rumford can be an icon of Franklin since they share the property of being Americans, which is, if not a metaphysical property, at least a very general one. Nor would Giordano Bruno, or other thinkers of the Middle Ages and the Renaissance be shocked (cf. Yates 1966; Gombrich 1972; etc.); neither would the *Naturphilosophen* of Ger-

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man Romanticism, or Baudelaire and other believers in the theory of "correspondences", including the surrealists, and even latter-day New Age mystics. Hence, iconical signs of this kind are not only conceivable; they have been conceived throughout the greater part of human history.

Yet, it is true that these are not typical signs, let alone typical iconical signs; and pictures are most certainly not of this kind. The undesirable consequences anticipated by Bierman can be avoided, in his own view, if we introduce the provision that no icon should contain universal characteristics as part of its meaning. Thus, it seems, Bierman is satisfied, but it is obvious that such a provision must be problematical, in particular because it is not clear how we shall establish the limit beyond which characteristics become too general to be included in the meaning of iconical signs. It would also seem that, even apart from the "correspondances", there are cases in which iconical signs have very general features in their contents, at least if metaphors and symbols in the European sense, are considered to be iconical. It is arguable, that some pictograms stand for relatively universal features, in particular if based on synaesthesia. Indeed, both the balance as a sign for justice, and the signs of Blissymbolics considered above, would be ruled out by such a provision. Such as it stands, Bierman's provision is scarcely acceptable.

The import of the argument of regression really depends on how we interpret Peirce's theory. If he meant to suggest that there are three properties, iconicity, indexicality, and symbolicity, which, by themselves and without any further requirement, trigger the recognition of something as a sign, then the argument of regression will create trouble for his conception. On the other hand, if he merely wanted to suggest that something that was already recognised as being a sign could be discovered to be an iconical sign, rather than an indexical or symbolic one, by means of tracing it back to the iconic ground, then the argument of regression will have no bearing on it. No matter what Peirce would have thought, the separation of the sign function from the iconical ground, explicitly introduced in our reading, makes this argument completely irrelevant.

Beyond the symmetry argument

According to another argument, first voiced by Bierman, which has later been termed the *symmetry argument*, iconicity cannot motivate a sign, for while similarity is symmetrical and reflexive, the sign is not. Pigments on paper, or carvings in a rock, could stand for a man, but not the reverse; nor will they, in their picture function, stand for themselves. This argument is based on an identification of the commonsensical notion of similarity with the equivalence relation

of logic. No doubt, the equivalence relation, as defined in logic, is symmetric and reflexive, and thus cannot define any type of sign, since the sign, by definition, must be asymmetric and irreflexive. As far as I can see, there is no way to evade this argument within a purely Peircean framework (except of course the same argument as against the argument of regression, if this is an genuinely Peircean argument); ecological semiotics, however, has an answer to offer.

The error consists in the identification of similarity with the equivalence relations as defined by logic. To make such identification is to suppose man to live in the world of the natural sciences, when in fact he inhabits a particular sociocultural Lifeworld. Similarity, as experienced in this Lifeworld, is often asymmetric and irreflexive. That this is true of ordinary comparisons in verbal language and in metaphorical visual displays has now been experimentally demonstrated (notably by Rosch 1975; & Simpson & Miller 1976; Tversky 1977; & Gati 1978; cf. also Sonesson 1989a,220ff, 327ff). Here, I will just consider one example: In a task involving comparisons between countries, Tversky (1977: 333 ff.) found that the statement "North Korea is similar to Red China" was chosen in preference to its inversion in 66 out of 69 instances; it was also located higher on a scale. On the whole, that item which is most prom-

inent becomes the references point, and prototypicality is only one of the factors making an item eligible for the position, others being frequency, intensity, celebrity, information, and so on.

If we generalise this finding to the case of signs, 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 where 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). In a similar vein, it is natural that a Mexican woman, coming for the first time to Sweden, should wonder at the presence of
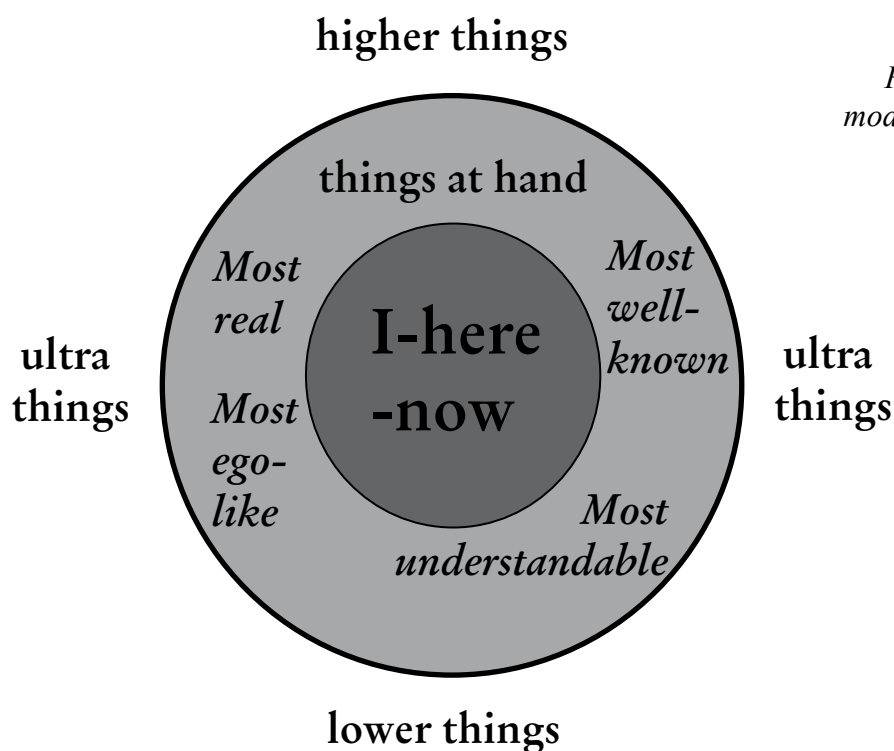
higher things

things at hand

Most real

Most well-known

I-here-now

ultra things

Most ego-like

ultra things

Most understandable

lower things

Fig 6. The basic model of the Lifeworld hierarchy

"Barbies" everywhere: in her experience, real-world blond women were far less prominent than the doll made in their image.

It thus becomes necessary to posit a kind of taken-for-granted hierarchy of prominence among the things of the Lifeworld (see Fig. 6.). For something to be a sign of something else, it must be ranked relatively low on the scale of prototypicality applying to the "things" of the Lifeworld. Such a scale would be similar to the basic metaphor underlying ordinary language, which Lakoff & Turner (1989:160ff) call "The great chain of being". Indeed, these regularities of the Lifeworld, together with the similar laws of environmental physics, formulated by James Gibson, stand at the origin of an even broader domain of study, which I have called the semiotic ecology (cf. Sonesson 1993a, 1994a, b,1996a, c,

1997a, b, 2000a). Husserl, Gibson, and Greimas all called for a science of "the natural world", because they realised that nature as we experience it is not identical to the one known to physics but is culturally constructed. Like Husserl's Lifeworld and Gibson's ecological physics, but unlike Greimas' natural world, semiotic ecology will suppose this particular level to be a privileged version of the world, "the world taken for granted", in Schütz's phrase, from the standpoint of which other worlds, such as those of the natural sciences, may be invented and observed (cf. Sonesson 1989a,I.1.4, I.2.1.). This world is characterised by a particular spatial and temporal structure, by types, and, by regularities, or as Husserl's says, "the typical way in which things tend to behave". The latter are the kind of laws of "ecological physics", in Gibson's sense, which are "defied

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by magic", and which also forms the foundations for Peircean abduction.

In my earlier publications, I have referred the *hierarchy of prominence* of Lifeworld things, in two different, but complementary, ways. On the one hand, objects, such as the human body itself, in particular the face, but also common objects like chairs, must be so central to the human sphere that they will be recognised with only scant evidence, even though the invariants embodied in a particular picture are found in other objects as well (cf. Fig. 9c.). In this case, the objects at the highest levels of the scale stand the best chance of being selected. On the other hand, I have argued that only objects low down on the scale will be recognised as susceptible of embodying a sign function, without being particularly designated as such, which in our culture is true of a sheet of paper or a canvas. A human being, a shape which is easily recognised as such with very scant indications, is perhaps also that object which is most difficult to see as a mere signifier of something else if he is not explicitly so designated, as in the theatre or in a ceremony. On the other hand, the human face, which is probably that object which is most easily identified of all, serves at the same time as support for conveying other signs, the expressions of feelings and attitudes; but then again, it is not the face but its movements which are signifiers of these other signs. It is just that,

unlike that of the Cheshire cat, the human smile cannot exist independently.

Contrary to the argument of regression, the symmetry argument may thus be warded off, without introducing a supplementary sign function and without amending the definition of the iconic ground. On the other hand, it supposes a complete reconstruction of semiotic theory, in which ecological physics, also known as the Lifeworld, is taken as the point of departure of all possible meaning construction.

Primary and secondary iconic signs

The alternative analysis in terms of conventionality suggested by Goodman, Eco, and others is conceived to take care of the case of pictures, but paradoxically, it seems that it would really be needed, not for pictures but for some other iconical signs which rely on identity (and some others, such as "droodles", e.g., in the extreme case, a line perceived as "a dirty French card seen from the side"). Goodman's, Greenlee's and Eco's contention that the referent of each picture is appointed individually, are incompatible with what psychology tells us about the child's capacity for interpreting pictures when first confronted with them at 19 months of age (as demonstrated in a famous experiment by Hochberg). On the other hand, we do have to learn that, in certain situations, and

according to particular conventions, objects which are normally used for what they are become signs of themselves, of some of their properties, or of the class of which they form part: a car at a car exhibition, a stone axe in the museum showcase or a tin cane in a shop window, an emperor's impersonator when the emperor is away, and a urinal (if it happens to be Duchamp's "Fountain") at an art exhibition. There is never any doubt about their pure iconicity, or about their capacity for entering into an iconic ground — but a convention is needed to tell us they are signs.

When used to stand for themselves, objects are clearly *iconical:* they are signs consisting of an expression that stands for a content because of properties which each of them possess intrinsically. And yet, without having access to a set of conventions and/or an array of stock situations, we have no possibility of knowing either *that* something is a sign or what it as sign *of:* of itself as an individual object, of a particular category (among several possible ones) of which it is a member, or of one or another of its properties. A car, which is not a sign on the street, becomes a sign at a car exhibition, as does Man Ray's iron in a museum. We have to know the showcase convention to understand that the tin can in the shop-window stands for many other objects of the same category; we need to be familiar with the art exhibition convention to realise that each object merely signifies itself; and we are able to understand that the tailor's swatch is a sign of its pattern and colour, but not of its shape, only if we have learnt the convention associated with the swatch (cf. Sonesson 1989a,II.2.2. and 1994a, b, 1998b).

When Man Ray makes a picture of a billiard table, we need no con-

Fig. 7. Man Ray's billiard table

vention to recognise what it depicts (Fig. 7). However, if Sherrie Levine's (real, three-dimensional) billiard table is to represent Man Ray's picture, there must be a label inverting the hierarchy of prominence of the Lifeworld (Fig.8). This shows that among the properties determining the probability of an object functioning as the expression of an iconic sign is to be found three-dimensionality rather than the opposite. Since the inception of modernism, and particularly in the phase known as postmodernism, the sign function of pictures has been at the centre of interest: it is thus not surprising that artists, such as Levine, should employ themselves to inverse the normal Lifeworld hierarchy, which makes two-dimensional objects stand for three-dimensional ones, rather than the reverse. But similar things also happens in the world of everyday life: the Mexican woman who found Sweden to be full of "Barbies" made the same inversion, because, building on her particular Lifeworld experience, she took real, animate, persons as being, at least for the duration of a speech act, representations of assembly-line fabricated objects, made of inanimate matter, i.e. of dolls.

The relative part played by iconicity and conventionality in a sign may be used to distinguish primary and secondary iconicity. In fact, to be more precise, we should distinguish *primary* and *secondary iconic signs*, since we are really involved

Fig. 8. Sherrie Levine's billiard tables

with the way iconicity is assigned to signs. 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.[17]

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17   Eco (1998: 27ff; 1999: 382ff) apparently changes the names of my two

In a sense, what I here call secondary iconical signs are not very good examples of iconicity, as the latter is characterised by Peirce, for the definition clearly implies that, in at least one sense, the iconicity of the signs is not independent of their sign character: on the contrary, it is a precondition.[18] Perhaps this does not have to be taken as an argument against Peirce's definition: iconicity per se may well be independent of the sign function, even though its presence in signs may sometimes be conditioned by the sign function.

Pictures are of course primary, iconical, signs, in this sense, and they may well be the only kind there is. However, identity signs do not constitute the only case in which the sign function has to precede and determine iconicity. In the case of identity sign, the problem does not consist in discovering the shared properties – but it seeing the one item is a sign for another, rather than just two members of the same category. In other cases, the sign function must precede the perception of iconicity because there is *too little* resemblance, as in the manual signs of the North American Indians, which, according to Mallery (1881:94f), seem reasonable when we are informed about their meaning. In Arnheim's terms (1969:92f), a "droodle" is different from a picture in requiring a key, as Carraci's mason behind a wall (cf. Fig. 9b), or in "Olive dropping into martini glass or Close-up of girl in scanty bathing suit" (cf. Fig. 9a). While both scenes are possible to discover in the drawing, both are clearly underdetermined by it. There are two ways in which we can try to avoid such an ambiguity. One is to fill in the details, in particular the details that are characteristically different in an olive and a navel, in the air and a pair of thighs, etc. At some point the droodle will then turn into a genuine picture. The other possibility, which is the only one considered by Burks and Bierman, is to introduce an explicit convention, such as Carraci's key.[19]

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). The originality of Eco's proposal, however, is the suggestion (which is never spelt out) that the property that I have found to distinguish two kinds of iconicity could also be found in other grounds. Lopes (1995), on the other hand, seems to have happened on a very similar, if not identical, distinction, independently of Eco and me. For some discussion, see Sonesson, in press b. Vaillant & Castaing, in press, interpret Eco's distinction in quite a different way, which seems to me quite unwarranted.

18   As we shall se later, there is quite another sense in which primary iconical signs do not conform to the criterion of independence.

19   It is undoubtedly because he is mainly involved with droodles or logotypes close to being droodles that Vaillant (1997: 45ff) fails to see the relevance of the prototype hierarchy. This also explains the same argument
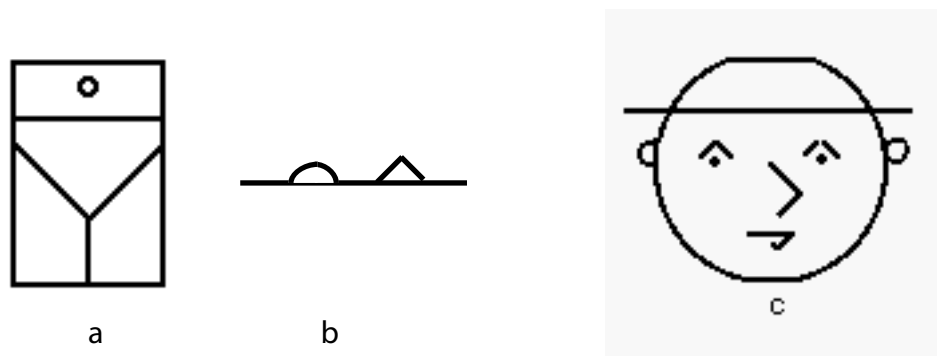
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Fig. 9. Two droodles and a picture which can be read as a droodle: a) Olive dropping into Martini glass or Close-up of girl in scanty bathing suit (inspired from Arnheim as adapted in Sonesson 1992). b) Carraci's key (Mason behind wall); c) face or jar (inspired by Hermerén 1983:101);

According to Hermerén (1983: 101), it is only because of "the limitations of human imagination" that we see Fig. 9c. as a human face, for it can equally well be perceived as "a jar from above, with some pebbles and broken matches on the bottom, and a stick placed across the opening". Thus, it should be ambiguous in Bierman's sense. It all depends on what is here meant by the limits of human imagination: Gestalt principles, the face as a privileged perceptual object (cf. E. Gibson 1969:347 ff.), and so on, all conspire to make one of the readings determinate. While it is possible to find the elements Hermerén suggests should be there in the picture, it is impossible to see the interpretation as a whole without being disturbed by the other reading. Thus, it seems that when an expression has similarities to different contents or referents, one of these

may be favoured because of properties of the expression itself, and is not overridden by convention.

In a curious little essay, Davidsen & Davidsen (2000: 82) take me to task, because, in their view, the concept of a hierarchy of prominence only apparently solves the problem of accounting for the natural asymmetry of the iconical sign: while it "might be taken to explain why an image of a man is the iconic representation of this man /…/, this does not contribute much more than to systematising relativism." I don't know what more can be done. The sign cannot be anything in itself. The point is precisely that the sign is a sign in relation to a given lifeworld — in relation to the general structures of the lifeworld, as in the case of three-dimensionality, or in relation to a particular socio-cultural lifeworld, as in the case of the meaning of paper to the Me'. Ecological semiotics is interested in accounting for "the limitations of human imagination", to use Hermerén's term – not to do away with them as

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by Bordon & Vaillant (2002: 59), who however proceed to offer a more pertinent counter-example to the prototype hierarchy suggested here, which will be considered below.

an obstacle to a deeper truth.[20]

While all this serves to clarify the nature of the pictorial sign, as a particular kind of iconicity (though we will see that pictorality is peculiar in other ways), it leaves a large residue: secondary iconic signs can hardly be said to be determined more than in a negative way. Consider a counter-example to my prototype hierarchy offered by Bordon & Vaillant (2002: 59): an ice statue of a motor cycle is less familiar to Parisians than a real motor cycle, and yet when the former is exhibited in front of the town hall, there is no doubt to anyone that the ice statue is the signifier, and the motor cycle the signified.

The authors are guilty of several errors of interpretation, and yet their example is interesting. The prototype hierarchy is based on the notion of prominence characterised by the cognitive psychologists Rosch and Tversky as corresponding to prototypicality, frequency, intensity, celebrity, information, and so on. In this sense, if "familiarity" may, on some occasions, be the opposite of prominence, there are many other possibilities. But this also means that the concept of prominence is rather unclear: at least, it seems to be too open-ended. In any case, as I have

conceived it above, the prototype hierarchy would not apply to objects as such, but to some of their properties. Not the ice statue of a motor cycle, but perhaps ice as a material, might be argued to be "less prominent" (perhaps in the sense of more homogeneous, more ubiquitous in the history of mankind, etc.) than motorcycle parts. In the Me' story, it is paper, not particular things made out of paper, which is ranked too high on the scale.

But the example is also quite different from those I have discussed above, which either involved a two-dimensional object representing a three-dimensional one (as in the case of pictures), or a single three-dimensional object being the sign of the class of which it is a part, of some of its properties, and so on. It is, however, similar to cases I have taken up elsewhere (notably Sonesson 1989a,III.6.5; in press b): the tailor's dummy and artificial food made out of plastic or wax, as seen in Japanese restaurants. The outcome of that discussion was that there were certain properties that were intrinsically more prominent in the human world, such as, apart from three-dimensionality, animateness and movement. The last of these features may of course be the factor that makes the real motorcycle more prominent than the one made out of ice. But a more general argument could in fact be made from the example of artificial food. There is a reason why the wax

20   Later on in the essay, Davidsen & Davidsen (2000) appear to criticise me for finding the same sign iconical, indexical, and symbolic, but that is only a problem, as mentioned at the beginning of this article, if we take these terms to apply to objects, rather than to relations.

food is taken to represent the real food, rather than the opposite. Food is defined by the functional property (or the "affordance" as Gibson would say) of being edible, and that is exactly the property which wax food lacks. The motorcycle, similarly, is defined by the property of being a vehicle, which is an expectation that the ice statue can hardly fulfil. If this shows that the ice motorcycle is no real counter-example, it also demonstrates the complexity of secondary iconicity.[21] The prototype hierarchy should not be expected to form some rigid structure fixed once and for all.[22]

Another, more important lesson of this discussion, however, is that primary and secondary iconicity

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[21] It might also be relevant, as has been suggested to me, that the motorcycle is as more enduring type of artefact than the ice sculpture (Cf. Lecture 2). However, this argument could then be used to claim that the bronze statue of Caesar is more basic than Caesar himself.

[22] This also shows that the "Barbie" example given above is much more complex than what I hinted at: from the point of view of animateness, and the like, even the Mexican woman does do really consider the doll to be more prominent than the human beings who are blond (or so I would hope). It is when attending to hair, skin colour, and the like, that she ranks the Barbie doll higher on the scale than those alien human beings seen in Sweden. This is the stuff of which metaphors are made. Cf. Sonesson 1989a, 2003c; 2005. Interpreted in another way, this anecdote might be the point of departure of the distinction that is basic to cultural semiotics. Cf. Sonesson 2000b.

should not be taken to be an all or none affair: just as a sign may contain iconical, indexical and symbolic properties at the same time, it may very well mix primary and secondary iconicity.

The criterion of independence

Apart from the reasons mentioned at the beginning of this essay, there is another sense in which pictures are far from being central instances of icons. As was noted above, the fact that an object serving as the expression of an icon and another object serving as its content possess, in some respects, the same properties should not be a result of one of them having an influence on the other. In the case of an icon (contrary to the case of an index), "it simply happens that its qualities resemble those of that object, and excite analogous sensations in the mind for which it is a likeness" (2.299). Since both Franklin and Rumford are Americans, Peirce claims, one of them may serve as a sign of the other; but the fact that Franklin is an American is quite unrelated to Rumford's being one. But there is at least one sense in which this is not true of pictures, not only in the case of a photograph (which Peirce often pronounces to be an index), but also in the case of a painting: in each case, the "thing" serving as the expression is expressly constructed in order to resemble the "thing" serving as the content, although a direct

physical connection only exists in the first instance. Leonardo painted the canvas known as Mona Lisa in order to create a resemblance to the wife of Francesco del Giocondo, and, although the resemblance is of a much more abstract kind, the same is true of Picasso painting Gertrude Stein or Kahnweiler. And it is as true of a synthetic computer picture showing a lamp correctly illuminated from above right as of a photograph with the same subject.

In this sense, Peirce's claim that the properties of expression and content pertain to them independently seems more relevant to identity signs than to pictures. When Franklin is made to represent Rumford, or, to take a more clearly iconical (and visual) example, when a blond girl plays the part of Marilyn Monroe, it is obvious that each of the 'things' involved has an independent existence and a presence in the world independent of the other; but in case of the painting, the "thing" which serves as expression is actually created in order to resemble the "thing" which serves as the content; it comes into being precisely in order to accomplish this function. Thus, it seems that the iconical ground of *primary iconical signs,* or at least one particular case of them (which may be the only one), pictures, is not independent of the fact that it connects the relata of a sign function, whereas there is such an independence in the case of *secondary iconical signs,* or

at least in some cases of them (the exception being perhaps droodles). But we have already pointed out that there is a sense in which primary iconical signs, but not secondary iconical signs, seem to realise such independence. So what kind of independence are we talking about? It seems that Peirce's criterion is insufficiently specified. Tentatively, I would like to suggest the following distinction: secondary iconical signs are made up of entities that have an *existential independence* (they exist independently of the sign function and the iconical ground) but no *semiosic independence* (they are constituted as iconical grounds only as a consequence of being recognised as signs). As for primary iconical signs, they have no *existential independence* (the expression does not exist, as a likeness or as anything else, independently of its relation to the content), but they do possess a *semiosis independence* (the iconical ground is constituted prior to the recognition of the sign function).

If it is possible to distinguish existential and causal independence, then there may perhaps be some further kind of independence that is really characteristic of all iconical signs. Or perhaps — and I think this is the safest bet for the moment — iconicity *per se* is really independent, while iconic grounds and iconic signs may possess only causal or existential independence, but never both.

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Summary

In this section, some pieces of criticism have been addressed against the Peircean notion of iconicity, in order to show that it cannot stand on its own, if it is not complemented by a few essential new elements. First of all, to ward off the argument of regression, we need to use a more specific concept of sign than that offered by Peirce and Saussure (as this was introduced in the second lecture). In the case of the symmetry argument, our only way of escape turned out to require a radical remake of semiotic theory, basing it on the world-taken-for-granted, as developed by Husserlean phenomenology and Gibsonean psychology, and further elaborated in my own work, notably with the introduction of the concept of a hierarchy of prototypicality. We ended up with a division of iconical signs into two very different kinds, the primary ones, where the perception of similarity is at least part of the reason for postulating the sign character, and the secondary ones, in which case knowledge of the sign function is a prerequisite for discovering the likeness. It should be clear that secondary iconical signs violate one of Peirce's basic requirements for iconicity: the independence of iconicity from the sign function. Fortunately, it may seem, pictures are primary iconical signs: but there are ways in which pictures do not seem to measure up to Peircean iconicity either.

We have already touched on one of these ways: one property, which Peirce insists on as a defining criterion of iconicity, independence from the sign function, will not translate onto pictures, at least if independence is taken in the sense of existential autonomy. But the case of pictorality is even more convoluted, as we will see shortly.

3.3. In the looking-glace, somewhat less darkly. Eco's three critiques

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 iconical 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 sidewards, into some kind of proportionality. In the final stage, however (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.

This nose is not a nose. The case for conventionality

When Peirce says that the sign is similar to its object, and when Peirce and Morris alike claim that they have properties in common, Eco (1968:188; cf. 1976:327f) thinks this is to some degree trivially true, but false to the extent that it is interesting. For, Eco goes on to ask, what can it mean to say that Annigoni's portrait of Queen Elizabeth II (Fig. 10) has the same properties as the queen herself? The example is of course not chosen arbitrarily: Pietro Annigoni is a painter of the 20th century purporting to work in the tradition of the Italian Renaissance and mostly known because of his portraits of celebrities such as Elisabeth II, John F. Kennedy, and the Shah of Iran. It may seem, therefore, that the difference between the portrait and reality is minimal. Lindekens, later on, will choose photography to have a good whipping boy with which to bring home the cause of conventionality.

For what Eco wants to show is that, even so, the distance between the picture and reality is considerable. Perhaps we could agree, he suggests, that 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

Fig. 10. One of Annigoni's portraits of Elisabeth II, possibly the version referred to by Eco

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. Morris, Eco admits, is well aware of such problems, and has therefore proposed that iconicity is a question of degrees; but such a definition, Eco contends, can be stretched to include anything, and must lead to the destruction of the concept of iconicity. For semiotics, Eco therefore concludes, it is not enough to say that the iconic sign resembles its referent *in certain respects*.

Oddly enough, it is precisely with this definition that Eco (1968:191) seems to end up a few pages later: iconic codes are said to reproduce certain *selected* conditions on the perception of the corresponding object. This selection in turn de-

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pends on the codes of recognition, and also on graphic conventions. In our culture, for instance, the zebra, contrasted with the horse, will be identified by its stripes; but a society only acquainted with zebras and hyenas will need to focalise on some other feature. In the same way, Eco (1976:349) says about Gombrich's (1963:1ff) hobbyhorse, that it is iconic in the most abstract sense, because it only reproduces the straight line formed by the horseback. Nothing of this is particularly original, however. In the most general sense, Peirce was well aware of the conventional nature of iconic signs. As for the codes of recognition, Vierkant (1912:352) had already noted their existence when he observed that the primitives make their pictures, including only that which must be observed in reality, from the practical point of view of the hunter; but of course, Vierkant thought Occidental man would not make use of such operations. A more impressive testimony of the workings of recognition codes is fig. 11a-b, which reduces the difference between a bird and a man to a minimum (drawings of the Bakairi, according to Vierkant 1912:344). Paraphrasing Aristotle, we could say that to this tribe man is a beakless biped.

But rather than specific picture conventions, all this may well be conventions of the Lifeworld, either in some specific socio-cultural variety of it, or in its general human form.

More important is the idea that the selection of similarities is also conditioned by the possibilities of the particular pictorial expression used. But Eco does not pursue this idea further. It should anyhow be obvious that nothing of this will answer the fundamental criticism which Eco himself addressed to iconicity: even if we select just the stripes, or the propeller, or the horseback, it remains true that, on closer inspection, those of the pictures are basically different from those of reality. But even so, this is not necessarily an argument against the presence of similarity: rather its concerns the *locus* of similarity.

Sometimes Eco (1968:201, 208;1976:359) appears to return to his original radicalism: iconical signs only *seem* to reproduce the properties of their objects. A simple continuous line, we are told, will form the contour of a horse, and yet, "the only property the line has", i.e. that of being "a continuous black line", is "the only property that the real horse does not have" (1968:192; cf. 1976:328).[23] Now, obviously, there are other properties that the real horse does

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23   In his third critique, Eco (1998:14f; 1999: 349f) explicitly rejects what he says here, but he sometimes seems to go to the opposite extreme of thinking there are lines in nature, and sometimes he accuses Gibson of holding this theory ('outlines are already offered by the stimulating field'), when in fact Gibson's point is that perception is based, not on simple properties, but on relations between relations.
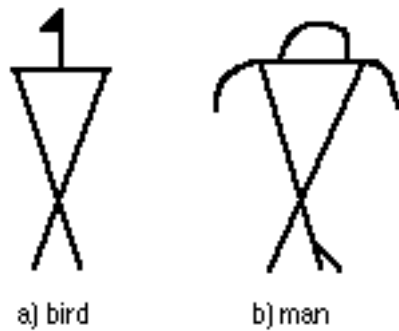
*Fig. 11. Bird and man, according to
the Bakairi conception, as shown
by Vierkant 1912:344*

not possess; but, more importantly, the line has other properties, at different intensional levels – and so, the common property may appear at one of these levels (cf. Sonesson 1989a, III.1.4.). In fact, Eco even mentions another property of the line a few lines later, viz. that it separates the inner space, the horse, from the outer space, the non–horse; but he adds that neither is this property found in reality. Then, mitigating once again the radicalism of his critique, Eco speculates that the horse may really look like that if seen in profile contrasted against the background of the sky. This is certainly admitting too much: the light may be such that the horse loses its aspect of possessing a volume, but then it will appear as a silhouette. And silhouettes have *limits ("Grenze"),* but no *contours* ("Kontur"), as Volkelt (1963:28ff) says: the latter, but not the former, detach themselves equally from outer and inner space. There is nothing comparable to that in reality; more precisely, nothing like that is to be *seen* in reality (in a photograph, a

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similar effect can be obtained only by solarisation).

Curiously, the zebra, which to Eco is a horse with stripes, also appears in Kennedy's (1974b:231 ff.) psychological study of picture perception. Children were able to interpret lines to stand for uneven surfaces as in a landscape layout, uneven illumination as in shadows, uneven texture as in the hems and cuffs of knitted garments, and uneven pigmentation as in the hide of a zebra. Here then, contours, not coloured surfaces, are used for the stripes. Kennedy concludes that any discontinuities that are sources of optical structures may be rendered by lines. Thus, we may answer Eco that the limits of the horse's body and the black continuous line have in common the property of being discontinuities in optical organisation.

If the iconical sign has any property in common with something, Eco (1968:201) says, then it is not with the object itself but with its perceptual model; for the iconical sign constructs a model which is homologous to the model of perceptual relations which we construct when we recognise an object or remember it; only the matter in which the model is realised differ. But it seems doubtful that there has ever been anybody who has claimed that pictures are similar to anything else than what we perceive and/or know about their objects, say, to the deeper nature or essence of things, except perhaps a

Neo-Platonist or Heidegger contemplating van Gogh's boots. Goodman, it is true, tells us about the numerous ways "in which the world is", in order to dismiss the similarity argument; but, clearly, the obvious candidate for similarity comparisons is our ordinary, perceptual, Lifeworld.

Pictures, according to Eco, depend for their meaning on a code, but only a very weak one; i.e. only with difficulty can they be dissolved into their elements. Oddly enough, both Eco's argument for the coding of pictures, and his argument for this code being weak, are mistaken. In principle, Eco (1968:212, 217) says, any analogue sign may be dissolved into a digital sign. As an example, Eco (1968:215ff; 1976:323 f) cites the photograph, which must be dissolved into dots before being reproduced in the newspaper; and the telephotographic technique for transmitting photographs from one place to another. Now, these cases are plainly irrelevant: only when the dots are brought together again will configurations appear, and the picture is seen as such. The possibility of transmitting photographs dot by dot is no more relevant than the possibility of making any picture into a jigsaw puzzle.

Such a "digitalisation" is difficult in practice, Eco continues: it is hard to tell the elements of articulation apart (1968:203) and to distinguish optional features from distinctive ones (p204). The signs (!) of the picture are not comparable to the phonemes, for they have no opposition value: the same dot may at one time signify an eye, and then something completely different (Ibid.; cf. 1976:355 ff.). Eco thinks these features must either be infinite in number, or else that they should correspond to the elements of geometry – but he also gives a list comprising figure/ground, light contrasts, etc. These are then combined into signs, corresponding to objects which may be recognised: a nose, an eye, a cloud – further combined into "iconical statements" like "this is a horse", or perhaps "this is a standing horse seen in profile" (p234f; cf. also Sonesson 1989a,III.4.3).

What Eco says about pictures could equally well be said about verbal language. There is no way of finding the elements of a language without being acquainted with its particular scheme of interpretation. It is a common experience that one is unable to discover even the limits between the words when listening to an unknown language. In verbal language we can only distinguish optional features from distinctive ones in relation to a given content; and the case is of course the same for pictures, only that these would seem to have different contents on different intensional levels, so that a feature which is optional on one level becomes distinctive on another. As we said in lecture one, when discussing "Las Meninas", more traits are

necessity for determining the sign "the Spanish *infanta*" than for the sign "little girl", although these traits partially overlap. Physically identical sounds will be heard as different phonemes in different contexts, just as Eco's dot changes meaning with context; and in fact, physically quite different sounds are heard as the same phoneme (cf. Malmberg 1966). On Eco's account, it would seem, verbal language would also be a "weak code".

In the first version of his critique of iconicity, as we have considered it in this section, 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. Nonetheless, he 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.

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 rely on simple qualities, the *diagrams,* which concern similari-

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ties 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.[24] 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

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24   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.

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.

Saccharine by any other name… A plea for proportionality

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 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, but, 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 oppo-

sitions 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 (Fig. 11), and in some pictograms for ladies' and gentlemen's lavatories as well as the correspond signs of Blis-symbolics (Fig. 3.). Nevertheless, it seems intuitively clear, that the more important such abductive oppositions are in 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.[25]

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. This is, of course, what Mallery (1881) called "reasonable" similarity which is, as we have already argued above, only found in droodles, identities and other kinds of *secondary iconical signs,* and cer-

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25   We will return to the secondary use of structural elements in pictures in Lecture 4.

tainly not in prototypical pictures. The only thing that is necessary to know beforehand, we noted, is the hierarchy of the general and particular Lifeworld we inhabit.

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, which 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 this is 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 ex-

ample; 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 3/4 cm, and for the mark which is 1 1/4 cm, but in what Eco would call a "digital" system, they might both come out identical (cf. Roupas 1977:69ff).[26] The former example is a particular case of a *structure–preserving* mapping (cf. Janlert 1985:184), and this raises the question which other or-

ganisations 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, a 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

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26   Roupas is really discussing Goodman's distinction between 'dense' and 'finitely differentiated' systems. Cf. Sonesson 1989a and 1995 and Lecture 4. 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.

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 iconical that 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 relata, 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 supposes 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!*

In relation to Eco's view, the conception propounded by Groupe μ (1992:135ff) separating the iconic sign into three elements: the signifier, the referent, and the type, has at least the merit of positing a categorical level which Eco fails to recognise. It will be remembered that I pointed out above that the ground seems to account for the division between the immediate and the dynamical object on the side of content; but I then proceeded to argue that there must be a similar division on the side of 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.

Mirror, mirror, on the wall…What do you signify?

In his most recent work on iconicity, Eco's (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[27]. At other times, however, Eco (1997; 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 iconical signs, and, in a way, it seems, to all iconical signs.

According to a theory first presented in Eco's (1984) dictionary entry on the mirror, and enlarged upon in his recent writings (1997, 1998, 1999), the mirror is no sign. In particular, Eco quotes seven reasons for denying the sign status of the mirror, which can be summarised as follows: 1) Instead of standing *for* something it stands *before* something (the mirror image is not present in the ab-

sence of its referent); 2) It is causally produced by its object; 3) It is not independent of the medium or the channel by means of which it is conveyed; 4) It cannot be used for lying; 5) It does not establish a relationship between tokens through the intermediary of types; 6) It does not suggest a content (or only a general one such as "human being"); 7) It cannot be interpreted further (only the object to which it refers can). I will deal with all these arguments in the following, though not exactly in the order in which they are presented above. In fact, they cannot be discussed in the order given, since some of the affirmations turn out to be interconnected.

On Eco's account, then, the mirror is pre-semiotic. It is, according to Eco, an absolute icon, in Peirce's sense, and it would thus have been a perfect iconical sign, if it had been a sign. This is certainly saying too much, since an absolute icon, in Peirce's view, can only exist for a fleeting moment, even in thought.[28] Eco goes on to say that the mirror is no index, because, unlike a letter containing personal pronouns such as "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. It "is *not even* a

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27   For some examples, see the notes to the earlier discussion of Eco's critiques.

28   There are certainly some serious issues looming behind these interpretations, which cannot be dealt with here. See, however, Sonesson, 2003b; in press a, and Lecture 2.

Firstness in the Peircean sense" (my italics), Eco continues, because it is already a relation, and thus a Secondness. On this point, I can only agree with him, except for the wording: it would have been more proper to say that the mirror *is already more* than Firstness. In fact, I have said the same thing, not only about the iconic sign, but about something more general which it supposes, the iconic ground: it is *already* a relation. In any case, if it is a relation, it is a least already Secondness, so why should it not be causal, as Secondness is in strict Peircean theory? Or, if we take causality to be a sufficient but no necessary criterion on Secondness (as I would prefer), then it might still be causal (cf. Sonesson 2003b; in press a).

With reference to 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 discon-

tinuity 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).

Let us start with the first argument, according to which the sign, but not the mirror, supposes the absence of the referent. In the case of many signs, the content (or rather the referent) is present together with the expression. Many signs function *in the way they function* only in presence of their referent: this is the case with those pictures of birds with the names of their species written below them which are attached to the bird case in the zoo. Indeed it is the case with much of our language use: for although the female personal pronoun, for instance, figures extensively in the absence of a possible referent, it does not tell us very much; and talking about the gorilla in front of it adds more than only shades of meaning.

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. Indeed, as we shall see, co-presence is a precondition at least for one kind of indexical sign. The

sign character of these signs 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". The classical definition of the sign, which Eco here refers to, is wrong in requiring the absence of the referent. *Differentiation*, which defines signs, must be distinguished from absence.

We shall now have a look at the second argument, which says that the mirror image is causally produced by its object, which is not the case with the picture sign. Thus, causality is taken to exclude the sign character. This is curious, because one of Peirce's most currently quoted definitions of the index (which is a sign) says that it depends on a causal relation between expression and content. 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.

However, if we choose to define indices in terms of causality, then – following the "structural argument" which is have formulated elsewhere (cf. Sonesson 2001c and above) – it will be impossible to exhaust the domain of signs by means of only three sign types: indeed, many examples of indices given by Peirce are certainly not causal. "Real connection" (exemplified most notably by contiguity and factorality) is therefore at better definition of indexicality. Yet

this means that there is no contradiction between causal production and the sign function. Even if causality does not define the sign function, nor even the peculiar kind of sign termed index, it is not incompatible with it.

These facts no doubt explain why Eco feels the need to demonstrate, not that the mirror is not an icon, but that it is no index. But his argument is connected to another feature, which he takes to be characteristic of signs: that they imply the possibility of lying (cf. Eco 1976:339f; 1984:202ff). Employing one of the more classical instances of indexical signs, Eco (1984: 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, which 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. This is so because the sign, in this kind of case, is based on our observations of common Lifeworld regularities. 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 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?

Pronouns like "I" change their meaning each time they are used, yet retain this meaning once they are written down (or, one might add, when the speech is recorded on tape). The mirror, Eco contends, continues to change its meaning for ever. 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, not that which the sender observed before putting the device into the parcel. This is not to say that the weathercock functions exactly as the mirror. The difference between the mirror, the pronoun and

the weathercock has to do with the relative importance of the constant and variable element in the meaning, that is, with Eco's "content".

This thus brings us to the sixth argument, according to which the mirror does not suggest a content, or only a general one such as "human being". The difference between the pronoun, the mirror, and the weathercock 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. The constant element 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.

The opposition that Eco posits between mirrors and signs is seemingly the same as other thinkers (e.g. Gombrich) have always postulated as a difference between pictorial and verbal signs. It is often expressed as a difference between *singularity* and *generality*. A picture, it is said, can only show an individual person, not "a guard in general", but some

very particular guard with individual features. As applied to pictures, these arguments are no doubt wrong. It is possible to construct very abstract or schematic pictures (children's drawings or logograms, for instance), which only convey very general facts. Indeed they are about "a woman in general", etc. 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. This also applies to mirrors: while looking at myself in the mirror, I may suddenly see some configuration, which I interpret, as "a man appearing behind my back". I do not have to recognise him as Frankenstein's monster to be frightened. In mirrors, as in pictures, singularity is not, in the last instance, in the sign, but in the use to which we put the sign.

At this point, it will be convenient to attend to a kind of generalisation of the second argument: according to Eco, the mirror image is not an index for the person in front of the mirror, because we do not need it in order to know this fact; only the lack of an image when the Invisible Man or an vampire passes in front of the mirror could perhaps be admitted to be a symptom. Nor is a mark on the nose observed in a mirror an index, Eco says, because it is no different from the mark we observe directly on our hand. However, these observations are *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.

Curiously, Eco all the time talks *as if mirrors were only used to look at ourselves.* In fact, mirrors are not only used for seeing oneself but for seeing others and other things. Some mirror types are actually specialised for such purposes. The rear mirror of a car is used for discovering other cars coming from behind. 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. Even supposing that Eco's argument would have some relevance, these mirrors are not used to show something that is known beforehand, as the presence of cars, teeth, or lips, but to investigate special properties of these objects. Thus, they are not "symptoms", if we take this word in the ordinary language sense of an indexical sign that is unintentionally emitted.

We can now go back to the third argument, which claims that the mirror is not independent of the medium or channel by which it is conveyed. It is not clear whether Eco here means

to speak about the different materials employed, or about the fact of transference being possible.[29] 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 "obscurely, as in a mirror". In this sense, the argument is historically wrong.[30] 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 fifth one, according to which signs suppose types to be mediated by tokens.

Therefore, we now proceed to the fifth argument, which tells us that the mirror does not establish a relationship between tokens through the intermediary of types. 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, which most art historians would vehemently deny). Nor do *any momentary signs* comply with this criterion, from pointing fingers to weathercocks 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".

The notion of momentary signs does not appear to exist for Eco, and yet it is an important one. The problem seems to be that Eco thinks something, which once is a sign, must then always be one. However, if we exclude all signs that are only momentarily signs of something, most of the examples given by Peirce and others will not be eligible as signs. You do not have to cut off a finger and send it off by post for it to change completely its meaning; even in its natural position, the content to which it points is continuously changing. In fact, weathercocks, 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. This is also the only reason Eco quotes for not recognising my suggestion (from Sonesson 1989a)

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29   The first is the common interpretation of Hjelmslev's distinction between form and substance, but the latter is closer to being the correct one.

30   Indeed, Gregory (1997: 47ff, 57) who maintains that the first mirrors were made of polished copper, silver, gold, or obsidian, and before that were bowls filled with water, the direct descendants of which were wetted slates hung on the wall, also suggests that S:t Paul's looking glace may have been have been an instance of "*obscura* mirrors which were so poor optically that they stimulated the imagination more then the eye."

that the mirror is a "hard icon" in Maldonado's sense: the indexicality and iconicity of the mirror is only momentary. But this reason will not do, since it would force us to deny the sign status of numerous other signs.

We will now turn to the fourth argument, according to which the mirror cannot be used for lying. 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 (1984: 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 amount to saying that, like the picture, the mirror has its "ground", its principle of abstractive relevancies.

In fact, there are no zero-degree mirrors: as people who use mirrors professionally, from dentists to sales clerks at the dressmakers, will readily point out to us, 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 particular fraction in the case of the dentist, a particular tint for the dressmakers, etc.

Eco's final argument, the seventh one, says that there is no chain of interpretants resulting from the mirror as in the case of the sign. The mirror cannot be interpreted further – only the object to which it refers can. But of course the mirror may be the starting-point for a chain of interpretations, just as any feature of the common sense Lifeworld. That is what the dentist does, the woman applying her lipstick in front of the mirror, the driver who sees a car coming up behind him, the person seeing the monster (which is not a vampire) in the mirror, etc. Eco would say this amounts to interpreting the object, but this would only be true if we had accepted his other arguments. If mirrors are adapted to their particular uses, as we just saw, then it really is a question of interpreting the object *as it is given* in the mirror, roughly similar to the interpretation of objects through the intermediary of a picture.

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 (1999: 369) points out against me, that these latter signs leave something endurable 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.

From here on, Eco (1998: 22ff; 1999: 371ff) goes on to suggest that the television image is similar to mirrors, and not to ordinary pictures, with the provision that the reflection passes over an electronical channel.[31] He then imagines that the film, the photograph, and the hyperrealistic painting are "frozen" mirror images. The difference here is simply that now expression is separate from the content and thus can survive the

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31   We will see in a later lecture that this is unfeasible, quite independently of the mirror being a sign or not.

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disappearance of the latter. Very little seems to be left for the conventionalist theory of pictures, which, in other passages, Eco seemed 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!

Summary

In contrast to Bierman's and Goodman's logical critique of iconicity, Eco assembles a number of argument, which are more general, common-sense, and "cultural". Many of these arguments are intriguing, but they always seem to miss the mark. In the first version of his critique, Eco suggests that pictures are conventional and divisible in to features. But basically, he seems to confuse the conventionality of the *Lifeworld* with that of the picture sign (as we will show in more detail in the next section). The second version of Eco's critique involves one important change: pictures are still supposed to be conventional, but they now are alleged not to be divisible into features. Yet Eco's argues for a relation of proportionality between the sign and the world, which clearly implies that both the sign and the world must be segmented into parts. The third version of Eco's theory of iconicity starts out from the mirror, which is claimed not to be a sign, and then generalises this conception

to (almost) all pictures. However, thanks to our more stringent definition of the sign as well as of iconicity, we can show that the mirror is indeed a sign, and an iconical sign at that – and in that sense, it is similar to pictures. In other ways, however, as we shall discuss in the next section, pictures are peculiar.

3.4 On the way to Pictorality: The case for resemanticisation

We have seen so far that pictorality is usually confused with iconicity, which begs the question of to what extent pictures are special. The same arguments, which Bierman directed against iconicity, were used by Goodman in the case of pictures; and Eco constantly confuses pictures and icons, even in his latest work. Klinkenberg and Blanke even explicitly declare that they are going to use the term iconicity to mean pictorality. Peirce would probably take pictures to be "images", that is, icons based on simple qualities, but as we have seen, this will not do, if he is referring to the ground that motivates picture signs (which must consist of relations between relations), as opposed to the impression they create. After showing more in detail why pictures cannot by Peircean "images", I will suggest that pictures are organised in a special way, which I will call resemanticisation. I will also delve deeper into the foundation of the process of resemanticisation, which is to found, in part, in Wollheim's notion of "seeing-in", but, principally, in Husserl's considerations on "pictorial consciousness". Returning to my earlier discussion of these authors (in Sonesson 1989a), I will expand on my previous conclusions to suggest a modification of the µ-model of the picture sign. Finally, I will suggest a way in which the iconical and indexical grounds, liberated from their function to constitute signs, will offer the foundations for a pictorial rhetoric. We will start, however, from another end: by taking up Eco's arguments again, and adding to them, to pinpoint the conventional aspects of pictorial and other iconic grounds.

The conventional residue of iconic signs

Although the general argument for the conventional character of pictures is no doubt mistaken, it remains true (as Peirce was the first to recognise), that all real pictures are largely conventional. Some of the conventional traits of pictures depend, as we have suggested, on the general character of the human Lifeworld. Many of the other conventionalities attributed to pictures are really inherent in the particular socio-cultural Lifeworld. This means that, whenever some peculiarities of an individual or a thing, some traits of the woman or the zebra, are locally given importance, they also make up the features given

primary importance in a picture.

Pictures, being a kind of visual thinking, are required to follow the phenomenological rule of all thinking, according to which an object can only be seized each time *from a particular point of view,* and not in its entirety, which means that a choice has to be made among the proper parts, the perceptual parts, and the attributes of the object. Moreover, much thinking, also that which goes on in pictures, is made in terms of prototypes, that is to say, construing an object as an approximation to a more typical instance of the same class; and even abductions and simple structures often intervene in the constitution of pictorial signs.

In fact, even a sign grounded in resemblance must pick up some of the infinite number of properties of the object which it takes as its signified, and reject all the others, in order to constitute its own signifier. Only some of the properties of the content are pertinent, or relevant, within the domain defined by the sign function. This appears to be true, not only of pictures, but of all iconical signs, which is why there can be no pure iconicity. In his early study of manual gestures, Garrick Mallery concluded, as we noted above, that many of these signs seems "reasonable", because the similarity between the sign relata could be observed by a person acquainted with the culture, or once the sign had been explained to him (Cf. Mallery 1881:94f

and Kroeber's introduction, p xxiv). Thus, for instance, in Mallery's (1880-81) dictionary of manual gestures we discover a great number of different signs bearing the meaning "woman" or "female": imitations of the breasts; of the female sex organ; of the undulating contours of the female body; of small size; of long hair; and of the peculiar hairdo of the Indian woman, with braids to the sides. This is really the story of the blind men and the elephant all over again: the elements are all similar, but the way they are selected and divided up into segments must be separately justified (cf. Sonesson 1989a: 43ff, 223ff). This story may be recounted using pictures.

Thus, the iconical sign, like any perception, is unable to grasp its object in more than *one or a small number of its aspects* at the same time. Thus, for instance, a thing must be perceived from a particular point of view, and must likewise by so rendered in a picture, or by means of an iconic gesture; even Cubism is unable to integrated more than a few perspectives at a time. This is true not only of the *perceptual parts* (perspectives) of a thing, but also of its *proper parts,* and of its *attributes:* an object appears as a division block of a more extended perceptual world (the face as part of the body, the body of the room, the room of the apartment, the apartment of the city, and so on); and one or other of its properties is highlighted by the way it is present-

ed (as a human being, a horseman, a general, a husband, and so on). The manual sign for woman obviously represents a woman from a particular perceptual perspective (the braids or the curves are seen from the front), selecting some proper part to the exclusion of others (hairdo, sex, or more global properties like size and nature of border lines), and insisting on particular attributes (secondary or even culturally defined sexual characteristics). Also petroglyphs will insist on some particular perceptual angle (a human being from the front, a ship or an animal in side view, a plough and a chariot from above), some proper parts (arms, legs and trunk of a person, sometimes no head, but often sexual organs), and some attributes (sometimes man versus woman, but never child versus adult, etc.). Anati's "prayer" only conveys some very general traits of bodily shape, arms, legs, trunk, sometimes a head; and it picks out one conceivable position, that of raised arms.

[32]This choice is often not made in an entirely arbitrary fashion, but some proper parts rather than others, some attributes, and in particu-

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32   As is clear from the name, Anati (1976) takes this figure to be engaged in praying. This seems to me a risky hypothesis. Perhaps there really are anthropological universals for praying, but I think it is safer to describe this figure as an picture of a man, but only a droodle of praying. If so, it remains to show that the key is universal. Cf. Sonesson 1994a and Lecture 2.

lar some perceptual parts will be favoured over the others, at least if there is no particular reason for picking out some specific part. This choice is determined in multiple fashions. First, manual gestures, like pictures, carry with them *the conventional traits of the Lifeworld* in which they are first used. Even when referring the white man's woman, the user of the American Indian manual signs will make the sign depicting the two braids typical of the Indian woman's hairdo. In the context of the prehistoric Lifeworld, it would seem, the inclusion of a penis, or of some kind of weapon, both serve equally well to designate the male sex of a human figure (see Burenhult 1981; Janson et al. 1989), even though one is a body part, and other a cultural trait; moreover, they may appear even when no sexual act is involved, in one case, and no war scene or hunting party, in the other. In the same way, the raised arms of the "prayer", do not necessarily stand for praying at this particular moment, even supposing that was a possible interpretation of the arm position in question at the time.

Second, like all thinking, pictures and manual signs designate categories of things by describing their *prototypes,* that is, the best instances of the category. Thus, although not all women have a markedly curvaceous body, the manual sign involving undulating movements may be employed to designate them. Similarly, the petroglyph showing a man urging

a mule, or driving a plough, with his over-sized penis in erection (reproduced in Anati 1976:128 and Janson et al. 1989:20, respectively), may not be making love, either to his plough, or to his mule, but is simply shown as a prototypical man, first because his sexual organ is emphasised, and secondly, because it is shown in its prototypical state (which is not to say its most common state). Indeed, as we have suggested elsewhere (Sonesson 1988; 1989a; 1990) many visual signs standing for large categories are better seen as *idealtypes,* that is, signs the expression of which exaggerates certain features to a point not found in real instances of the category.[33] The penis, in many petroglyphs, is not only of a disproportionate size, but its erection is outside of natural contexts for such as state. Also Anati's "prayer" may well be a idealtype in this sense (Fig. 12a): it exaggerates the erect posture which differentiates man from other animal, by adding the vertical extension of the arms to the customary stature, and by introducing the raised arms outside a natural context for such an act.

Most beings and objects clearly possess a point of view from which they are most characteristically shown, and more easily identified: it has been demonstrated that the side-view is prototypical to animals and vehicles, but furniture, shirts, and trousers, as well as human beings, from the front (see Rosch et al.

33   Cf. Lecture 4.

1976: 400f). What is prototypical to one culture may not be so to another, however, for old Chinese pictures, and the early stages of their writing, show that they preferred to consider a nose from the front, not in profile, as we do (cf. Lindqvist 1989:33). In petroglyphs the plough or the chariot is often shown form above, the animals attached to it from the side (and sometimes one of them upside-down), and the man driving them from the front (see Janson et al. 1989:20).

In order to economise their expressive resources, the users of pictures and gestures, like all other signs may, thirdly, be content to use only *those traits in which the designated object differs from other, similar objects.* In the case of manual gestures, for instance, women's small size is relevant, in opposition to the (relative) tallness of men. According to a well-known example given by Eco (1968:191), the zebra, which in our culture may be contrasted to the horse by means of its stripes, would have to be differentiated in another way in a culture being familiar with a single other animal species, the hyena, which also has stripes. A more extreme example are the petroglyphs of the Bakairi tribe contrasting man with a bird (Figure 11a-b): only the upper part of the figures differ, so that it might be said, paraphrasing Aristotle, that to this tribe man is a beakless biped. Anati's "prayer" appears to pick out a more basic trait
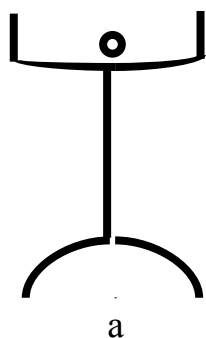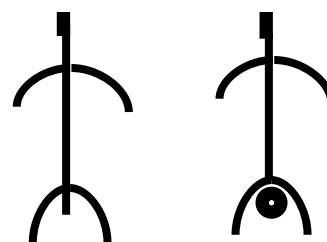
Fig 12. a) One variety of Anati's "prayer" (from Anati 1976:46, passim); b-c) prehistoric petroglyphs

a

b) man;   c) woman

distinguishing man from other animals, which is more firmly grounded in the general structure of the Life-world: the erect posture, exaggerated by being extended to the arms.

The signs used for man and woman in Blissymbolics (and also sometimes as logograms to indicate men's and women's washing rooms; Figure 12b-c) may be read pictorially, but the traits included are not chosen for the sake of a correct and complete rendering, but to establish the distinction: the trousers' legs of the male versus the woman's skirt (Note that, on this interpretation, the pictorial equivalents of the woman's legs emerging below the skirt are not included; the rendering of the woman's body is less complete than that of the man). In some respects this is similar to the opposition, often found in petroglyphs, between the stick figure with a the straight line appended, which is easily interpreted as the man's penis, and an identical stick figure with a dot (or, strictly speaking, a cup mark), which could be the woman's vagina (cf. Anati 1976; Broby-Johansen 1967; Burenhult 1981; Gudnitz 1972; Janson et al. 1989). In

a general way, the sexual organs are more natural distinctive features between the male and the female than trousers and skirts; but, pictorially, the selection of these traits, rather than any of the other bodily differences between men and women, is quite arbitrary.

Taken together, all this means that, although a part of the expression of a sign can be iconical for a part of the content, it may very well be included in the sign for conventional, and even, in a stronger sense, arbitrary reasons. Of course, in some cases this inclusion is far from being arbitrary, but is then motivated by considerations quite foreign to the pictorial rendering, perhaps by the necessities of symbolism.

If the inclusion in a picture of certain, in themselves iconic, traits, is not necessarily iconically, or at least not pictorially, motivated, the exclusion of such traits does not have to be pictorially, or otherwise iconically, justified. Thus, for instance, Anati (1976) repeatedly mentions the presence of "asexual figures", but in fact, the failure to depict any sexual organ, just as the absence of heads, in other

cases, may well lack all pictorial significance; the proper parts in question may have been *neutralised, simply* because their inclusion was not important in that context. Similarly, Tilley (1991: 68ff, 102ff, 136, 142, 146) makes too much of what might well be the same kind of neutralisations, when he argues that the elks, lacking antlers, must be females, and thus embody a female principle, whereas the stick-figures, which have phalluses or no sexual indication, must represent males. Sexuality may simply not be relevant here.

If Anati (1976:60) is right in suggesting that a couple consisting of one headless figure and one normal one indicates the separation between body and soul in the same individual, then the headless figure is really iconical, but not in the sense of pictorial, as we have describe the latter function above, but rather in a symbolical sense: no real headless person is depicted.

Finally, it should be mentioned here that pictures and gestures are necessarily conventional because they are themselves *objects of different categories* from most of the object that they represent. For instance, since the expressive resources of manual signs are essentially the hands and their movement, the (limited) vertical extension of the female body can only be described as far as one of its properties is concerned, its highest point; and the curvaceousness of the female body cannot be rendered

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in its totality, but only transposed in time, as an undulating movement. Rock carvings, as all other pictures executed on a surface, lack the third dimension of the real world: actually, because of being carved in the rock, the petroglyphs, unlike most pictures, have a prominent third dimension, but this cannot be used for rendering the third dimension of the perceptual world.

The picture is no image. The Annigoni case

Another respect, in which Eco (1968:188; cf. 1976:327f) *does* have a point, but not the one he presumes, is when he asks what it can mean to say that Annigoni's portrait of Queen Elizabeth has the same properties as the queen herself. As he points out, the nose of the real queen has three dimensions, and that of her portrait only has 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. And we could certainly go on comparing further details with similar results. Thus, it can hardly be denied that a painting of the queen (as opposed, for instance, to an actor impersonating her on the theatre, or even a statue) is profoundly different from the queen herself. But this does not show that the painting is conventional, at least not in any obvious sense.

It follows, instead that there is something wrong with the Peircean division of icons into three types: the *images,* which rely on simple qualities, the *diagrams,* which concern similarities between relationships, and *metaphors*, which involve relationships between relationships. Following these definitions, 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, and so on (cf. Gibson 1982; Sonesson 1989a). The Annigoni portrait is a perfect illustration of this point. Whatever is similar between the portrait and the real queen must be searched on some higher level of relations between relations. And yet we do not have to search for it. It is directly offered to our perception. Indeed, the similarity is there, not in some real reality, but in the human *Umwelt*. The same goes for the lines, which Eco (following Gombrich) denied any reality. The lines are there, in the human *Umwelt*.

If the Peircean notion of images is not an empty category, then the only candidate for inclusion 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.

If, as I suggested above, there is an implicit structural argument in Peirce's division of signs into icons, indices, and symbols, then this should also be true about the further division of icons into images, diagrams, and metaphors. If it is implied that this division should be valid both for the iconic grounds, and for the impression created, then we have falsified this argument. It seems hardly satisfactory to say that the picture is a metaphor at the level of grounds, but an image at the level of perceptual results, but for the time being this is all we are able to do. More than in the case of the primary triad, the present one really stands in need of emendation. This may really be a

case in which we had better abandon trichotomania.

Saussure's (1974:39) observation that, whereas language is one-dimensional, painting depends on a semiotic system deployed in multiple dimensions, has never acquired any followers, and rightly so, for it would be impossible to demonstrate that these dimensions are relevant for the combinations (syntagms) and selections (paradigms) of some kind of pictorial sub-elements (cf. Sonesson 1988; 1991, 1992e; 1993c.). For a long time, however, semioticians tried to demonstrate the existence of some kind of minimal unit of pictorial meaning, sometimes termed *iconeme,* which was supposed to have no meaning of its own, but served to discriminate the meanings of larger wholes, just a phonemes do in relation to words or morphemes. Eco (1968: 234f; 1971: 77ff), who was an early proponent of this conception, even went so far, at one time, as to suggest the existence of something similar to a *double articulation* in pictures (adding a third articulation in the cinema; 1968: 244), where dots and lines made up the equivalent of phonemes, noses and eyes corresponded to words, and horses and men were on the same level as sentences; but quite apart from the fact that the latter two levels concern units of the referential world, which may be rendered differently in pictorial signs, such an analysis does in no way account for the peculiarity

of pictorial semiosis (cf. Sonesson 1989a,III.4.2-3).

Eco (1976) later retracted himself completely, arguing that there could be no distinctive features in pictures. Thus, he ended up holding the same position as that expressed earlier and more clearly by Goodman: that pictures were capable of no further analysis, i.e. that they were, as Goodman puts it, "dense and replete". Density is a property of sign systems the possession of which implies that no matter how close a division of the signs is made into smaller parts, it will always be possible to proceed with the division, introducing a third unit between each earlier couple of items, and so on indefinitely. Density is semantic when it applies to content units (to referents, in Goodman's nominalist terms), and syntactic as far at it involves the varieties of expression (Goodman's "marks"). A dense system is replete when its signs can be divided from many different, perhaps an infinite number, of viewpoints. Density and repleteness, in Goodman's view, apply to pictures both as carrier of reference and as exemplifications, that is, in terms more familiar to semioticians, as "iconic" and "plastic" language respectively (cf. Groupe µ 1979). As I have shown elsewhere (Sonesson 1989a;III-2.3-5 and III.6.1.; 1995a), this would mean that pictures are semiotic atoms, in the original sense, i.e. not susceptible of being divided in any non-arbitrary way into smaller

units. However, as I argued against both Eco and Goodman (in Sonesson 1989a), and as Eco (1998: 12f; 1999:344ff) now himself admits, the interpretation of pictures supposes the identification of general categories, both in pictures and in the perceptual world. And there can only be categories that may be correlated to the extent that the world and the picture are susceptible of segmentation.[34]

In his earlier work, however, Eco claimed all similarity to be 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 thought, would we be able to discover the motivation of the signs. As pointed out above, 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. Contrary to what Eco claims, we noted, there is one property that is preserved here, viz. 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.[35] A convention specifying

all these relationships would have to be very complex indeed, and would have to be made separately for each picture. But suppose instead that the relations correlated by iconicity are prior to their relata, i.e. that they are relational properties. Something of the kind seems to be suggested by the theories of perceptual psychologists such as Gibson, Kennedy, and Hochberg (cf. Sonesson 1989a,III.): no "simple qualities", but the relations between the relations coincide in the picture and the perceptual world. 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 supposes 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. On the contrary, to many psychologists engaged in the study of perception, pictures are *motivated* and resolvable into *features.* This is because their features are relational.

To Gibson, features are the same as "invariants, in the mathematical sense, of the structure of an optic array"; "formless and timeless invariants that specify the distinctive features of the object" (Gibson 1971:31); "relations between relations, for which there are no names and no mathematical expressions";

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34   Simple spatial features are not enough, of course, as I argued (in Sonesson 1989a) against both Kennedy and the usage to which Bouissac puts Hubel & Wiesel's spatial detectors, and as Eco (1998: 14f; 1999:350ff) now argues against Hubel & Wiesel.

35   This argument, formulated already

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in Sonesson 1989a,III. would seem to take further the claims made by Stjernfeldt in press.

"invariants of structure which are nameless and formless" (1978:228). This certainly seems curious, as Gibson's critics have not failed to notice (cf. Goodman 1984:11 f; Janlert 1985:156ff): for while it is conceivable, that a mathematical invariant cannot "be put into words", it is difficult to understand how it can lack mathematical expression. According to Kennedy (1974a: 44) solid angles are too complex to be computed by the optics of the present time; so mathematical expression is supposedly forthcoming in the future. Purdy and Sedgwick have demonstrated that pictures really do contain geometrical information for depth (cf. Sedgwick 1980); and Perkins (1973) has shown that, from some angles of vision, certain geometrical volumes can be derived from their orthogonal projection on the picture plane. But that the information is present does not mean that it can be used by the perceptual system, as Hochberg acutely remarks. More important for the moment is the consideration of what kind of information it is that has to be picked up.

It may be remembered, that, according to Gibson (1978:228), what is directly seen are things like the cat on not "that peculiar, furry, mobile layout of surfaces". Therefore, it is not enough to show, that there is geometrical information for depth, and for simple geometrical shapes, on the picture plane; we need to find the formula of cat-ness. Kennedy

(1974a: 44) is aware of this problem: what optics is still not able to do is to discover that which is common to all angles that are projections of human beings. That there are such invariants is however, as far as I understand, simply an article of faith.[36] So why could we not suppose instead that these kinds of invariants, unlike those of depth and simple shapes perhaps, are qualitative rather than quantitative, and have both a name and a time of birth?

This would certainly bring us closer to the *Ganzheitspsychologie,* though not so much the Berlin school, which Gibson explicitly rejects, but rather the Leipzig school. The examples given by Gibson (1978:230) could easily be understood in this qualitative way: straight lines, curves, closure, intersection, parallelism, coincidence, and other features are invariants which the child must discover and correlate with invariants of the environment, such as occluding edges, corners, pigment-borders, etc. Features of this kind have been studied more thoroughly by Kennedy and Hochberg. Although Gibson clearly identifies his invari-

36   The fact that animate action (and the action of different animals, as well as different movement pattern of the kind we call walking, running, etc.) can be perceived simply from the movement of a constellation of dots seen in the dark would seem to lend some plausibility to this claim – but even if these constellations may be mathematically described, it does not follow that this is how they are perceived.
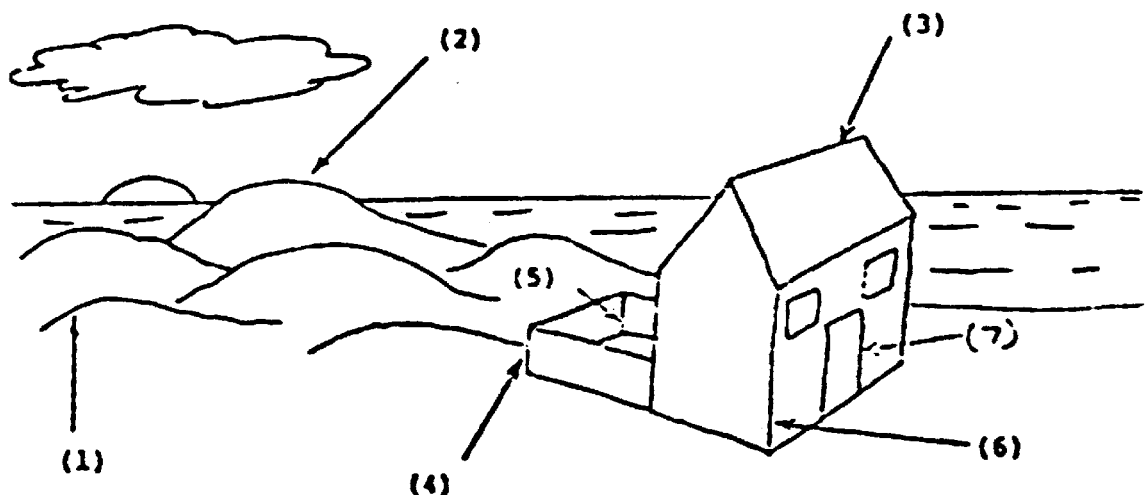
Fig. 13. Features according to Kennedy (1974b: 231): 1) occluding bound with background air; 2) occluding bound with background surface; 3) occluding edge with background air; 4) occluding edge with background surface; 5) concave corner; 6) convex corner; 7) crack

ants with features, Kennedy seems to feel that his features are different.

Kennedy (1974a: 28ff) starts out radicalizing Goodman's critique of similarity, in order to include more subtle relationships. Langer, who, in Kennedy's view, is more precise than Peirce and Wittgenstein about the distinction, says that similarity may consist in "a proportion of parts", "an arrangement of elements analogous to the arrangement of salient visual elements in the object" which, as Kennedy (p34) observes, is really two criteria, for a stretched rubber sheet changes its proportions but retains the adjacencies of its parts, i.e. its topology. Two configurations close to each other on the pictorial surface may, as Kennedy points out, represent a neighbouring house and a distant hill. Thus, it is certainly not in terms of the distribution of chemicals on the pictorial surface that pic-

tures can be defined. It could be added, I think, that if there is similarity, it exists between the content and the referent (between the picture object and the picture subject, in Husserl's terms, as we will say below), not between either of these and the expression (i. e. the picture thing). This problem is assumed to be resolved by both Langer and Kennedy.

The convention theory is also rejected by Kennedy for obvious reasons. Gibson's original point-projection theory will not do either: the same configuration can be formed with white chalk on the blackboard, and with blue ink on white paper, and there will be no single identical spot (p.42). Later, however, Kennedy suggests that the projection theory can be made feasible, if it is reformulated for features instead of spots. Indeed, if we are concerned with outline pictures, Gibson's col-

our spots are clearly irrelevant for there is no colour (p 106ff); so perhaps, instead, Kennedy suggests, it is the whole object which is projected from the world to the picture. Since it is possible to depict, and to recognize the depiction of, unknown objects, Kennedy argues, entire objects cannot be projected, so perhaps it is parts of objects that combine to form new configurations, which are projected. But different objects have different parts, Kennedy continues his argument, so this would give us an infinite number of elements. In order to arrive at "a small set of units – a small vocabulary", Kennedy (p 108) suggests another analysis in terms of contours, shadowing, highlights, etc. Contours, for instance, have features like "concave corner, convex corner, occluding edge, occluding bounds, strands, cracks, etc." (p 110 ff; cf. fig. 13). Features like these must be higher-order variables, so it is not clear how they differ from Gibson's invariants, at least from Gibson's examples quoted above.

In any case, Kenney's features result in a new segmentation of perceptual reality, a new "form" given to the old "substance", for the human body will no longer dissolve into head, trunk, legs, etc., but into bounds, edges, and corners. Of course, at some unconscious level, perceptual reality is supposedly analysed in the same way. But this means that to Kennedy, and perhaps to Gibson, pictures are motivated, and ana-

lysable into features — which is exactly the opposite proposition to that of Eco. So far, Kennedy's suggestion certainly seems the more reasonable.

Like Kennedy, Hochberg (1972:69; 1978a: 190ff; 1980:51; 1994; 1998) thinks picture perception is essentially based on perspectival cues. Pigment on paper can stand for the edge of a surface, such as the contour indicating the silhouette of a key; it may represent the corner where three surfaces meet, as in the Necked cube; or else it can represent the line where a round surface, for instance a doll's body, passes out of sight, just as the earth disappears from view at the horizon. At least some of these features, like many of Kennedy's, are already on the content side: the edge and the "horizon", for instance, look exactly alike, until they are seen as parts of the object they compose on the pictorial surface. The case of the different angles between the lines is different, for they can be interpreted by a properly programmed computer (cf. Winston's programme discussed in Boden 1977). In addition to the perspectival features, Hochberg (1972:73ff; 1980:76ff) also considers *distinctive* or *canonical feature,* the nature of which can most easily be grasped from an example: given a facial oval, a toothbrush moustache is sufficient to indicate Chaplin, if the potential set is made up of movie stars: but in a wider context, a bowler hat, instead of the charac-

teristic fringe, is needed in order to distinguish Chaplin from Hitler. The insistence on "potential sets" gives the argument a distinctly structuralist ring; but neither the fringe, the moustache, nor the hat are "purely negative terms", and so must somehow be recognized for what they are in themselves. If we can explain how this is possible, we have also perhaps the general explanation for picture perception.

Indeed, the modification of Gibson's picture theory was provoked by the Ryan & Schwarts experiment, which showed that cartoon-type drawings were more rapidly recognized than more literally correct pictures, including photographs (cf. E. Gibson 1969:100 ff; Hochberg 1978a: 193 ff; Perkins 1975; Perkins & Hagen 1980); and yet the rejection of the point-projection theory could, as Kennedy (1974a: 42) observes, be motivated from the common sense observation that white chalk on a blackboard can form the same picture as blue ink on white paper. But what if cartoon features, or "canonical notation", *are* crucial to all pictures? What if there are some "invariants" for moustache-hood, bowler hatness, and fringe-ness, which are not perspectival in nature, i. e. which do not refer to spatial layout? Consider again Kennedy's landscape (cf. fig. 15): how much would we make of it, if the house had not been a typical house, just as the hills, and the quite non-perspectival cloud and sea? The

perspectival cues, then, would be secondary to some more qualitative types of holistic properties; and this would explain, not only that non-perspectival pictures are readily interpretable, but also the possibility of "impossible pictures".

More recent proposal, which do not distinguish between the perception of pictures, and that of perceptual reality, such as those of David Marr (discussed, for instance, by Bermúdez 2005) or Irving Biedermann (cf. Peissig, Young, Wasserman, & Biedermann 2000) do not show any fear of an "infinite number of elements" which, according to Kennedy, must result from different objects having different parts. Marr, for instance, discusses the single example of the human body, conceived as a series of interlocked parts inscribed into three-dimensional shapes. Bidermann's theory more explicitly take into account the difficulty of recognizing objects when seen from different points of view, and so may include the pictorial view as an instance; at least, the perceptual abilities of pigeons are studied using pictures. "Geons" are such components of objects which can be recognized from different perspectives and which include the relation to other component of the same objects.

While no agreement seems possible at present of the nature of the parts into which objects and pictures are analysed, it is clear that, if anything, pictures, just like perceptual

reality, must somehow by analysable into features, for some identification to take place, and these features must be, at least in part, motivated by similarity, if a mapping from what is for all practical purposes an "infinite" number of features is to take place from reality to picture and vice-versa.

The process of resemanticisation

In spite of the existence of pictorial features, Goodman's observations on density are not entirely off the mark. Indeed, once we have determined whether a particular scribble realises the category of a tree or of a woman's profile, the drawing will tell us a lot about the particular conformation of the crown, or the nose, the haircut, and so on (Cf. Fig. 14a-b). Similarly, once we realise that a "black wiggly line", as in Goodman's example, does indeed represent Mount Fuji, rather than a population graph, its minute details and variations will inform us about the particular shape

of this mountain ridge. But not indefinitely: only up to a point set by the principle of pertinence embodied in the pictorial medium.

Consider Hünig's (1974: 5ff) argument regarding the impossibility of pictorial features. Fig. 15a looks like a fish, but fig. 15b is easily seen to be a bird; since the only difference between them is the elements found in fig. 15c, one might suggest that they are indirectly signifying units, like phonemes. Against this proposition, Hünig adduces the fact that fig. 15d, which does not contain the elements in fig. 15c, can also be seen as a bird, as well as the further facts, that the very same elements are parts of a star in fig. 15e, and form the arms of a man standing on his hands, in fig. 15f, which, without these elements, would instead be similar to a tree, as in fig. 15g. Unfortunately, this argument is invalid. To begin with, if both fig. 15b and fig. 15d mean "bird", they will simply be synonymous expressions, and this fact has no bearing whatsoever on the existence of
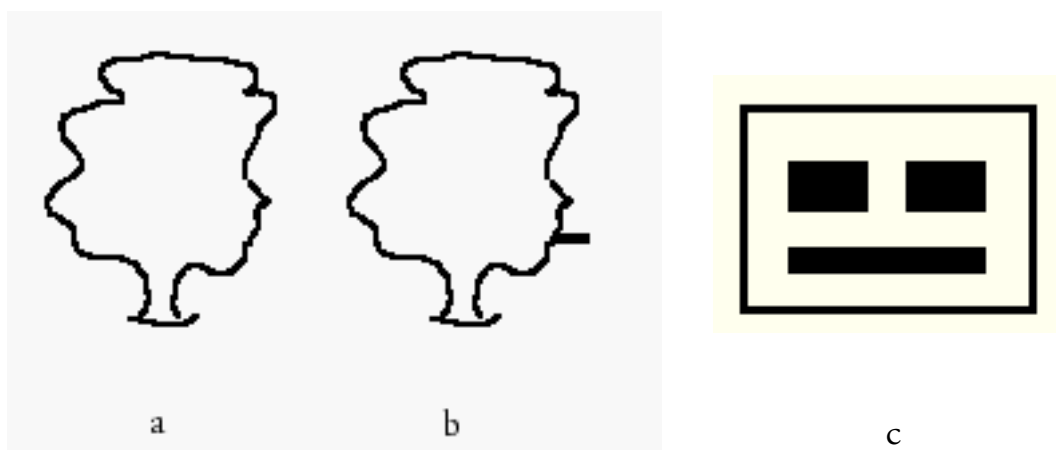

Fig. 14. Gregory's tree: a) seen a tree ; b) seen as smoking woman's profile; c) quadrangular face
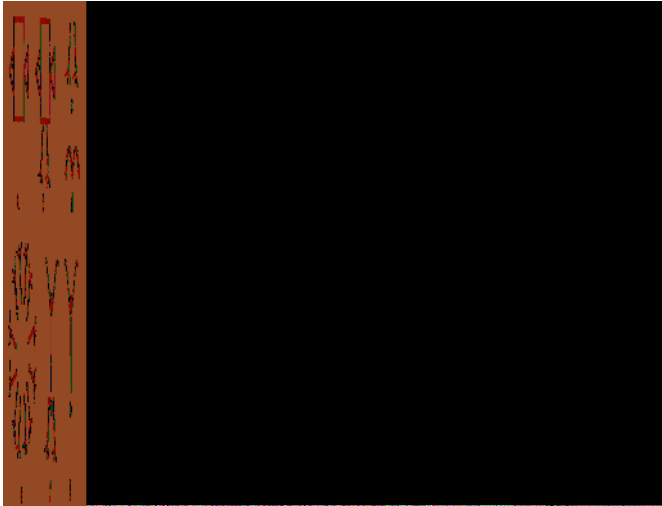
Fig. 15. Iconical figures and configurations (from Hünig 1974 :5f and Sonesson 1989a : 297).

features, for synonyms cannot be expected to have the same set.[37] In the second place, the other cases cited actually confirm the thesis they were designed to oppose: for if the elements in fig. 15c are able to enter into so many configurations having quite different meanings, they really appear to be units lacking meaning in themselves, exactly as phonemes are. The real point, however, is that once the elements in fig. 15c are added to fig. 15a, the fish is not only changed into a bird, but the elements added themselves take on the aspect of bird's legs; and when the same elements are introduced into fig. 15g, the tree is not only transformed into a man standing on his hands, but the elements themselves now appear to be the arms of the man. The difference is not where Hünig expected it

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37   In fact, these pictures should really be intensionally specified, at least as 'standing bird' and 'flying bird', respectively; then verbal language appears to be more motivated in this case than pictorial semiosis, for in the latter there is nothing standing proxy for the invariant birdness.

to be.

It has been noted by philosophers, from Husserl (1980) to Wollheim (1980), that we seem to "see" the content of the pictorial sign directly "into" its expression. This is true in a quite concrete sense. For instance, although no real faces are quadrangular, we have no trouble identifying Figure 12c as a face; and, more to the point, we can even indicate the precise place of the expression plane where the ears are lacking. This certainly has something to do with that peculiar property of iconic signs, observed by Peirce, and called *exhibitive import* by Greenlee, which makes it possible for icons to convey more information than goes into their construction (cf. Sonesson 1989a,III.3.6. and III.5.1.)

The specificity of pictorial meaning can be illustrated by Magritte's familiar picture, "Le viol" (Fig. 16) which may be seen either as a face or as a woman's trunk; it is precisely because of this double, contradictory appresentation that it

Fig. 16. "le Viol", by René Magritte

property which is peculiar to pictorial meaning: the parts which are meaningless in isolation become carrier of particular portions of the overall meaning, once they are integrated into the whole. Like the phonemes /m/, /æ/, and /n/, forming the word /mæn/, the strokes and dots making up the picture of a man are in themselves meaningless even when considered in their particular spatial location; however after having been put together, the phonemes continue to be deprived of meaning as such, whereas the strokes and the dots begin to take on the aspects of different proper parts and attributes of the man they contribute to form. Put simply, the different parts and properties of the man are not distributed

is instructive. Beginning with the smallest elements, no particular meaning is suggested. But at least when putting the two half-circles containing two smaller circles side-by-side, we seem to be seeing two breasts. This interpretation is at its most determinate at the penultimate *configurational* level; but, at the highest one, when the hair is added, another interpretation, that of a face, gains the upper hand. Once we reach this level, some details which were present beforehand lend their support to it: the holes in the small circles, and their relative dimension, makes them look much more like the pupils of eyes than as nipples; indeed, the proportional location of the inner details are more nearly those of a face than of a trunk.
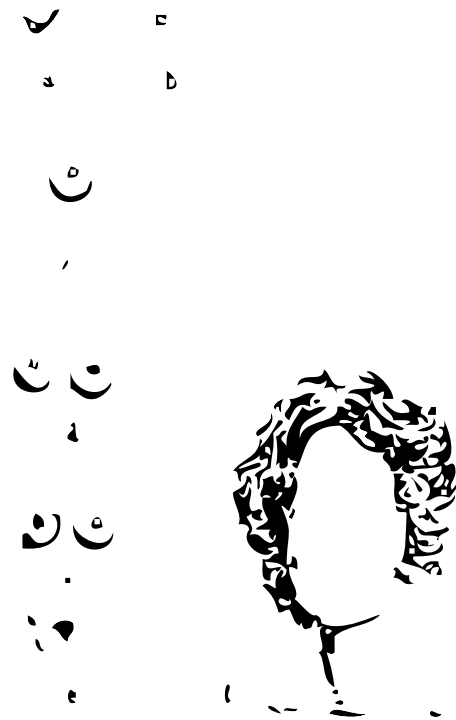
Now this points to the second

Fig.17. The double analysis of "Le Viol" and its consequences for resemanticisation

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among the phonemes /m/, /æ/, and /n/, as they are among the strokes and dots forming the corresponding picture. This does not mean, of course, that every detail of the picture may be given a particular reading in terms of details of the object represented; there is a lower, as well as a higher, level where this projection of meaning from whole to parts cease to operate.[38] This process, by which meanings accrues to pictorial features, may be termed *resemanticisation.* It will be noted, then, that pictures do not have double articulation, as was once argued by Eco and Lindekens, nor do they lack elements without their own signification, as has been widely argued since; their case is different again.[39] And this is precisely the property that is not found in mirrors, nor in identity signs: it is peculiar to pictures.

It has been suggested by Vaillant & Castaing (in press) that what I have here, as well as elsewhere, termed the process of resemanticisa-

tion, is really only the familiar device known as the hermeneutic circle, by means of which some elements are determined by the whole of which they form a part.[40] The comparison is interesting, although I don't think it is entirely correct. To begin with, if resemanticisation is identical with the hermeneutic circle, it is at least operating at another level: while the hermeneutic circle, as we normally understand it, works on the foundations laid down by the ultimate constituents of language, that is, phonemes and words, resemanticisation starts from scratch. The case is similar to what I have in another context claimed about the operations of rhetoric: whereas the *transformational rules* of verbal rhetoric work on and modify the result first brought about by the *combinatory rules* of grammar, pictures first arise from rules of transformation applied to perceptual reality. In this sense, they are immediately rhetorical (cf. Sonesson 1997a, 2004a, in press c). But there is a second difference, which may point to something even more peculiar to pictures: whereas the hermeneutic circle distributes the meaning of the whole back to the parts, it does so only on the level of

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38   Vaillant (1997: 101ff), who adopts my notion of resemanticisation, rejects the idea of upper and lower iconical thresholds (Sonesson 1989a: 317f), but he interprets them wrongly to imply a level "en-deça duquel l'unité de plan de l'expression ne veut plus rien dire", etc., which would make resemanticization identical to double articulation of sorts. All that is meant is that, beyond these levels, the projection of meaning back from the whole to the part is no longer a one-to-one mapping. Cf. lecture 4.

39   This argument is given more fully in Sonesson 1989a,III.4.

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40   As they note, there is also a parallel to Gestalt psychology, but that is recognised already in my description, since I distinguish different configurational levels of the picture, at which it can be interpreted as being complete, for instance, in 'Le Viol', as a face or as a trunk.

content. But resemanticisation operates more immediately on the level of expression.[41] This is because resemanticisation, as I have described it, depends of what Wollheim calls "seeing-in", and what Husserl has described as being "perceptually imagined", which is a phenomenon that I believe to be unique to pictures.

The Husserlean triad: picture thing, picture object, and picture subject

To determine the nature of pictorality (which he calls iconicity), Börries Blanke (in press) also has recourse to the theories of Wollheim and Husserl, using them to argue that pictorality is essentially a case of double categorisation: something is both a tangle of lines on paper and a rabbit. Both as an interpretation of Wollheim and Husserl, and as an elucidation of the nature of pictorality, this characterisation seem to me rather misleading. At least if we follow Husserl, we really would have to recognise a triple categorisation (into picture thing, picture object and picture subject). More importantly, however, I do not think we are justified in conceiving categorisation to be the essential operation involved in pictorial consciousness, because, just as in any other sign, as we have seen,

41   Of course, one might prefer to take the hermeneutic circle in a more general, abstract sense, as all kinds of determination of the parts from the whole, in which case resemanticisation is a special case of the hermeneutic circle.

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expression and content are present to us in different ways within the picture. It is, however, an excellent idea on the part of Blanke to bring Husserl's work to bear on the μ-model of iconicity. To show this, I have to return, however briefly, to my own earlier discussion of Wollheim and, in particular, Husserl (in Sonesson 1989a,III.3.5-6.).

Wollheim's contribution consists in pointing out that, in Wittgenstein's (originally Jastrow's) famous duck/rabbit picture, the phenomenon of "seeing-in" something in the surface, whether it is a duck or a rabbit, is distinct from the phenomenon of "seeing-as", that is, of seeing something as being either a duck or a rabbit. We see the rabbit or the duck alternately, but we see the surface and what it depicts at the same time (for which Wollheim refers to the work of Pirenne, which can however be substantiated by the later experiments of Hagen, Elliott and Perkins, quoted in Sonesson 1989a,III.3.5.). The first is not restricted to pictorial consciousness: even in the real perceptual world, we may mistake a shrub for a ruffian, if perhaps not a rabbit for a duck.

Husserl's much earlier work delves much deeper into the issue. Two similar things assume the character of a picture only when pictorial consciousness is attached to them, Husserl (1980:17, 16, 138f) contends (and, in addition, the similarity must be "anschaulich"; p 135). Pictorial

consciousness puts three instances into relation: the *picture thing* (originally the "physical picture"), the *picture object*, and the *picture subject* ("Bildding", "Bildobjekt" and "Bildsujet", respectively). When the picture is said to be lopsided, this concerns the picture thing; but when we complain about the failure of the photograph to resemble the person photographed, it is the picture object that is incriminated. However, it might seem less clear what constitutes the difference between the picture object and the picture subject.

In the photograph of a child, a figure can be seen which is in some respects similar to the child, but differs from it in size, colour, etc. The miniature child in a greyish violet is of course not the child that is "intended", i. e. conceived ("vorgestellt"). The real child, the picture subject, is red-cheeked, has blond hair, and so on, but the picture object can only show up "photographic colours". The first, then, which is what is "seen-in", in Wollheim's sense, is the picture object.[42] The second is the picture subject. It should be noted immediately that, although "photographic colours" do not mean the same thing to us as to Husserl, the distinction is

still valid, because even high-quality colour photographs, as well as paintings, are unable to render the full scale of colours present in the real world of perception. According to Husserl (p 18), however, there is also a different kind of difference between the picture object and the picture subject, for while that Berlin castle which we see is here, where the picture is, the Berlin castle itself, as a thing, remains in Berlin.

Non-coincident traits stand out on the background of the coincident, depicting ones, Husserl observes; and, while the extent to which picture object and picture subject differ varies from one picture type to another, and for each particular case, there must be some difference, for without a difference and an awareness of it, there can be no pictorial consciousness (p 30ff, 20, 82,138), merely "Täschungen à la Panoptikon, Panorama, etc.", i.e. "Jahrmarkteffekte" (p 41). Unlike the picture subject, both the picture thing and the picture object are "appearances" ("Erscheinungen"), i.e. they are directly perceived (p 27 f, 489 f). Our seeing of the picture object is of the same kind as ordinary perception (p 133 f), and yet it is somehow "abnormal" (p 490). For picture thing and picture object can by no means be identified: the latter is no part of the physical picture, as the pigments and the lines are; and while the picture thing is flat, the picture object is three-dimensional (p19f, p82f, 138f,

42   Husserl uses the very phrase 'seeing in' all through his extensive research manuscripts (e. g. pp 24 f, 28, 30 f, 32, 34 f, 167, etc.). Unfortunately, each time he becomes more precise, it appears that he is thinking about the relation between the picture object and the picture subject.

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Interestingly, it is for the relation between the picture object and the picture subject that Husserl requires similarity (p 138f and passim), i.e. for two instances which are roughly equivalent to Peirce's "immediate" and "dynamical objects". Except once, when he says that a relief is comparatively more similar to its picture object (p 487 ff.), Husserl never discusses the similarity of the picture object and the picture thing. Nor does he consider the similarity of the picture thing and the picture subject, which is the closest we come to Peirce's relation between the "representamen" and the "object". It is in the relation between the picture object and the picture subject that pictorality may be more or less *extensive*, and more or less *intensive*, i.e. concern a greater or lesser number of properties, and realise them to a greater or lesser degree ("*Extensität*" and "*Intensität* der Bildlichkeit"; p56f).[44]

The picture thing and the picture object are directly perceived; but the picture subject, which is what is intended ("gemeint"; pp 23 ff., 30, passim), is only indirectly given; therefore, although Husserl does not tell

us so, we would seem to have an *appresentation* (cf. Husserl 1939:174ff; Luckmann 1980), in other words, what we have called a *semiotic function* above. It is possible to thematize the picture thing, as when we note that the picture is lopsided, but "trotz meinender Zuwendung zum Bildding bleibt die erregte Erscheinung des Repräsentierenden Bildes mitbemerkt" (p 137; cf. p 488). Likewise, it appears to be possible to thematize the picture object, at least in order to note the "extensity" and the "intensity" of its pictorality.

Husserl's term for the equivalent of Wollheim's seeing-as is competition ("Wettstreit"), as when we are not sure whether we see a human being or a wax-doll (p 277, 401, etc.). This is opposed to the condition of contradiction ("Widerstreit"), in which case one of the percepts is perceived without "belief", in other words, is "cancelled out", as when we see the doll and the human being it stands for. According to Husserl, however, pictures are different again: they do not simply constitute "illusions". The picture object is no doubt a *fictum*, but not an illusionary one for, unlike the latter, it is discordant already in itself, so that no attention to the environment is needed in order to cancel it out (p 490). Also, while the illusionary fictum appears in the ordinary world, the picture presents itself in a reserved space (p 480). Indeed, the paper surrounding the drawing can be observed, as can the

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43   For reasons discussed in Sonesson 1989a,III.3.6., I would not give such importance to the impression of three-dimensionality as Husserl does, but I will not enter this discussion here.

44   That third part of the iconicity question elected for consideration by Husserl is thus not the same as that chosen by Peirce (Cf. Sonesson 1989a, III.1.1.).

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frame, the wall where it is placed, the room, etc., but there is no ordinary perceptual apprehension ("Wahrnehmungsauffassung") for that part of the paper where the drawing is. Of course, the paper apprehension is all the time "co-conscious", for it is part of the continuous field of vision, but it has lost its contents to the picture object apprehension. There is a contradiction, but the picture object prevails (p 45f). And yet, the picture object is unreal, for it contradicts that which is present in the here and now: in the consistent wall perception, a piece is "covered" by the picture (p 482).[45]

In conclusion, it seems that while the *picture object* has a kind of existential priority, because it is most immediately seen, the *picture thing* has another claim to the same priority, because it is compatible with the most extended range of the environment. This should not impede us from seeing the picture as a sign, in the sense of the semiotic function, although of a rather peculiar variety.[46]

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45   Many more complications envisaged by Husserl are discussed in Sonesson 1989a,III.3.5-6.

46   Husserl himself claims there is a sign relation even between the picture thing and the picture object, but he does so for erroneous reasons: he thinks the sign function (here clearly identified with conventionality) to be required for us to know which side of the picture is up and which is down. However, as a simple experiment using the comic strip "The Upsidedowns" shows, this information is part of the very picture object. Cf.

From the picture thing via the picture object to the picture subject (and, as I will later argue, to the extrapictorial referent), there is (if the aesthetic function does not apply) increasing *thematization,* and, roughly speaking, there is also decreasing *directness.* There is decreasing directness only if the most large-scale consistent reading is required, for otherwise the picture object is the most directly given, and directness decreases in both directions from there.

Thus we see that the picture corresponds to at least three different categories: the picture thing, the picture object, and the picture subject. Indeed, I will go on to suggest that the latter must be distinguished from the picture referent. Moreover, it becomes clear that these categorisations do not occur at the same level of perception: while the picture thing is an ordinary percept, the picture object is merely "perceptually imagined", and the picture subject is not perceived at all. They are not related to each other as categories, but as levels of thematisation and directness within the sign.

Pictorial consciousness and the scale of typicality

Although *typification* is an important ingredient of the Lifeworld, as so often described by Husserl, he never seem to take it into account is his discussion of pictorial consciousness. Actually, he does, but only im-

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Sonesson 1989a,III.3.6. and Lecture 2.

plicitly so. The difference between types and occurrences is in fact contained in the distinction between picture thing, picture object, and picture subject, to which must be added the picture referent. It will be remembered that, to Klinkenberg (1996; in press), in the second version of the μ-model, referent stands to type as stimulus stands to signifier, but the fact that the former item of each couple is a typification is blurred by the terminology. In Husserl's case, typicality is hidden by being found between the different instances.

As we noted above, Husserl maintains that there must always be a difference, however small, between picture object and picture subject, in terms of the "extensivity" and the "intensivity" of their respective properties. If so, it should be sufficient to attenuate the "intensive" and "extensive" differences between them, in order to have them approach gradually, and then in the end coincide, at least as a thought experiment. But this could never happen, not even in thought, because the picture object is here, where the picture thing is, but the picture subject is somewhere else, in the place assigned to it in the Lifeworld (cf. pp 18, 79): indeed, as we have heard, the Berlin castle, no matter where the picture is moved, will remain in Berlin. Moreover, the picture object is perceived, but the picture subject is only something about which information is conveyed (see Sonesson 1989a,III.3.6.).

But this makes nonsense of the idea, suggested by Husserl himself, to compare the picture object and picture subject, as to "extensivity" and the "intensivity" of their respective properties.

It seems to me that the picture subject is made to accomplish a double task, which it cannot really sustain, that of content type and referent. It would of course be an error to identify the triad picture thing, picture object, and picture subject, with expression, content and referent. The picture object is perceived, which the content of, for example a verbal sign, is not; and there is a real sense in which the picture object is present here and now, together with the picture thing, which the verbal content can hardly be said to be. Nor is it feasible to assume that the picture subject is identical to the referent, in the sense of a concrete object of the world, or even in the sense of being a type standing for a number of such instances. Many pictures may not have referents, in any of the latter senses, but they clearly have picture subjects: such is the case not only of the notorious unicorn, but of all the creatures emerging out of Escher's and Reutersvärd's pictures.[47]

The whole point of the "impossible pictures" is that they point beyond themselves to something which

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47   More will be said about Escher and Reutersvärd and about "impossible pictures" in the final section of this lecture.

cannot exist, their equivalents in the three-dimensional world (cf. Sonesson 1989a,III.3.4.*):* indeed, their picture things are quite possible, as are in this sense their picture objects (consider the importance of "recognizability" to Escher*).* This is, I submit, the most interesting interpretation of the notion of picture subject: *as the potential real-world equivalent of that which is "seen in" the picture thing, that is, of the picture object.* Husserl (p 490*)* could be taken to suggest just this, when he claims that what is seen in the picture is corrected for its deviations from the idea we have of the corresponding type, which imposes constraints on the possibilities of perception: being made of plaster contradicts our idea of a human being, so we withdraw it from the picture object.

Thus, if the picture subject is the projection onto the common, three-dimensional Lifeworld of the picture object, the reverse is also, and primarily, true: at least on some intensional level, Titian's Sacred Love (to pick one of Husserl's favourite examples) and the Escher-Reutersvärd kind of objects also reflect potential things of the common Lifeworld, in relation to which they are felt to be incomplete. For instance, at the level of perceptual parts, the picture object is normally based on just a single noema (or a few noemata in the case of Cubism), and no real world object, and so no picture subject, can have just one noema (or only a

few; cf. Husserl 1980:38: the picture object renders the picture subject in one of "seiner Erscheinungen aus der Synthesis"). Furthermore, the picture object differs in its attributes both "intensively" and "extensively", as Husserl puts it, from the picture subject; or at least this is the usual case. It is also possible for a picture object to show just a proper part of a picture subject and, at least in one sense, only complete objects can exist in the Lifeworld. Thus, we could take the picture subject to be the picture object as it must be completed in order to be something, which could possibly be encountered in the Lifeworld. But this is only possible because, at least as types, at a general level, we know the Lifeworld objects beforehand. We can easily complete our Lifeworld prototypes of a woman, a sitting person, an almost naked person, and so on, to arrive at the picture subject which is Titian's Sacred Love (though not at the iconographic level); but the picture subjects corresponding to the "impossible objects" can only be anticipated as some very general kind of Lifeworld objects, as "box-like", or something of the kind (and outside the purview of real box possibilities).

The reminder of this discussion (from Sonesson 1989a,III.3.5-6) should help us realise what else has to be put into the model of iconicity (which is actually a model of pictorality) envisaged by Groupe μ. Many years ago, I suggested there are re-

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ally *three iconicity questions* (cf. Sonesson 1989a,III.1.1.): the relation between expression and content, the relation between content and referent, and the relation between expression (or perhaps rather the sign as a whole) and the referent. In the case of the picture, as we have seen, the issue is further compounded by the existence of a fourth instance: the picture object. It is the possible iconicity of the relation between the picture object and the picture subject that is discussed by Husserl. But all similarity breeds a certain dissimilarity. Husserl, as we saw, talks about the extensivity and the intensivity of the common properties. Thus, if there are three (or four) relations of iconicity, there is the same number of places in which a transformation may take place.

Consider the story of Marco Polo's discovery of the unicorn (retold by Eco 1999: 57ff). Or rather, let us consider the preconditions of that story (not mentioned by Eco). How did Marco Polo get his idea about the looks of a unicorn? He might have read about it, but most probably he had also seen pictures, which would allow him to have a more complete idea of its appearance. He might have seen paintings, tapestries, book illuminations, but perhaps also reliefs or even statues. He had certainly not been made to think that unicorns are beings of paint, woven tissue, ink, or stone, nor that they are flat as they appear in the first series of represen-

tations. So, apart from what he had been able to "see into" the surface of the pictures and the relief (and what is already there in the statue), that is, apart from the picture object, which emerges directly, but already transformed, from the different picture things encountered, he must have had recourse to a number of typifications, such as concrete object, living being, horse-like creatures, and so on, which helps in constituting the picture subject.[48] As we know, this did not impede him from finding, at the end of his search, the referent we now know must have been a rhinoceros. Others, of course, have come up with the empty set.

It follows that the extrapictorial

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48   As I have often pointed out above (and in Sonesson 1992a, 1994a), one of the many ways in which predominantly iconical signs like pictures and gestures are necessarily conventional derives from the fact that they are themselves objects of different categories from most of the object which they represent. For instance, since the expressive resources of manual signs are essentially the hands and their movement, the (limited) vertical extension of the female body can only be described as far as one of its properties is concerned, its highest point; and the curvaceousness of the female body cannot be rendered in its totality, but only transposed in time, as an undulating movement. Rock carvings, as all other pictures executed on a surface, lack the third dimension of the real world: actually, because of being carved in the rock, the petroglyphs, unlike most pictures, have a prominent third dimension, but this cannot be used for rendering the third dimension of the perceptual world.

referent, if there is one, is something quite distinct from the picture subject (unlike the case of mirrors; cf. Sonesson 1989a,III.3.5 and 2003b). Thus, it seems, we must think of the picture thing as being on the expression side of the sign, while the picture object occupies some kind of intermediate position; the picture subject is similar to the content; and the referent, which strictly speaking falls outside the sign, is still the referent. The picture object must be seen as a reflection within the sign, of the picture subject: and thus, the similarity of the picture object to the picture subject, in absolute terms, matters less than the place of the picture subject in the hierarchy which allots their relative centrality to the objects of the Lifeworld. This is what determines the possibility for pictures to say new things about a very old world.

At the beginning of this lecture, I suggested that the recognition of the iconical character of pictorial signs was only the beginning of a real semiotics of pictures. In fact, if the primary property of the picture sign is to suggest a similarity to real-world perceptual appearances, then the very point of their sign function is to subtly modify our view of these real-world appearances. Similarity make us expect more similarity, and connection make us anticipate integration. But, in pictures, these expectations are generally deceived. This is what constitutes the foundations for pictorial rhetoric. The first systematic approach to pictorial rhetoric was realised by Groupe μ (1979; 1992). For reasons that would be too long to review here (but cf. Sonesson 1996a, b; 2001a; 2004a; in press c), I find their model rather unsatisfactory in the end. But I think another model may be established which relies on several dimensions, some of which are iconicity and indexicality.

In the first section of this essay, we liberated the iconic and indexical grounds from their absorption into their respective sign functions. This is what we need here, because the elements which are connected iconically or indexically are not parts of signs, but elements depicted, on one hand, and elements which are expected to be depicted, on the other. There are two indexical dimensions, one involving *contiguity,* and the other *factorality* (the relation of parts to whole): both operate by an *increasing degree of divergence from expected integration.* For instance, on the level of factorality, we expect to see pupils in Haddock's eyes, but instead there are bottles; and, on the level of contiguity, we anticipate that ice cubes and an aperitif bottle should be placed in an ice-pail, but instead they are located inside Coliseum. On the iconical dimension, there may be *more similarity than expected* (e.g. the roof and the street which have identical forms in Magritte's "Les promenades d'Euclide"), or more commonly, *more dissimilarity than*

expected, going to the extreme of contrariety (the male adult mouth on van Lamsweerde's little girl) and even contradiction (Magritte's pipe contradicted by its title). The third dimension may perhaps also be called the dimension of symbolicity, for it concerns signs containing other signs (e.g. pictures of pictures). Thus, we see that the ground, in the sense in which we have taken the term, is not only useful for constituting signs: it also may explain operations *within* signs.[49]

Summary

There is no tradition in semiotics for determining the specificity of pictures, within the domain of iconical signs. The category which Peirce calls "images" may have been invented precisely to do this job, but we have seen that it cannot serve such a purpose: if understood in terms of grounds, pictures are certainly not made up of "simple properties". Against structuralist semiotics, which tried to import the notion of double articulation from linguistics to, among other things, pictorial semiotics, I have shown that pictures function according to a very different, quite peculiar process, which I have called *resemanticisation.* This is a property whose specificity to pictures must itself be explained relying on what Wollheim calls "seeing-in", and which Husserl, in an earlier,

much more thorough investigation, called "pictorial consciousness". Even Husserl's account is seriously incomplete, and the notions of picture thing, picture object, and picture subject do not only have to be made more precise, but the latter must also be distinguished from the picture referent. When confronted with the μ-model of iconicity, Husserl's analysis shows us however that there are several different relations of iconicity, and, for the same reasons, several distinct *loci* of transformations. Finally, we have seen that iconical and indexical grounds, and in a way also the sign function, may be used within the picture sign in other ways than just to constitute the sign.

Pictorial semiotics, I have argued, must determine the specificity of pictures, within the general domain of iconical signs, not just offer models for the analysis of particular pictures. Although my own point of departure is Husserlean phenomenology, reviewed by newer approaches within perceptual and cognitive psychology, I have found it useful to start out from the work of Peirce and his critics, in order to develop my own, more complex, conception of iconicity. The latter model involves a distinction between iconicity *per se*, the iconical ground, and the iconical signs, and it supposes a much more explicit concept of sign than those found in the Peircean and Saussurean traditions alike. I have also suggested that there are at least

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49   Cf. Sonesson 1996b, 1997a, 2001a, 2004a; in press d.

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two very different kinds of iconical signs, *primary* and *secondary* ones, which inverse the relations of conditioning between the ground and the sign function, and that the primary kind can only exist because of more general assumptions embodied in the Lifeworld or ecological physics. In determining the specificity of the picture sign, we were led to reject its identification with the Peircean concept of "image", as well as the independence (in one sense) of iconicity from the sign function. Unlike both the first and second articulations in verbal language, I argued, pictures gain their meaning from a process I called resemanticisation: the projection back from the whole to the parts of a globally constituted meaning, at the level of expression as well as that of content. But resemanticisation itself is only an effect of something more fundamental: the specific functioning of the distinct instances making up the picture sign: the picture thing, the picture object, the picture subject, and the picture referent. Between them, there are different relations of iconicity — and thus different possibilities of transformation.

3.5 Perspectives, aspects, and "impossible pictures"

A correlative of the peculiarities of pictorality which we have studied in the last section is that pictures, alone among all species of semiotic resources (apart from those, like cinema, television, and video, which are based on picturelike media), is capable of showing (and, indeed, in a sense, is constraint to show) true perceptual perspective. One of the things which most clearly separates the the *picture object* and the *picture subject* is that the former offers a particular perspective on the latter. Unlike what happens in the noematic matrix, however, the (perceptual) part is not an inextricable moment of the perceived whole. The part stands out as a separate object. It becomes an object on its own right, given in its proper noemata. However, it would be misleading to equate perspective, as here understood, with linear perspective, as discussed in art history. Indeed, the fact that perspective is discussed in relation to many other kinds of semiotic resources, including language, suggest that is has a much broader mening, also in pictures. The problem, nevertheless, is that the latter may be too broad to make any sense.

Perspective, as applied to perception, compounds several different things: most generally, that which is seen in perspective is given *in one of its variegated appearances* (which means that the object is question is this thing of which we have experience but many other things in addition); the object is given from one of the many position which make up the space sourrounding it (what we will later call *positional perspective*); and
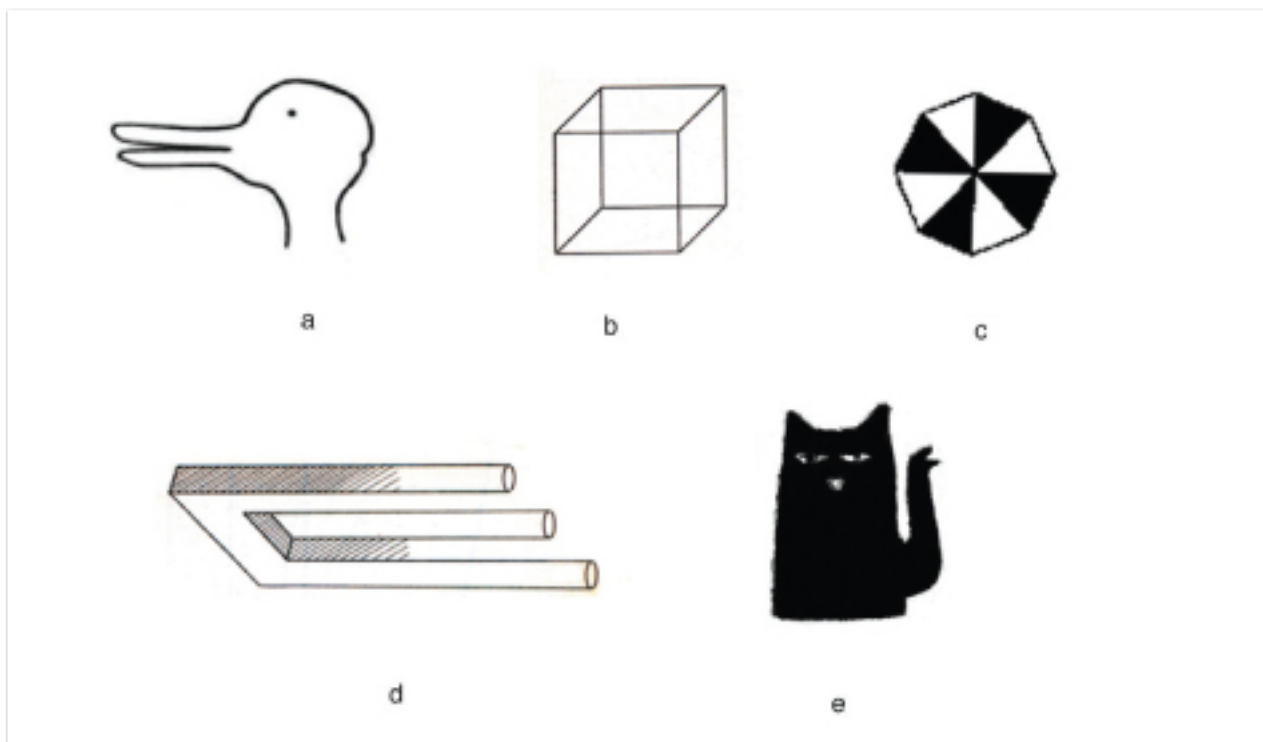
Fig. 18. Different kinds of ambiguous figures: a) Wittgenstein's duck/rabbit: b) the Necker cube; c) Black cross on white background, or the reverse; d) "the devil's turning fork"; d) cat which is also a coffee pot.

it is given to a particular person who, in the most simple case, happens to occupy the space in question (later called *personal perspective*). The ascription of perspective to positions and persons may be found also in semiotic resources not so close to perception as pictures. However, in pictures the source of that which is given is always (visual) perception, but when other semiotic resources are involved, it may very well by knowledge (in pictures, as in perception, we really know much more than we see, notably, we know about the sides which are turned in other direction. The classical distinction between the "conceptual" pictures of children and "primitives" and the perceptual ones invented by the Renaissance is largely misleading). On the other hand,

when applied to other types of mediation than perception and pictures, perspective may often involve, not position as the place from which the object is experienced, but as defined in relation to some kind of landmark (for instance "behind the mountain", where the mountain is the landmark, the object is on one side of the mountain, and the person having the experience on the other side). Perspective in this sense seems to be impossible in pictures. In the second place, other semiotic resources such a language may mix different perspectives (in the sense of position and person, and involving perception or knowledge), but this is hardly possible in pictures, apart from some rather marginal cases.

Wittgenstein's rabbit as a Saussurean "form"

When literary historians, linguists, film theorists, art historians, and so on, discuss perspective, they are concerned with different things, yet with phenomena which may not entirely lack overlapping features. Naturally, we should expect linguists and literary historian to be referring, at least some of the time, to the same thing, since both are involved with language — but, as we shall see, not even this is obvious. There have been attempts to compare perspective in film and literature (cf. Currie 1995), but they do not seem to take must heed of the terminological differences. The most famous case of a systematic attempt to compare (or rather equate) literary and art historical concepts of perspectives is found in Boris Uspenskijs classic book *A poetics of composition* (1973 in English).[50] It seems to me that, from Uspenskij onwards, if not before, there has been too much a tendency to find similarities between the arts – and the semiotical systems which lie at their foundation – rather than attending to their differences.

The difficulties in discussing perspective, as it appears in different semiotical systems, and as it is con-

strued by different scholarly specialities, is compounded by the host of near-synonymies which immediately offers itself in any languages: instead of perspective, we could almost as well talk about "view", "point of view", "viewpoint", "standpoint", "outlook", "approach", "angle (of vision)", "attitude", "aspect", etc. Indeed, a partial overlap is even to be found with some more "technical terms" such as "seeing-as", "seeing-in" (as the terms are just by Hermerén and Wollheim), "intention", "propositional attitude" and so on (as commonly used in philosophy and some parts of linguistics), "form" as opposed to "substance" (as used is semiotics following Saussure and, in particular, Hjelmslev), and indeed "aspect" (as used by Wittgenstein). We shall have occasion to return to some of these terms in the course of this section.

It could be argued that semiotics is *the* science of perspective — or at least of point of view. We have Saussure's (1968: 26) word for it : he talks about the difficulty of "linguistics and all the other semiological sciences" stemming form the fact that they are not involved with something material, but only with "the point of view taken on something material". This is parallel to a more famous saying, which appears in the *Cours de linguistique générale,* put together by Saussure's pupils, according to which "it is the point of view which creates the ob-

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50   It was my dissatisfaction with this book that first prompted the present observations (although on the way it happened to crossbreed with some other themes of mine), but, in the end, I have found it more convenient to state my conception in a positive way, rather than criticising Uspenskij.

ject". As Luis Prieto (1975a: 114; 1975b: 225f) has convincingly demonstrated, this is not, as so often have been thought, a positivistic *profession de foi* : rather, it is another way of expressing the famous figure in Saussure's *Cours* of the double cut, isolating some portion out of the two amorphous masses of sounds and meaning. But it adds something : the relation to a subject.

Today most linguists and psychologists would probably not want to talk about any amorphous mass, neither on the side of the signifier nor on that of the signified : at least in the case of verbal language, the most fundamental categories through which we perceive the world appear to by part of the universal make-up of the human species, in the form of "prototype categories" preferentially grasped at the "basic level" (cf. Rosch 1975; et alia 1976). And even if these categories are found in perception and cognition before they appear in language, it is probable that they will appear also in those semiotic systems which make use of the visual modality, such as, in the cases considered here, the cinema and static pictures.

This very general concept of perspective (or, literally, point of view) in no way pertains to any particular (spatial) position, incarnation, opinion, or mode of expression ; it amounts to the suggestions that we are involved with something ("a meaning"?) which is, as Husserl

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said about the Lifeworld, *subjective-relative*. The subject in question does not necessarily have to be a solitary individual but could just as well be a group subject or even an anthropologically (or perhaps zoologically) universal subject. What Saussure seems to mean, in the end, is that *something which appears to be identical* (something "material") *is presented as being different from the point of view of different subjects,* where the canonical case is taken to be the speaker of a particular language — or, as suggested in the unpublished remarks, the user of any other semiotic system.

The most obvious example of this thesis is of course the different ways in which sounds are used by different languages, some positing a difference where other do not. The case is more easily illustrated by the different ways in which writing systems interprets the visual figure which looks as follows: "H". In the Latin script, it is of course the letter "H" (though in some language, it is really not pronounced at all, and in some cases it merely represents aspiration), but in the Russian alphabet, it corresponds to the sound which we render by the letter "n", whereas in the Greek alphabet, it now represent the sound /i/ (as in the world "be"), while the Ancient Greeks used it to designate the sound /e/ (as in the world "egg"). In Saussure terminology, it may be said that the shape "H" remains the same *substance*, but is

given varying *forms* by these different writing systems. In other terms, different principles of relevance are applied to the same object.

As a first approximation, it may seem that this is similar to Wittgenstein's (1971: 227ff) famous picture (taken over from the psychologist Joseph Jastrow, otherwise known for having written, together with Perice, the first American article of experimental psychology 1884) which may be seen as either a duck or a rabbit: physically, it might be suggested, what is present on the page of Wittgenstein's book is the same ink blot, but as the perceiving subjects adopts different stands on the blot, a duck or a rabbit is seen (Fig. 18a. roughly corresponds to Wittgenstein's version). Again, the ink blot could be considered to be a single *substance* which is given different *forms*. Wittgenstein, of course, talked about different "aspects".

Wittgenstein's description gave rise to a discussion among some aesthetically interested philosophers. Thus, both Hermerén and Wollheim at one time thought what Wittgenstein calls aspect could more properly be described as a kind of "seeing-as". As we have seen, Wollheim (1980) later argued against this position, pointing out that there were really two different phenomena involved here : seeing the blot as something other than a blot ("seeing-in") and seeing it as either a rabbit or a duck or even some third thing ("seeing-

as"). The first phenomenon could be instantiated also by a completely unambiguous picture. Wollheim also rightly points out that "seeing-as" is not restricted to pictures — it also applies to humidity spots, clouds, bushes, etc. Indeed, I have argued that "seeing-in" is a variety of the semiotic function, the sign function, as it appears in pictures (cf. Sonesson 1989a: 263ff and above).

Well before Wittgenstein, Hermerén, and Wollheim, in some manuscripts written between 1898 and 1925, Husserl (1980) discussed a phenomenon apparently identical to "seeing-in" describing it as being "perzeptiv imaginiert". In our time, the psychologist James Gibson (1980) used the term "indirect perception". Husserl went on to distinguish the *picture thing* (the material object which may be suspended obliquely), the *picture object* (that which you "see into" a photograph, in spite of the "photographic colours" present in the material thing, etc.) and the *picture subject* (the real thing we think we see but which is actually somewhere else, with correct colours, etc.). When Husserl here talked about "photographic colours", he was no doubt thinking about black and white photography. But it is still true of colour photography – and of any other kind of picture — that it conveys a reduced colour scale as compared to perceptual reality (cf. Hochberg 1979: 25: cf. Sonesson 1989a: 270ff).

Both "seeing-in" and "seeing-as" could be considered to be some kind of "perspectives", in the most general sense : they are different ways of talking about something which, from another point of view, is identical. It should be noted that, in cases like these, "seeing-as" is dependant, for its possibility, on the "seeing-in" : pictures may contain information which is minimal to the point of making it possible to reduce the real-world difference between a rabbit and a duck, etc. It would certainly be very difficult to confuse a real rabbit and a real duck. Nor are combinations of a cat and a coffee pot feasible in the actual perceptual world (cf. Fig. 18e.) Thus, the similarity is at the level of expression — in the picture object, not the picture subject. Also in the case of clouds, bushes, or damp spots the sign function is a prerequisite for "seeing-as" — at least if we take these equivalencies to be simple musings, as they clearly were to Leonardo da Vinci, and not errors of judgement, which may occur in the dark, or during some special mental states. The box which the child pretends to be a house, which is a further example of Wittgenstein's, is a case of "symbolic play", as thus of the semiotic function.

Clearly, it is only in a very loose way that the semiotic function may be identified with perspective. It would then simply mean that some object is not perceived for its own sake, but merely as a "stand-in" for something else: our attention (or "intention", as Husserl would have said) "goes through" the expression but does not stop there: it is focused on the content. This is also true of Wittgenstein's "aspect" to the extent that it can be identified with "seeing-in", that is, when we take it to involve the ink blot as opposed to the rabbit and the duck.

Neither Saussure's "point of view" (that is, the "form", which is instantiated in pictures as "seeing-as") nor Wittgenstein's "aspect" (here reduced to "seeing-as" as in the choice between the rabbit and the duck) are really central instances of what we ordinarily mean by the term "perspective", at least when applied to the world of vision. It might be useful to consider some of the other examples mentioned by Wittgenstein: the Necker cube, where either end may be perceived as being closer to the observer (Fig. 18b), actually seems to be more akin to the central idea of perspective. Then there is the shift between figure and ground, which Wittgenstein exemplifies with the black cross on a white background, which could also be seen as the reverse (Fig. 18c), but which may be more familiar as the two profiles facing each other which can also be seen as a vase. These instances may be compared to so-called "impossible figures" (for example, "the devil's turning fork"; Fig. 18d), which to ordinary vision
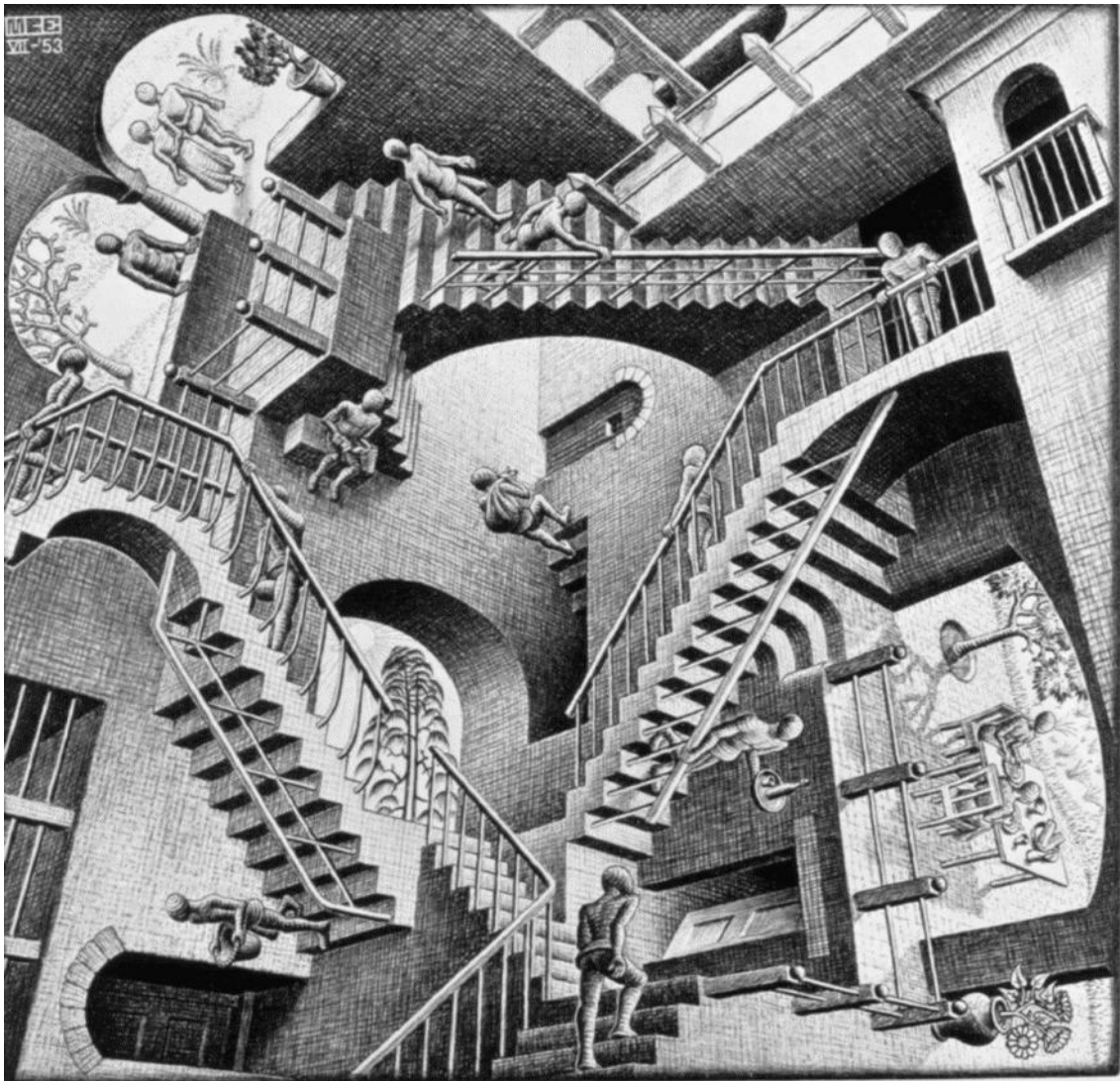
Fig. 19. The classical revolving stair of Escher

seems to form wholes, but which do not go together if we attend to the details. As is well-known, Escher (Fig. 19) and Reutersvärd (Fig. 20) have used such figures in their paintings; but also some of Klee's works, in which for instance a mother and a child share a contour line (Fig. 21), are "impossible" in a similar (though less geometrical) way. In fact, none of these figures are impossible as figures, that is, as constellations of lines. They simply do not correspond to any conceivable (and perceivable) real-world object. Nor is the Necker cube or the cross ambiguous as ob-

jects, but only as lines on a surface. Thus, the alternatives as well as the impossibilities are only given thanks to the sign function.

As far as I understand, Wittgenstein did not mean to argue that one "aspect" necessarily precludes the perception of the other; but this is exactly the use to which Gombrich (1960) puts Wittgenstein's example. It may be true that we cannot see the rabbit and the duck at the same time, nor, perhaps, the two orientations of the Necker cube; but in other cases, as in the cat which is a coffee pot

(Fig. 18e), as well as in Arcimboldo's paintings, we have no trouble seeing the contradictory aspects. Here again, as I noted earlier, the doubling of the aspect is only possible once the sign function is given.

It seems obvious that both Saussure's notion of "form" and Wittgenstein's conception of "aspect" involves something which is conceived as being different from what it "really" is (that is, immediately, in "direct perception"), in such as way that *there are different (though sometimes concurrent) alternatives for what this other thing is.* In contrast, a perspective does in no way represent any "indirect perception" (unless combined with "form"): it *offers one of several possible modes of access to a single identical object.* In fact, as I observed above, the Necker cube may actually be construed as representing alternative perspectives, but only if we suppose that it is the same cube that we are seeing from different angles. This possibility does not exist for the cross, let alone the duck-rabbit.

In order to talk about things being the same or different, and something being merely a different mode of access to an identical object, it seems we must make assumptions about how the world is made up, that is, in the famous Quienean phrase, about what there is. Acutally, for us to establish a difference between *form/aspect* on the one hand, and *perspective* in the strict sense on

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the other hand, we do only need to suppose that there are objects in the world, and that there are different ways of having access to them. We do not have to say anything about which these objects are, nor describe the modes of access them. For more concreteness, however, I prefer to rely on folk ontology, also known as the "science of the Lifeworld", "ecological physics", the "natural world", or "naïve physics" (cf. Sonesson 1992a, b; 1996a, 1997, 2001a, b, c).[51]

Possible depictions of impossible worlds

The interesting thing about so-called "impossible pictures" – which are really very possible pictures, although they seem to represent objects which could never exist in the three–dimensional world – is that their very absurdity highlights the way pictures relate, by means of dissimilarity as well as similarity, to the perceptual world. I think some considerations on these "impossible pictures" will show us why perspective, in the strict sense (which is more than linear perspective) is only possible in pictures.

Unlike pictures as such, impossible pictures have long be discussed by perceptual psychology, being treated as one among several kinds of "visual illusions" used to argue for the constructivist view of percep-

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51   Cf. Lecture 2. More will be said about this in Lecture 4.

tion. As Gibson has often remarked, pictures are analysed in order to draw conclusion about the three-dimensional world of perception (and this is still true today, in the work of Hoffman 1998). The task of the perceptual scheme, according to Hochberg, is essentially to fill in the details which peripheral seeing fails to capture. For while the information picked up from the environment, when it falls on the fovea, is indeed abundant, the gaps between the fixations have to be spanned with constructions built up on fragmentary cues. Painters have used this fact, Hochberg (1979:25ff; 1994) suggests: Rembrandt developed one style for the fovea, and another for the periphery; and impressionism devised a way of painting, the result of which simulates a scene when viewed peripherally, while merely indicating "painterliness" to the fovea (p 36). We cannot pursue these complex issues here, but will remain content to consider the case of outline pictures. In Hochberg's view, depicted objects, as well as real ones, differ most from each other at their edges: thus, when perceiving an object or a picture, we are likely to fix some of the edges, or the lines standing proxy for the latter, and then fill in the rest from assumptions. This is what Hochberg (1972:59, 1978a:154; 1980:63) tries to establish in his discussion of "impossible pictures. His point is that if we really had access to complete information from the environment, as Gibson suggests, we

Fig. 20. A Reutersvärd picture on a Swedish stamp

should at once realize that such pictures cannot be interpreted three-dimensionally (cf. Gregory 1966); but in fact their three-dimensional interpretation is only rejected, Hochberg claims, when the contradiction is apparent in one momentary glance, for otherwise the gaps will be coherently reconstructed using the most plausible assumptions.

First, we turn to the famous Penrose triangle, which was the basis of many of Escher's constructions

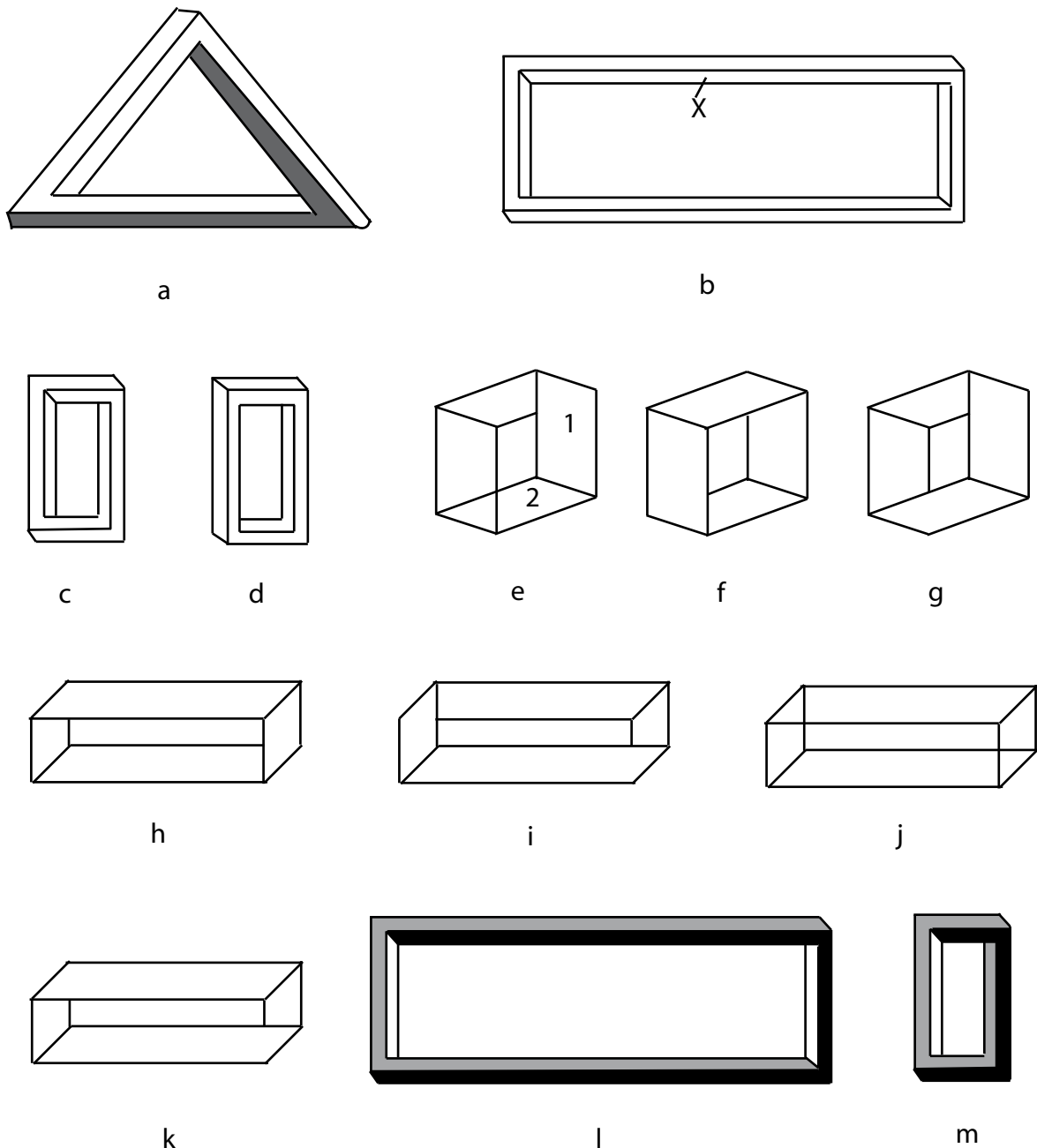*Fig. 21 "Mother and child" by Klee*

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Fig. 22. "Impossible pictures" and some all too possible ones (a-g inspired in Hochberg 1978a: 154; h-k from Perkins 1981: 152ff; l-m from Sonesson 1989a).

(cf. Escher 1967; Ernst 1978); it was actually invented by Reutersvärd in 1934, 24 years before the Penroses' article (cf. Bresti 1985). Neither this figure, nor the two to follow should look solid according to the Minimum principle, as defined by Hochberg, because they are neither simpler nor more consistent when considered as whole 3D objects than they are as flat

patterns. But although the right and left sides of Fig. 22b are inconsistent, because the line marked x must change its function as the corner of a dihedral angle somewhere between the two sides, this contradiction is not obvious, and does not interfere with the figure's apparent tridimensionality. The reason for this, Hochberg (1980:63) claims, is that the

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two sides cannot be encompassed by foveal vision in one single glance. But this is possible in Fig. 22c, and consequently, the figure looks flat and inconsistent, Hochberg tells us. That 22c is not flatter merely because of its proportions is shown by 22d, which is just as compact as the former, but appears tridimensional. In other cases, too, it is what is grasped in the momentary glance that determines the interpretation. Thus, when the gaze is directed at point 1 in fig. 22e, we see a perfectly consistent object, viz. a partly transparent box oriented as in 22g; but with the gaze turned to point 2 in fig. 22e, perspective reversals will be perceived to occur, and the orientation of the figure in 22f will alternate with that of 22g, even though only the latter is consistent with the local depth cue at point 1. These two sets of pictures are taken by Hochberg to show that only those lines which fall near the fovea act as cues in the representation of the depth and the corners of an object, and and that the remaining part of the percept, including orientation, is hypothetically reconstructed on this basis.

Hochberg's argument appears to rest on his own perceptual experience in relation to the figures, and it seems possible not to share that experience. I, for one, find it quite impossible to see fig. 22c as flat; nor do I think that it is properly speaking inconsistent. Instead, it appears to me to represent a strangely twisted and contorted object; there is even a suggestion of a spinning movement. The Penrose triangle can also be read in this way, but hardly Hochberg's rectangle (fig. 22b): however, at least on a second viewing, it may give the impression of being slightly bent, rather than inconsistent. Nor can I agree with Hochberg about the most natural interpretation of the second set of pictures. These are similar to the wellknown Necker cube, which admits of two readings, which only differ as to orientation (e. g. fig. 22j). But in the classical Necker cube, both readings are equally consistent, and the aptitude for reversal is quite resistant also to the addition of further cues: even if anterior and posterior lines are drawn in different colours, reversal can take place, and a tridimensional wire construction is treated in the same way (see Kennedy 1974a: 138 ff).

In Hochberg's view fig. 22e is also open to two readings, one of which is inconsistent, but fig. 22f and 22g only admit of one reading each. However, it seems to me that also fig. 22f and 22g can be seen in either of two orientations, where the second is inconsistent; and while it takes some effort to find the second reading of fig. 22f, fig. 22e appears to shift from one orientation to the other quite spontaneously. The case of fig. 22e is even more curious: I find it hard to see the reading which is consistent, for I immediately perceive the righthand side of the figure

to be the farther side of the box. Even when fixing point 1, I often continue to see the cube in this orientation, and although I sometimes manage to see the consistent reading, where the right-hand side of the figure is the side side of the box which is closer to the viewer, the figure will soon revert to the first, more stable percept. It would of course be interesting to know whether most people would agree with me or with Hochberg, on the interpretation of these pictures, or if they would suggest some third reading; but even if my perceptions are completely idiosyncratic, they throw some doubt on Hochberg's argument, for the physiological constraints which it posits must apply to each and every case.[52]

Perkins's (1981:152ff) argument is similar (also cf. Perkins & Cooper 1980:122ff): fig.22h and 22i have different orientations; fig. 22j can be seen both ways; and fig. 22k has no coherent interpretation, for the righthand part is like that in fig. 22i, and the left-hand part looks exactly like that of fig. 22h. The reason for this, Perkins (1981:154) submits, is that the perceiver begins with some local cue, and then attempts to extend the interpretation suggested by this cue to the entire figure until the procedure runs into trouble, permitting a new cue to be taken up, and again extended as far as possible.

This is very much like Gregory's hypothesis-testing, as Perkins & Cooper (1980:122) also remark ; and it has a somewhat more conceptual ring about it that Hochberg's proposal. Yet local cues cannot be the whole story: Perkins & Cooper have already demonstrated that the presence of symmetry is essential to the way a picture is interpreted, and now they observe that symmetry supposes cues to have been picked up from all over the figure, and then to have been integrated with each other. Unfortunately, Perkins & Cooper do not develop this line of thought. However, it was already demonstrated in the studies of the *Granzheitspsychologie* (Sander, Volkelt, etc) that holistic, non-configurational properties have primacy in all perception; and I have suggested, as the most favourable though somewhat implausible interpretation of both Eco and Gibson, that what is identical from the picture to reality is some kind of holistic properties.[53]

There is no denying the importance of local cues, however. At some very elementary level fig. 22h-k, as well as fig. 22e-g, are probably seen simply as "angularity" and "closure" or, somewhat more concretely, as instances of "box-ness". It is impossible, I think, to see fig. 22k as a flat pattern. But then local cues are essential. In the case of Gregory's tree (fig. 13), it will be remembered, a small detail is sufficient to change

52   In fact, in an informal experiment, I found confirmation for all my readings, except for the ambiguity of fig. 21f-g.

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completely the interpretation of the whole figure. But when it comes to the Necker cube and its variants, there is not even that much of a difference: here, as in Rubin's vase which is also two facial profiles, the mouse which is an old man's face, and the duck which is a rabbit, all the features of expression of the two pictorial signs are identical, but *the thematic hierarchies are different,* because the thematic centre has been differently located in the two cases. It should be possible to attend to local cues, without failing to capture holistic properties, if, as in the noema, there is a horizontal consciousness accompanying that of the thematic centre. As it is originally presented by Hochberg, one would expect peripheral vision to be sufficient for picking up *some* information, if only of a sketchy kind; but Hochberg later only takes account of the fovea. It is possible, however, that peripheral seeing conveys the kind of information gathered from tachistoscopic exposure by the subjects of Sander and and other *Ganzheitspsychologen*: holistic properties. If so, at the same time as the thematic centre gives us the local cues (if we are able to pick them up) the fringes offer holistic information. Even the pictorial expression would thus take on the meaningful organization of the noema.

But this noematic organization cannot simply be identified with the retinal distinction between fovea and periphery. The fact, referred above, that Hochberg's figures may be perceived in other ways than those he takes for granted, contradicts such an identification. If, at least to some persons, fig. 22c does not appear to be flat, but three-dimensional and contorted, and even may appear to be executing a spinning movement, then the presence of contradictory local cues in the space encompassed by a single momentary glance is not enough to destroy the three-dimensional percept. If the fixation of point 1 in fig. 22e does not automatically change the orientation of the box perceived, the fovea cannot be the sole responsible for the election of the perceptual theme. Further, if fig. 22e and 22g are easily seen in such orientations as suppose inconsistent percepts, consistency cannot be the fundamental criterion, and if the reading of fig. 22e giving rise to the most stable percept is the inconsistent one, there must be cues which override consistency: perhaps, in this case, holistic properties of "boxness", which induce the most prototypical orientation of the box to the viewer. Again if, in spite of the distance between the contradictory local cues, fig. 22b appears to be bent rather than being an ordinary frame, the contradictory cues must somehow have been sampled, but only when the over-all interpretation has been established.

A much more general point needs to be made: if pictorial interpretations were simply contingent

on foveal fixations and their limited scope, we, as well as Hochberg, would have had to modify our interpretations many times during our extended scrutiny of the figures; in fact, however, there are a few possible, and some preferred, interpretations, which remain identical even as we learn they are inconsistent. It is conceivable, of course, that the result of the first fixation is stored in memory, and continues to influence perception from there; but there may be other sources also for the selection of the perceptual theme (like the cultural expectations determining if something is seen as a window or a tin can in Deregowski's 1976:22f picture). The important fact, however, is that *we are not observering the real world*, with its continuously changing appearances, in which what is theme over and over again becomes thematic field and/or fringes, and vice-versa, but *a static artefact whose structures are fixed forever.*[54] The noematic adumbration in which the picture is given changes, but not the object given in the picture. Even the fixation on a detail, which is contradictory, therefore does not change the overall interpretation.

The Duck-rabbit and other impossibilities

In his discussion of Reutersvärd's "impossible figures", Bresti (1985:24f) introduces a distinction between "genuinely impossible figures", which represent solid, stereometrical bodies, and figures which are "not genuinely impossible", because they are not completely closed, or delimited, and fail to separate the "figure" clearly from the "ground". Bresti (p 17f) also quotes Reutersvärd himself as saying that the genuinely impossible figures are "more impossible", because the objects which they render seem to be perfectly tangible, and the drawings can be coloured, and shadows added, just as in the case of pictures representing ordinary objects. The distinction is not quite clear, particularly as Bresti (p25) also presents a drawing by Reutersvärd which is "completely closed, although it is not a genuinely impossible figure", which seems a contradiction in terms. However, Gregory (1966:72 f) also suggests that, while the Penrose triangle and the Penrose staircase (used in Escher's "Ascending and descending"; cf. Escher 1967:76; Ernst 1978:90 ff) correspond to objects that cannot exist, the "three-stick clevis", also called "the devil's turning fork (fig. 18d), is a rather different kind of impossible object, which cannot even be seen — and the latter figure is clearly among those which Bresti considers as "not genuinely impossible". From the intuitive determination, which is the only one at our disposal so far, it appears that Hochberg's examples are all "genuinely impossible figures".

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54   Cf. Lecture 2 about organism-independent artefacts.

Bresti is of course wrong in suggesting that Reutersvärd has, in any sense, rendered fourth-dimensional space; but it is true, as Kulpa (1982:14) says, that only those objects that we tend to see the pictures as representing are impossible, while the same drawings may also correspond to other, quite possible ones – but, unfortunately, the latter must then be two-dimensional patterns. Indeed, Deregowski (1973:171ff) found that only those who were 3D-perceivers, according to his construction test, had trouble copying "the devil's turning fork" (cf. Kennedy 1974a: 146ff). The works of Escher and Reutersvärd illustrate how the "rationalization of sight", in Ivins' (1938: 1946) terms, just as all other formalizations, may, once they have been accomplished, be detached from their foundations, and applied to alien, and sometimes rather "irrational" purposes: that is, the means which permit the rendering of the real world also allow its unreal (and impossible) extensions. The whole point of the "impossible figures" is that they appear to be three-dimensional, but we *know* they cannot be.

Impossible objects, Kennedy (1974a: 146 ff; 1974b: 235 ff) claims, are made up of the same ecologically attested features as possible ones, though in ecologically impossible combinations: in the real world of perception, "cracks", which have surfaces on both sides, cannot turn into "wires", which have air on both sides, and vice-versa; and occluding bounds enclosing surfaces cannot fit in with occluding bounds enclosing air space; but this is exactly what happens in the devil's turning fork. However, this explanation does not seem to account for "genuinely impossible figures": in most of the work of Escher and Reutersvärd, and in Hochberg's examples, there are no "cracks" becoming "wires", and so on, but "wires" in orientations which exclude each other. As a practical test of "genuine impossibility", we may, following Reutersvärd, try to colour our figures: in the devil's turning fork (fig. 18d), we must give up the attempt at some point between the ends of the lines; but in Hochberg's figures, colouring the "wires", if anything accentuates the contorted three-dimensionality of the objects perceived (fig. 22 l-m).

There is also some truth in Gregory's curious observation that some impossible figures are not only non-existent, but cannot even be seen. For if we try to follow one of the inner lines of the devil's turning fork, or Kulpa's monobar, from one end to the other, there is some intermediary point at which the inconsistency becomes flagrant; but in Hochberg's figures, as in Penrose's tribar, and in Escher's stairs, there does not seem to exist any such single point at which three-dimensionality breaks down. For, strictly speaking, the devil's turning fork *can* be seen, and is seen: viz. as a fork. It is only

when we try to capture the inner details that the fork becomes diabolic, or virtually unseeable. Indeed, it shifts from one interpretation to the other, both equally inconsistent, or dissolve in a general blur, instead of appearing real but contorted. In this respect, the Reutersvärd picture so contradictorily described by Bresti (1985:25), is really not a genuinely impossible picture, although it is enclosed by a continuous contour: it is genuinely unseeable.

The essential fact, however, is that the devil's turning fork is seen as a fork, and that Hochberg's figures are seen as frames, although there exists no consistent way in which the local cues may add up to this impression. Independently of the perspectival cues, there seems to be a primary message about fork-hood, frameness, and what have you. But how, then, is this message conveyed?

The best way to view "impossible pictures" is perhaps as figures which are intermediate between two other figures both of which correspond to possible objects (as some of those discussed by Hochberg). Seen in this way, the impossible pictures are not so far from ambiguous figures, such as the duck-rabbit: in both cases, it suffices to change a small detail to obtain a figure which is possible or, as the case may be, non-ambiguous. This brings us back to Wittgenstein's duck-rabbit, which Wittgenstein himself attributes to Jastrow. In fact, Jastrow himself adapted the

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figure from *Harper's Weekly*, which took it over from *Fliegende Blätter* (a German humour magazine more famously used by Freud in his writings about jokes; cf. 23a-b). Interestingly, however, unlike Jastrow's and Wittgenstein's duck/rabbit, the version in *Harper's Weekly* has the duck's bill tilted slightly upwards, and the *Fliegende Blätter* version even more so, which, as John Kihlstrom (2006a) observes, makes the reversal form one interpretation to another seem more dramatic. Kihlstrom (2006b-c) also points to the existence of another similar figure, alternating between the semblance of a dog and a chef (the first version of which comes from an old Gibson article), and he discovers for himself the possibility of interpreting another pattern as either a whale or a kangaroo (Fig. 24a-b).

Phenomena such as the duck/rabbit are not, as Kihlstrom points out, visual illusions properly speaking. Rather, they form "a class of reversible, ambiguous, or bistable figures commonly discussed by perception psychologists" (Kihlstrom 2006c). The difference, as Kihlstrom (2006a) sees it, is that the former depend on "unconscious inferences in perception" (and, thus, I take it, on universal human tendencies), while the latter "illustrate the role of expectations, world-knowledge, and the direction of attention". Thus, Kihlstrom goes on to say, children tested on Easter Sunday are more likely to
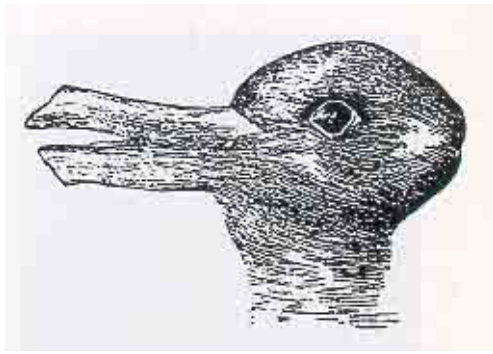
Fig. 23a-b. The duck/rabbit in Jastrow's version (a) and the original in Fliegende Blätter (b)

see the duck/rabbit as a rabbit – if, it could be added, these children are part of American culture or of the Americanized world after some time after 1970. To my mind, this does not touch on the basic difference: visual illusions are effects of the whole on the parts, which make metrically identical lines seem different in size, and the like. Ambiguous figures have to do with the identification of the marks on the surface as particular objects of the Lifeworld. They are similar to impossible pictures, in that their ambiguity, just as the impossibility of the latter, resides in their relation to the content level. They thus

involve what Deregowski called the *epitomic* aspect of pictures: the identification of the depicted object.[55]

The dog/chef picture and the whale/kangaroo picture, as well as Wittgenstein's version of the duck-rabbit, are all basically what we have earlier, following Arnheim, called "droodles", that it, not pictures properly speaking, but visual displays according to secondary iconicity. In this sense, they are like damp spots,

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55   See Lecture 2. They involve they epitomic aspect, but do not necessarily exclude they eidolic aspect, as we shall see, in the case, for instance, of the Necker cube.
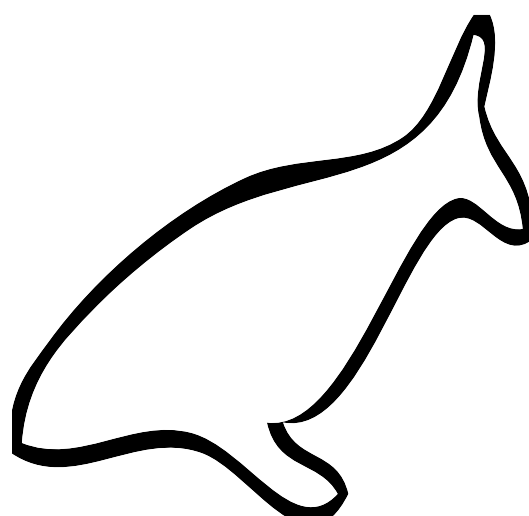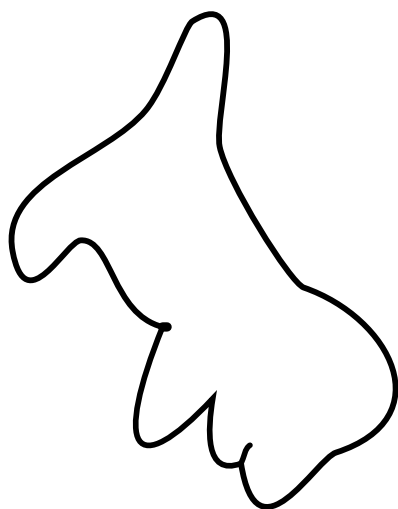
24ca-b: The chef/dog and the whale/kangaroo (from Kilhstrom 2006b-

clouds and the Rorschach test, with the caveat that the latter not normally "bistable", but shift between unlimited number of possibilities. Interestingly, Jastrow's duck/rabbit and the original version in Fliegende Blätter are not droodles, but real pictures. It is thus even more remarkable that they allow for different interpretations.

Kilhstrom (2006b) suggest there are three different kinds of reversible or ambiguous figures, the principles of which may combine in also combine in single figures.

> Figures that are subject to reference-frame realignments, such as the Necker Cube. Figures that are subject to figure-ground reversals, such as Rubin's Vase-Faces. Figures that are subject to reconstruals of the whole or of component parts.

In the particular case of the whale/kangaroo, Kihlstrom observes, there is a *reference-frame realignment*, in which the front of the whale becomes the back of the kangaroo. At the same time, there are also *reconstruals of component parts* of the figure, in which the whale's flipper becomes the kangaroo's foot, while the whale's tail becomes nose and ears. There is no *figure-ground reversal*. [56]As the example of the Necker cube suggests, the notion of reference-

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56   Without reference-frame reversal, the whale's flipper becomes the airplane's wing; the kangaroo's leg becomes the branch on which the bird sits; or with whole reconstruals of the object, the whale can also be seen as a dolphin, and the kangaroo can also be seen as a fox (Kilhstrom 2006b).

frame alignment does not simply apply here to the fact that front part of the kangaroo is to the left on the drawing, while that of the whale is to the right. This is, I take it, part of the reconstrual of component parts. Instead, reference-frame concerns the way in which the depicted object is taken to be oriented in space, that is, in the third dimension, depth. The whole point of the Necker cube is that either side of it may be seen as being closer to the observer. In order to see the figure as whale, we have to see the lower, right sight as being closer to us; if we opt to see it as a kangaroo, we must perceive the higher, left side as the closest. Here, as Hochberg (1980:51) notes in another case, that of a doll, the lines represent a round surface at the point of passing out of sight, as the earth disappears form view at the horizon, not the corners where the edges of the object itself meet, as in the Necker cube, or the edge of the surface, as in case of the silhouette of a key. The whale, or the kangaroo, is so as to speak transfixed at a particular position in relation to the viewer.

As far as I understand, the duck/rabbit is basically a reconstrual of component parts, in which the bill of the duck is transmuted into the ears of the rabbit, and so on. At least in the Jastrow and *Fliegende Blätter* versions, however, there also appears to be a slight change of reference frame: the nose of the rabbit seems closer to the observer than the

ears, and the bill of the duck appears to be closer than the back of its head. There are non figure-ground reversals. But what exactly are we to understand by the reconstrual of component parts? Does it involve simply substituting a pair of rabbit ears for a duckbill interpretation, and may it also occasion a different division of the whole into parts, that is, a segmentation into bigger or smaller units? Hoffman (1998: 89, 95), who also discusses the duck/rabbit figure, claims that the duck and the rabbit must have the same parts, according to the minima rule, which states that shapes should be divided "at negative minima, along lines of curvature, of the principle curvatures". Therefore, "what is an ear of the rabbit, for instance, is an upper bill of the duck." But this does not seem to be true: that which is an essential part of the rabbit, the mouth opening, is a fairly irrelevant inward bend of the lines making up the duck. Also, while the bill is one component of the duck, the rabbit has two ears, and as part of the body they must not necessarily be taken to end at the same point as the bill. More differences of this kind can surely be observed in the Jastrow and *Fliegende Blätter* versions.

Arnheim's droodle (Fig. 9a) is basically a reconstrual of component parts, the olive becoming a navel and the Martini glass becoming bathing trunks, but there is also a kind of figure-ground reversal, or rather, an extension of the figure, that which was the outer limits of the figure becoming parts of its internal demarcation. There is therefore also a small change of reference frame, for the difference in distance from the observer of the upper and lower lines is different in the bathing trunks and the glass interpretation. This means that the whole does not even end at the same boundaries in the two interpretations. As for Gregory's tree (Fig. 14.), we have seen that the component parts of the two interpretations are quite different, and of very different extensions.

Physical situations themselves, as Hochberg (1980:48f) observes, do not present any lines to the eye. Kennedy (1974a: 150ff; 1980; 1994; & Fox 1977) had blind people identify objects rendered by raised points; since they managed fairly well, Kennedy concluded that what both lines and raised points represent is not light, but "the spatial juxtaposition of surfaces" (1980:297). Elsewhere, Kennedy (1974 b215) tells us that a line, which is usually a deposit of pigment, is "an in homogenization on a surface between two boundaries (called contours) enclosing the width". It seems reasonable to conclude that raised points, as well as lines, are such inhomogenizations on a surface. Of course, raised points, unlike lines, are three-dimensional; but since the third dimension is the condition of possibility for their being tactually accessible, it can probably be reckoned as non-pertinent. In

both cases, then, inhomogenizations on surfaces stand for inhomogenizations in the space through which we move. It is not clear if any kind of inhomogenization will do. Nor is it clear if such inhomogenizations may stand for anything else than inhomogenizations in space. Lack of homogeneity is indeed a very abstract property for lines and objects to share.

There is another property of lines that in any case is not shared by the edges of objects (nor by the elements of photographs, cut-outs, silhouettes, etc.): that of having two boundaries that, so to speak, "face out" in different directions. This is the difference (referred to in the discussion of Eco above), which Volkelt (1963: 28ff) noted between *limits* and *contours*, where the latter, but not the former, detach themselves equally from inner and outer space. These boundaries are different, Kennedy (1974b: 218) observes, if the line is not straight: for instance, the outer contour of a glove is like a mitten, but the inner one is like a hand with the fingers slightly spread out; and the numeral 9 has one contour like 9, and another which looks like . Depending on whether we give prominence to one contour or the other, different parts of the drawing may emerge as "figure" and "ground".[57] But it is wrong,

Kennedy claims, to take Rubin's experiments to show that both contours cannot be given interpretation at once: in fig. 25, this is only true if we see one half of the picture as a head profile; but not, for instance, if we consider it to be a clam on its edge with its two sides clasped tight.

But there is no reason to stop at this point; for while it is true, semiotically speaking, that either just one boundary of a line, or both boundaries, may turn out to be pertinent under a particular interpretation, there is also the further possibility that, besides the boundaries, the pigment between them possesses a meaning in the picture (cf. Sonesson 1989a: 265f). The interior line of Kennedy's drawing (fig. 25) could well be the mouth of the clam, in which case the pigment stands for the mouth opening itself, while the boundaries, facing on to the pigment and each other, represent the inner edges of the movable body parts around the opening. It should be noted, however, that according to this same interpretation, only the outer boundary of the oval line has a meaning in the drawing, viz. as the outer edges of the clam's body (or, strictly speaking, its "horizons" in Hochberg's sense). But the same drawing may also represent a wire construction, in which case both boundaries and pigment, of the oval as well as of the inner sinuous line, correspond to particular parts of the

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57   And since Kennedy 1974a:154 thinks there is evidence of figure/ground effects also in "haptic pictures", he apparently also thinks raised lines have

two borders; cf. 1980:294f and 1994 about "ambiguities".

represented object.

In Arnheim's droodle, the pigment does change meaning somewhat, because the middle vertical line, understood as the stand of the glass, makes up a body of its own, but understood as the limits between the legs, it is an empty space between two contours facing each other outwards from left and right, respectively. More importantly, however, in the bathing suit interpretation, the main figure of the picture does not end with this middle line, branching out into a triangle standing on its head, as it does on the glass interpretation. Instead, these lines are simply internal demarcation in a figure whose limits cannot be seen (but which are supplied from our world knowledge).[58]

The decision of what to take as figure and ground seems to be primary. It decides what is taken to be the theme and the fringes, as applied to the picture. In most cases, of course, figure/ground reversals do not suggest themselves, so the figure is immediately given. The next question which involves frame alignment and component parts (which are at least partly dependant on each other), would seem to that the operation which decides, without the thematic field, which part is the theme proper and which are simply parts of its field.

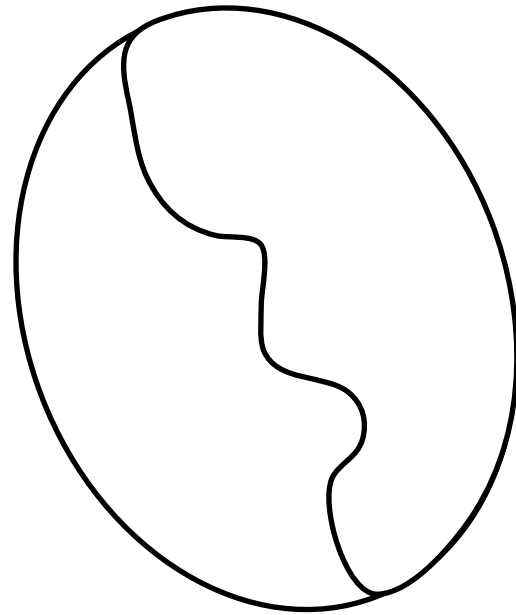It seems then, that in many cases, it is sometimes the pigment of the

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58   Cf. Lecture 4.

Fig. 25. A clam. Lines for different uses

lines, sometimes one of its contours, and sometimes both, which have to be taken a relevant for identifying the figure. Curiously, these epitomic impossible figures, which would seem to require as contradictory a interpretation as the corresponding eidolic ones, have never been treated as such. Consider, once again, Klee's "Mother and child" (Fig. 21): part of the line must be taken here, as the border both of the mother's body and of the child's body, each facing in a different direction. Thus local cues seem to be contradictory, but the whole does not offer any real problem of interpretation. Once again, the global interpretation gains the upper hand.

From perceptual to pictorial perspective

In order to situate the similarities and

differences in which perspective, in the sense of a particular, subjective-relative, division of an object, is rendered by means of such semiotic resources as verbal language and pictures, it will be necessary to attend briefly to the general differences between these types of semiotic mediation.[59] The most serious study of the difference between "literature" (that is, most of the time, verbal language in general) and "painting" (pictures and, to some extent, other visual modes of mediation) remains to this very day *Laokoon*, first published in 1766 by the German writer Gottfried Ephraim Lessing.[60]

It is the conviction of Lessing that time cannot be adequately rendered in pictures, which is why visual art should ideally pick up one single moment, and, in a parallel fashion, language, which it not very conversant with space, should be content to describe a unique attribute. Then, according to Lessing, an extension to the whole will take place in the imagination, spatially in language and temporally in pictures, that is, in the domain that the system cannot adequately render. The property that most easily allows such an extension to the whole of the (spatial) object is

called the "sensate quality"; and the phase which best permits the anticipation of the complete temporal succession is called the "pregnant moment".

If we are to believe Lessing (and, in fact, many others who have written about pictures since then, including Goodman 1968, who talks about "density"), visual art is not only able to describe the whole of space, but it cannot avoid doing so: pictures have to show "fully determinate entities". Taken literally, this must mean that pictures are unable to pick up "sensate qualities". Even if we limit this claim, as is no doubt intended, to *sensate* qualities in the *visual* modality, this is certainly not true: as I have shown elsewhere (in Sonesson 1989; 1994a), notably against Goodman, the "density" of pictures is only relative, and all kinds of abstraction are found in them.[61] This applies to the expression plane, in the case of more or less schematic pictures, such the "impossible pictures" and the "ambiguous figures" discussed above: but is also applies to the content plane of some pictures the expression plane of which is fully "dense". Thus, for all practical purposes, many pictures are not about a particular person in one or other disguise, but about more

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59   The following sections are adapted from Sonesson 2004b.

60   But, of course, even his ideas may be developed using more semiotics, as has been done by Wellbery (1984), Bayer (1975; 1984), and the present author (notably Sonesson 1988). More will be said about this in Lecture 4.

61   Simply put, "density" to Goodman means that, no matter how fine the analysis of something (e.g. a picture) into meaningful units, it will always be possible to posit another unit between each two of those already given, and so on indefinitely. Cf. Lecture 4.

or less abstract roles in relatively generic situations.

To Lessing, in any case, the picture is unable to abstract: Homer may show the gods drinking and discussing at the same time, but that is too much information to put into a single picture. But as the example shows, it is not the amount of information that is crucial, but the possibility to organise it: verbal language has fixed means for conveying relative importance, newness, focus, etc. The picture, however, in the prototypical sense of the term, may possess some corresponding mechanisms which are not sufficiently known, but hardly any systematic and content-neutral means for organising such information: that is, in Halliday's (1967-68) terms, there are no fixed devices for separating that which is *given* from that which is *new*, and that which is the *theme* (what we talk about) form the *rheme* (what is said about it). Indeed, although "background", as applied to language, is originally a visual metaphor, just as is "perspective", that which the picture places in front is not always the most weighty element, with importance decreasing according to increasing apparent distance; nor is necessarily the central figure the most semantically prominent one.[62]

One of the principal difficul-

ties is that, in the ordinary picture, the space of representation is, at the same time, a representation of the space of ordinary human perception, which impedes an organisation by other systems. We have seen this already in the case of the "duck/rabbit" and similar figures, that the thematic organisation serves the task of identifying and presenting the object, that is, it is taken in charge, first by the epitomic function, and, in the second place, if some resources are left unused, by the eidolic function. In the history of art, these difficulties were at least partially overcome by Cubism, Matisse, as well as some forms of collages and synthetic pictures, and it has been even more radically modified by visual systems of information, logotypes, Blissymbolics, traffic signs, etc.. (cf. Sonesson 1988; 1996b; in press a, b). Yet it remains true that pictorial representations lack systematic means for rendering what Halliday has termed "information structure".

Although pictures do not render the world in the form of "fully determinate entities", they have to divide up the world in bigger chunks in order to convey information about it than is the case with verbal language, and they lack any general means for imposing an internal structuring on these chunks, apart from the one given in perception. In terms of more modern cognitive linguistics, the same two points might be driven home by saying that pictures cannot

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62   Self-styled semioticians like Kress & van Leeuwen (1996) claim the contrary, but it is difficult to grasp their justification for so doing. Cf. Lecture 4.

pick one image scheme without also having to choose several others, and they are unable to organised these schemes in order of relative importance.[63] The positive side of the same observation, however, is that it is only in pictures (and to some extent in the cinema) that perceptual perspective can be rendered as such, that is, as it appears in the world of our direct perception. As far as I understand, it is only here that it can be given the form of *perceptual adumbration* that is has in reality. My second claim, however, to which I will turn in a moment, is that there is another sense in which pictorial perspectives, in spite of being at the origin of the metaphor, are further removed from perceptual perspective than others.

Pictorial perspective shows *how* something is perceived, not just *that* it is perceived: that is, it can, and in as sense must, show all the details of the perceptual relation connecting the perceiver to the main object of perception. In Husserl's terms, it shows the world in "perzeptuelle Abschat-

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63   The term "image scheme" is used by such linguists as Lakoff, Langacker, Talmy, and many others, but I have nowhere seen any clear definition of what it means. It clearly implies that linguistic meaning is different from what logicians call propositions but is in some way more similar to pictures. The visual representations used, in particular, by Langacker and Talmy, suggests that images schemes are some very abstract kinds of pictures corresponding to a single or a very limit number of objects or events. Cf. Lecture 2.

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tungen". Nothing similar exists, for instance, in language (and thus not in literature). Turning Lessing against himself, we could say that there is no such "sensate property " which, once being made explicit by language, could give us an impression of experiencing the whole of perceptual perspective. By means of other semiotic resources, we may fix the relation of the positions of the observer and that which is observed, whereas pictorial perspective, like true perceptual perspective, takes into account all the phases connecting those two positions. Thus, the true *perceptual perspective* of pictures could be contrasted with the mere *positional perspective* of other semiotics means.

Linguistic "perceptual" perspective is about relative position of the viewer and the thing seen, not about the "how", the nature of the link between the perceiver and the perceived. We must grant, however, that true perceptual perspective appears to imply something about the relative positions of subject and object. In fact, there are some very schematic pictures, exemplified by traffic signs, which are more similar to the kind of perspective we find in language and literature. Even so, however, the picture shows, in addition to position, some aspects of the "sensate qualities" of the object positioned. This could be exemplified by the traffic signs for bus stop (in Europe seen from the side, but in Mexico from the front), the car (from

Fig. 26. Different kinds of "positional perspectives" in traffic signs

the front), the air plain (from above), and that for a street with restricted circulation, which mixes the perspectives (Cf. Fig. 26). Similar examples could of course by found in Egyptian frescoes and pictures from many other alien cultures, in space and time. So the picture (at least the schematic variety) may render something akin to positional perspective, but, again, it cannot do so by showing mere position; but it is the only type of semiotic resource that allows for another possibility.

There is, however, a second peculiarity of pictures, which makes them more different from real-world perception than other semiotics, means: they are two-layered perspectives. A picture is immediately a perspective on a perspective. This is not what happens in the perceptual world : as Husserl argued and Gibson after him, we "see through" the perspective to the thing as such. This is not so in pictures. Even the best linear perspective will not permit us to see "through" this surface to the thing depicted: instead, the perspective is part of what is depicted. In terms of Husserlean phenomenolo-

gy, the perspective (which, as I suggested above, is one way of dividing objects into parts) becomes an object in its own right.[64] As perceptual psychologists such as Gibson, Pirenne, and others never tire of pointing out, it is only when we look at a picture through a loophole, using one, immobile eye ("cyclopean vision") that there is any possibility of confusing the picture with reality. In fact, the surface is always perceived *as* a surface. Although not part of any of these traditions, Perez Tornero (1982) gives a nice illustration of this two-layered perspective (Fig. 27). This is the reason for calling perceptual perspective, when manifested in pictures, for *pictorial perspective*.

Strictly speaking, pictorial perspective does not imply any particular positional perspective. In general, it cannot be supposed that depicted perspective is the perspective from which the perceiver "sees" the message. This is certainly not true about ordinary lineal perspective, for although the "right" position may be

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64   Actually, Husserl identifies "aesthetic perception" with phenomenological reduction in his discussion of the "Bildbewusstsein".

geometrically determined, it is never the one exclusively used by the observer (as shown by Pirenne; cf. Sonesson 1989a:255ff). Anamorphic perspective may actually force the observer to adopt a particular position; but this is a very peculiar device. In the second place, perceptual perspective is not necessarily the perspective from which the sender of the message created it – although he has not doubt looked at the thing depicted from the perspective depicted, among many others. The latter point obviously does not apply to photography – only the camera has to "look" from that perspective. The photographer may in fact be in front of the camera, as in Cindy Sherman's well-known photographs. Moreover, in the case of computer-generated images, in particular those derived by means of an algorithm, the perspective rendered is not even necessarily one among those experienced by the creator.

Perhaps we should say, then, that pictorial perspective implies positional perspective, but only an unspecified version of it. In other words, no particular subject or person occupying such a position is posited. If we take *positional perspective* to be the most abstract form of perspective (since it only describes relative positions), then it may be said that *pictorial* (and of course perceptual) *perspective* adds information about that which is perceived, while *personal perspective* contributes information about the perceiver. In order to illustrate these relationships (Fig. 28-30), I have adapted some schematic figures from Langacker (2001, in press). However, the emphases placed on different parts and the developments of the subject pole are my own contributions.

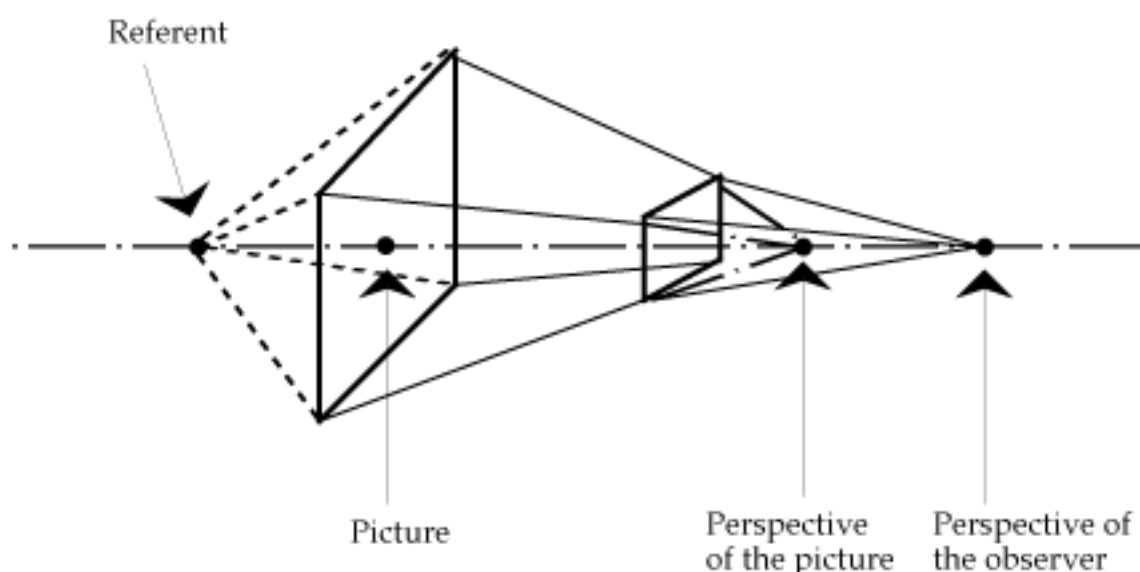Commenting on Lessing's theory, Bayer (1975; 1984) submits that

Fig. 27. The perspective of the picture and of the observer. From Perez Tornera 1982, as adapted in Sonesson 1989a.

the cinema should be able to synthesise the advantages of language and pictures: it has access to the whole of the visual world, and to temporal succession at the same time. This is probably an all to simple conception of film as it is experienced, as may be illustrated by the case of perspective. The film picture is of course similar to the static picture in being able to render perspectival adumbrations. However, it is probable that these adumbrations have less of a part to play in film perception, since they change all the time as the film develops. Thus, they are probably less in focus — except in the experience of the film analyst who may play the film over and over again, look at it in slow motion, and even investigate each picture separately.[65] On the other hand, unlike the static picture, the film picture *does* permit us to "see through" the perspective to the thing given through the perspective, as in the ordinary perceptual world. This is not surprising, since the film picture, like the perceptual world, is in perpetual movement. On the other hand, because of the construction of the camera lens, it is still a case of cyclopean vision.[66]

We have seen that it is not the relative position as such which is important in pictorial perspective, but the properties of the very process of viewing. In a film, however, it is precisely this relative position which seems to be important (somewhat like in language) : as-seen-from-above, as-seen-from-the-right, etc. [67]In some contexts, films seems to emphasise the *spatial perspective* (the position), in others the *personal perspective* (the identity of person doing the seeing). For instance, a perspective from above does not necessarily involve positing somebody looking down from above (God or the angels — except in some relatively recent films by Wim Wenders). But if we are first shown a person looking and then some view, we tend to think that what we are seeing is the perspective of that person, in particular if the film then cut back to the same person, or another one, looking. These are elementary viewing habits, which are learnt very early by children (and emulated by some recent robots). It is because of the temporal succession – and the possibility of cutting it up in discontinuous chunks (the "montage" of film theory) — that this is

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65   In fact, with the generalisation of the video library, not to mention the DVD, this possibility becomes more easily available. Contrary to what film analysts like Metz, Bordwell, etc, always seem to suppose, the cinema is no longer necessarily the typical channel of circulation for film pictures.

66   It is possible to imagine a different

kind of film. Some robots being built nowadays are able to integrate different camera views, just as the human eye does, but so far, only the robot can "see" this.

67   I am of course referring to the simulation of perceptual perspective here : there are other devices in films for rendering some qualities of the viewing process, most obviously blur.
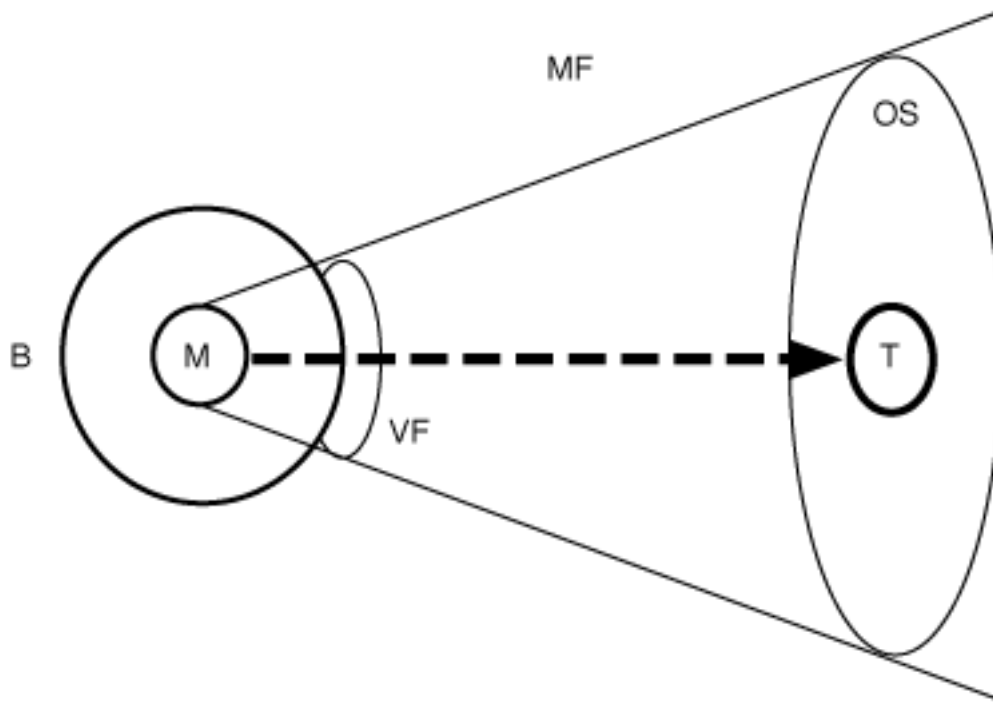
Fig. 28. Perspective construction (inspired in Langacker 2001, in press). B = Observer; M: consciousness; VF = visual field; MF = maximal field of vision; OS = immediate field of vision; T = theme. This is essentailly a translation of Langacker's scheme: what makes it into a positional perspective, however, is the fact that it is the relative position of M (or B generally) and T which is emphasized (thick line).

possible in the cinema, but hardly in static pictures.[68]

Here, as if often the case, we are of course concerned with *ascribed perspective*. What we see is ascribed to a person different both from the creator of the pictures and the observer. You must be at least a little of a film connoisseur to identify the low-standing camera as the gaze of Ozu, and the like. If anything, however, it is the perspective of the creator, in this peculiar sense, which may be

identified in static pictures: the gaze of Matisse, of van Gogh, etc. On the contrary, ascribed perspective here seems impossible. There have been arguments claiming that some donor figure appearing in mediaeval paintings, and even some other marginal person, is the one whose perspective is shown, but this seem to me a contrived parallel. These persons are part of the (perspectival) picture, even if they are painted on the border of the pictorial space. What is lacking in the picture is the shift from the space of the perceiver to the thing perceived which we have in the perceptual world as well as in the film. We could of course have a picture where we "look over the shoulder"

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68   Except of course in comic strips and photo novellas. But these still feature static pictures, which are seen as objects in their own right. Perspective may therefore be more effective in the comics than in the cinema.
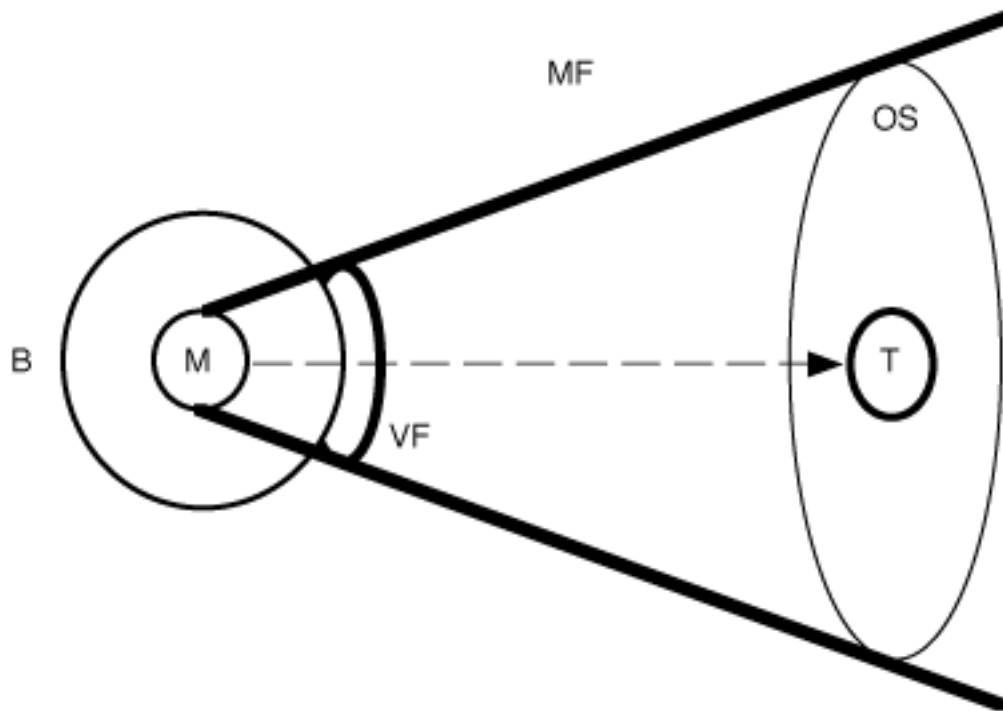
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Fig. 29. Perceptual perspective (same conventions as in Fig. 28). Here it is not the relative postion but its forms of transition (thick line) which are emphasized, and at least, in the static picture, the visual field rather than the immediate field of vision.

of some person, as we have in the cinema, but it is only in some wider context that such shots will identify the perspective of what is seen at the other side of the subject's body as being *his* perspective.

There is of course another way of embedding one person's perspective within another, and that is by "quoting" it, which is obviously possible in static pictures and also, though perhaps less naturally, in films. But since this seems to be a case in which the perspectival metaphor, projected onto language, is returned to pictorial media, it may be better to discuss first the nature of perspective in language and literature.

The limits of the perspective metaphor in language

The most elementary fact of linguistic perspective (in the limited perceptual sense) is that it is opposed to non-perspectival devices : some words and phrases do not seem to embody any (perceptual) perspective at all. This is of course impossible in pictures as well as in film (even though some abstract pictures may lack detailed perceptual adumbrations, as does traffic signs). So there is an initial choice between perspective and non-perspective, which does not appear within other semiotic resources, at least not within visual ones. An exception to this may well
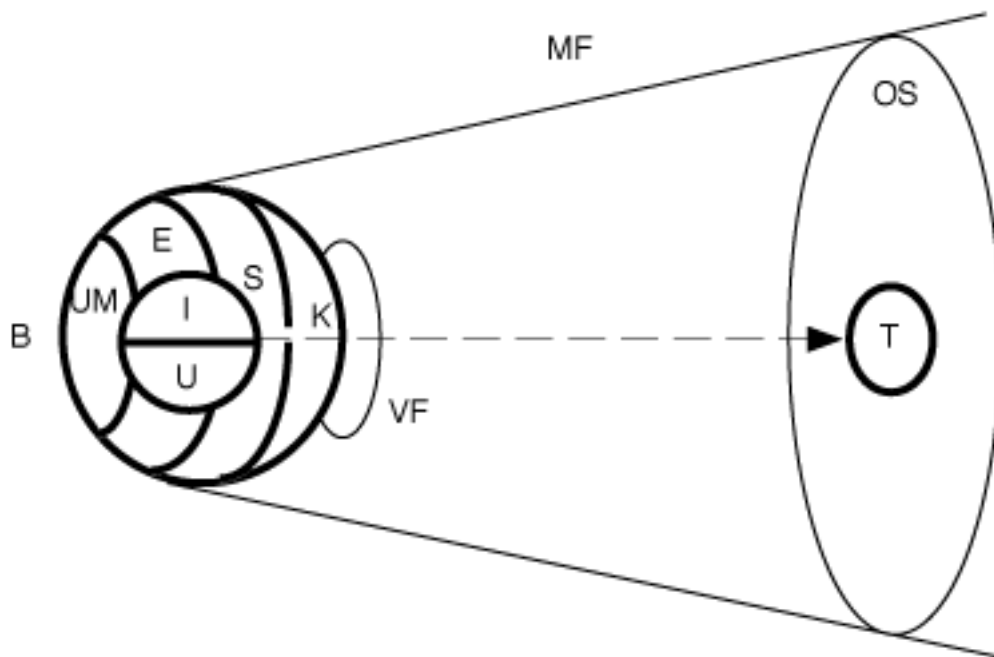
Fig. 30. Personal perspective. Same conventions as in Fig. 228-29, with the following additions: S = sight; K = body; U = conception; E = emotion; I = information, knowledge; UM = forms of expression.

be those kinds of abstract renditions of objects (e.g. the cube identified as closure plus angles) which are produced by small children and brain-damaged persons. But this case if of course perspectival in the wider non-perceptual sense of singling out some properties – another of the three modes in which the object may be divided, which were discussed above. More to the point, traffic sign, Bliss, logotypes, and many other schematic visual figures only have positional perspective. But all these are at the limit of being pictures. Cubist paintings, and "icons" in the religious sense of the term (as described by Uspenskij 1976a) contain several (more or less) perceptual perspectives. But choosing several perspectives is also a way of following the obligation of realising perspective.

In linguistics, perspective most immediately involves positional perspective : the difference between the speaker's perspective and that of some person mentioned or implied (including the listener's perspective, notably in some pronouns and verb forms). Such linguistic perspective, as codified in language, normally involves a relationship to the body of a person, which means that *positional perspective* and *personal perspective* are hard to distinguish. Thus, perspective presupposes embodiment, egocentric space, or, as linguists have earlier said, the *origo* of the *I-here-now*. A rather curious example is the sentence "The sun is right above the cabin", pronounced by someone standing on his head

(Langacker 2001: 37). In written language (the most common material of literature today, in spite of Lessing) the connection to the body of the speaker and hearer is of course much looser. As we have seen, there are only very indirect ways of embodying the listener's or some third person's perspective in static pictures, while there is much more leeway in the cinema. However, two phenomena to which we will now turn characterise linguistic perspective but are hardly conceivable outside of verbal language.

A notion of perspective which is linguistically very relevant involves some other object or person functioning as a kind of "landmark" or, as I will say in the following, a point of reference : something or somebody is in front of the house, behind the hill, etc. Perhaps it would be more correct to say that it is only in language that something distinct from one's own body may be used as a point of reference. Someone who says that somebody else "came up onto the stage" may himself be on the stage, but it is also possible that he uses the announcer as a point of reference (Cf. Langacker 2001: 29ff). The sentence "Dick is to the left of Tom" may be true at the same time as "Dick is to the right of Tom", if Dick and Tom face you, and you invoke either egocentric space or Tom as a point of reference (Cf. Miller & Johnson-Laird 1976: 275ff).

Perspectives, in this sense, seem to be completely impossible in pictures (and the cinema) : there are of course objects in the picture which can be described, linguistically, and perhaps even, in a sense, perceived, as being in front of and behind others, but the picture is never structured according to such a perspective. There is no point of reference apart from the implied observer of the pictured scene. In his book about Russian icon paintings, Uspenskij (1976a, b) argued that these paintings, in their central, religiously laden parts, were structured according to what he calls an "inner perspective", that is, a view from the other side of the painted scene ; but, even so, this would not involve any independent point of reference used by the perceiver, but God as some kind of super-subject — it would simply mean that the "point of view of the picture" were even further from coinciding with the "point of view of the perceiver" than in other pictures.

Another peculiarity of linguistic perspective is when we identify with the object, that is, we put our self in its position: we speak, for instance, of "the front of the house". Linguists call this phenomenon "intrinsic front" and define it as being the side containing the main perceptual apparatus, which is in the direction of motion and/or which is characteristically oriented to the observer (Miller & Johnson-Laird 1976: 400ff: Cf. Vandeloise 1986). The first two criteria involve some kind of identification

with the object, the third one rather with a second person, an Alter. Thus, it supposes some kind of dialogical projection, which is probably only possible in verbal language. Once again, descriptions such as these can of course be applied to pictures, both as objects and as depictions, but they have no consequences for the organisation of the pictures. It could be said that intrinsic front is a property also only described by language but actually forming part of our knowledge of the world. However, it seems to be transferable to novel objects within language.

A more general conclusion might be drawn at this point. Only is verbal language is it possible to use something different from the subject itself as a point of reference. A more complete analysis would certainly reveal that what characterises language is the capacity to use an additional point of reference, concurrently with one's own body. Something is "behind the hill" in relation not only to the hill but also to the speaking subject. Or, more precisely, something is "behind the hill" *in relation to the relationship* between the subject and the hill. The subject is primarily relevant as a body. Both referential points and intrinsic fronts involve a *bodily positional perspective,* or a *bodily perspective,* for short. No other semiotic resource than language seems to be able to make use of this kind of perspective.

Perspective in the extended sense in language and pictures

The term "perspective" is readily used by linguists and philosophers in a much more extended sense: it comprises all the different ways of "dividing up the object" which we discussed earlier, thus, in addition to perceptual parts, proper parts and thematic hierarchies of properties. This often involves using perception as a metaphor for cognition. Even though he does not use the term "perspective" (but "construal"), Langacker (1991; 2001) clearly conceives the difference between active and passive forms of the verbal construction in this way. Analogously, differences of tense and aspect (for instance *passé simple/pasado* vs *imperfait/ imperfecto* in French and Spanish) may be readily construed in this way. I will call this a *conceptual perspective.*

Literature may obviously employ conceptual perspective, since it is a resource contained in verbal language (also in less codified forms than those considered above). It applies not only to the real subject of the situation of communication (or at least to the creator) but also to a number of ascribed subjects (the "hero" but also the narrator). The only problem concerns the possibility of distinguishing this perspective from the other types. In static pictures as well as in the cinema, the situa-

tion is somewhat different (although even there "pure" cases may be difficult to find). Our idea of the style of a particular painter or photographer depends at least partly on conceptual perspective: this is the case with van Gogh's strokes (now even as features in graphics software) as well as with Cartier-Bresson's incomplete scenes. However, even in this case is it difficult to conceive the possibility of imputing the perspective shown to depicted or otherwise fictive persons. In the cinema, on the other hand, it can be done, because of the ongoing pictorial flow. The difference involving perceptual perspectives thus seems to be reproduced.

A more commonly discussed interface of perspective studies in language and literature is the phenomenon often termed "erlebte Rede" or, more generally, the possibility of reproducing (or only partly reproducing) the speech (or thought) of others within your own speech. For the present purpose, we need to begin by considering the general possibility of reproducing "the other's speech", in Bakhtin's parlance, without confusing it with our own, by means of different semiotic resources (cf. Bakhtin 1981; 1984; 1986; Vološinov). The question whether this operation uses direct speech, reported speech, or something in between will have to wait. Obviously literature, as all other uses of language, is capable of such reproduction. Even static pictures and the cinema can do this, but

it only happens under very peculiar circumstances. It is not a straightforward way of using these semiotics resources as might be said about literature and other kinds of language use.

Elsewhere, I have distinguished *generic* and *specific picture depictions* (Sonesson 1994). A picture may "quote" another picture, but if the picture in question cannot be identified from other sources, it is simply generic, and there is no way we can know whether it is similar to "direct speech", "reported speech" or something intermediate. The case if different with specific picture depictions. In Velázquez's painting "Las Meninas", several paintings by Rubens and Jordeans may be identified as hanging on the walls. In fact, it has even been argued that what we see are the copies of these paintings made by Martínez del Mazo. Here, we encounter the closest equivalent of "direct speech". If anything, Picasso's version of "Las Meninas" is comparable to "reported speech", because while we can recognise some elements of Velázquez's painting, they are all filtered through the style of Picasso. Hamilton's version of Picasso's "Las Meninas", however, may contain some elements of "erlebte Rede", with reference to both Picasso and Velázquez. This is at least true in relation to Picasso, since Hamilton borrows the latter's "way of speaking" (style, typical themes, etc.) even when it is not realised in

this particular work.

In order to have something more directly similar to "direct speech" in pictures, we would need to include a reproduction of some earlier picture in our picture. Since paintings are traditionally conceived to be unique, the only way of doing this would be to use a reproduction, as Duchamp did with Mona Lisa in "L.H.O.O.Q.". This is of course more naturally done in the cinema, where there is not supposed to be a unique copy of the work. Photographs, digital pictures, and in fact all pictures whose copies are given the same value as the original (the "first copy"), that is, which are not considered to be works of art, are of course equivalent to film here. Yet in all these cases quotation will only function as such when we recognise the work from other sources (even when it is only the pictorial genre which is quoted, as in Cindy Sherman's "Film Stills"). To construct "the language of the other", quite independently within one's own language, when this other is not a specific real person, as happens in a novel, seems to be impossible in the picture.

It is of course impossible to fully discuss here the relevance of something as complex as "erlebte Rede" to other semiotics resources than language, but I would like to add a few considerations. The analogies suggested above suppose that "erlebte Rede" consists in incorporating parts of the expressive resources of "the other's language" within one's own speech: this is the way in which Hamilton "quotes" Picasso. This could be called a stylistic perspective. In the case of both language and pictures, it is not clear whether such a *stylistic perspective* can be – or even should be – distinguished from conceptual perspective.

However, as the term is used in the study of language and literature, "erlebte Rede" also involves other phenomena. Thus, for instance, when Hellberg (1984) talks about "empathy markers", it seems that it is not so much the other's expressive means, but his or her emotions which are involved. Perhaps the case is comparable to Jakobson's (1963) "emotive function", which is defined to concern everything which involves the "sender" of the message, but which is then (in part) exemplified (as the choice of work also suggests) by reference to the emotions of this "sender". It could be argued that *emotional perspective* necessarily implies stylistic perspective, even though the opposite does not hold. But even this does not seem to me to be true. If I write, for instance, "He exclaimed that Damn! he would kill me", some much stronger word than "damn" may really be used, but the emotional tone may still be that of the other speaker.

Again, nothing similar seems to be possible in pictures. Like any human artefacts, pictures may of course express the emotions and sentiments

of their creators. And they may convey emotions to the observer in a way that is not completely arbitrary. But a picture cannot express the sentiments of the persons depicted. Of course, it may depict the facial expressions and gestures of the persons involved in the scene – but then it simply conveys the emotions available to the observer of the perceptual world. Nor can a picture render the emotions of the creator of a picture that it quotes. If we include values in emotional perspective, we might argue that Egyptian frescoes express the values of the Pharaoh, by depicting him much bigger than everybody else (something comparable to "subjective maps"). But in fact, Egyptian frescoes no doubt expresses the value of the society at the time. Something similar applies to the mediaeval donor who had himself painted much smaller than the saints: this value relation is really part of his society, and is expressed more clearly in the contract with the painter. Even the "inner perspective" attributed to God in Orthodox icons does not really express God's values or emotions. It simply embodies a way of conceiving the world that would be well known to the contemporary observer from many other sources.

In the cinema, on the other hand, it seems quite possible to express emotional perspective attributed to others. Because it is made up of a sequence of pictures, a film may show us some scene in which an emotion is given expression (using for instance special effects) followed or preceded by a scene in which this emotion is assigned to a depicted person.

The meaning of perspective in literature is of course predetermined by the resources offered by language. And yet it is perhaps no accident that literary scholars tend to conceive perspective in a rather different way from linguists. They are concerned with the one who does the observing and/or who detains the knowledge, much less the one who has feelings with respect to something and/or who gives expression to such feelings. A verbal text as a whole no doubt may contain viewpoints that are not given any particular linguistic expression. Genette (1983: 48ff) describes focalisation using a drawing with a head "observing " (or otherwise having access to) a bubble containing a head "observing" another head in a bubble, etc. This should not be confused with Perez-Tornero's picture of the viewpoint of the picture – the latter does not contain any little head doing the observing. It is a static reproduction standing for itself. Something similar to what Genette describes can only be found in specific picture depictions.

Against other literary scholars who have taken the perception metaphor rather literary, Genette insists that focalisation does not involve perception but only the amount of knowledge shared — or, more exactly, the restrictions imposed on

knowledge as compared to the omniscient narrator. That which then characterises other kinds of narrators is whether they have access to any consciousness or only to the outside world, and whether they have access to a single consciousness only (which may or may not correspond to the person described as "I") or to several ones. In such cases, we will talk about *information* or *knowledge perspective.* It will be noted that what is here taken as the zero degree of the classification is omniscience, whereas the point of departure of pictorial perspective is always the knowledge identical to that which is given to the perception of one person placed in a particular position.

Even though knowledge perspective does not have the same systematic importance outside of literature, it may still be relevant to other uses of language (even though the omniscient narrator then is revealed as a rather utopic personage). In pictorial media, on the other hand, knowledge perspective is hard to isolate, since knowledge here must of necessity be translated into seeing (even in the cinema, if we abstract from the verbal part of the message). But this does not in any way mean that we are barred from entering the consciousness of all persons involved (apart from the director), contrary to what is suggested when Hemingway's style is described as being derived from the cinema: in fact, other minds are given to us in a

film as well as in any other pictorial media in exactly the same sense as in reality, that is, indirectly through perception.

The amount of information conveyed about other minds thus depends on the aptness and willingness of the persons depicted for sharing this information with us. In some cinematic genres, such as "action films", information about other minds is largely irrelevant; and there are certain directors (such as Bresson) who intentionally try to eliminate the kind of access we have to other minds in the real world. On the other hand, the cinema (and, to some extent, other pictorial media) has the possibility seldom present in reality to convey some particular types of contents of a person's consciousness, by means of such devices as close shots of faces and extended shots (which are comparable, in this respect, to static pictures).

As such, however, the knowledge perspective only seems to become relevant in the cinema (as well as in a series of pictures, for instance a comic strip; cf. Sonesson 1988; 1992a) when a clear dissociation is perceived between the knowledge of the creator (and/or the corresponding ascribed subject) as it is translated into something which may be seen, and the knowledge of the spectator. This happens, for instance, in Hitchcock's "Stage fright" where we are shown what the narrator (which, at this point, is the suspected assas-

sin) wants us to know, which is not identical to what he *does* know, that is, what actually happened. But this can only be discovered retroactively, when we are shown the real sequence of events towards the end of the picture.

Summary

In this section I have described a kind of relationship to the subject which may aptly be called a perspective while distinguishing it from other similar phenomena (such as "aspect"): it is a case in which an object is conceived as being constant, while the modes of access which a subject may have to it varies. I have also singled out some different kinds of perspective: positional perspective, which only focuses on the respective spatial positions of the subject and the object; perceptual perspective, and its particular variety, pictorial perspective, which are concerned with the exact perceptual adumbration in which the subject has access to the object; and personal perspective, which is involved with the way in which the subject itself is modified in presence of the object. In addition, I have distinguished different components within the consciousness of the subject, such as his body, his feelings, his conception, his thought and his means of expression. Against the background of a distinction between the resources of verbal and visual media, I have also tried to determine to which extent ordinary language, literature, pictures and the cinema, respectively, offer the resources capable of expressing these different kinds of perspective. In particular, I have suggested that perceptual perspective can only be emulated in pictures. The presence of pictorial perspective, which serves to identify the object perceived (epitomic function) and its placement in the spatial world (eidolic function), at the same times serves to limit the possibilities of adopting other kinds of perspective in pictures.

References

Anati, Emmanuel (1976). *Evolution and style in Communion rock art*. Capo di Ponte, Edizioni del Centro.

Arnheim, Rudolf (1969) *Visual thinking*. Berkeley & Los Angeles: University of California Press.

Bayer, Duo, (1975): *Lessings Zeichenbegriffe und Zeichenprozesse im "Laokoon" und ihre Analyse nach der modernen Semiotik*. Stuttgart. Diss.

— (1984) Laokoon - Momente einer semiotischen Ästhetik, in *Das Laokoon-Projekt*, Gebauer, Gunter, ed., 58-102. Stuttgart: Metzlersche Verlagsbuchhandlung.

Bakhtin, M.N,. (1981) *The dialogic imagination*. Austin, University of Texas.

— (1984) *Problems of Dostoevsky's Poetics*. Minneapolis, University of Minnesota Press.

— (1986) *Speech Genres and other Late Essays*. Austin, University of Texas.

— (1990) *Art and Answerability*. Austin, University of Texas.

— (1993) *Toward a Philosophy of the Act*. Austin, University of Texas.

Bierman, Arthur K., (1963) That there are no iconic signs, in *Philosophy and phenomenological research*, XXI11:2,

December; 243-249.

Blanke, Börries (1998) Modelle des ikonischen Zeichens, in *Zeitschrift für Semiotik* 20: 3-4, 285-304.

– (in press) L'iconicité comme double catégorisation. To appear in *VISIO: thematic issue: Iconicity revisited/ Iconicité revisité*, Sonesson, Göran (ed), Spring 2005

Boden, Margaret, (1977) *Artificial Intelligence and natural man.* New York: Basic books, inc., 1977.

Bordon, Emanuelle, & Vaillant, Pascal (2002) Le status du signe iconiqwue entre iconicité et intertextualité. In VISIO, 6:4, hiver 2001-2002, 57-74.

Bouissac, Paul, (in press) Eroticon: l'iconicité renversée To appear in *VISIO: thematic issue: Iconicity revisited/Iconicité revisité*, Sonesson, Göran (ed), Spring 2005

Bresti, Carlo, (1985) De omöjliga figurerna /foreword/ in Reutersvärd, Oscar, *Omöjilga figurer i färg,* 5-30. Lund: Doxa.

Bruss, Elisabeth, (1978) Peirce and Jakobson on the nature of the sign, in *The sign — Semiotics around the world.* Bailey, R.W., Matejka, L., & Steiner, P., (eds.), Michigan Slavic Contributions: Ann Arbor; pp. 81-98.

Broby-Johansen, R. (1967). *Oldnordiske stenbilleder.* København: Gyldendals.

Burenhult, Göran (1981). *Stenåldersbilder.* Stockholm: Sureförlaget.

Bermúdez, José Luis (2005) *Philosophy of psychology.* New York & London: Routledge.

Carani, Marie (1999) Voir, penser, décrire et percevoir l'objet visuel. In *Visio,* 4; 2, 9-30.

Currie, Gregory (1995*) Image and Mind.* Cambridge: Cambridge University Press.

Davidsen, Erling, & Munkholm Davidsen, Helle (2000) Iconicity and Evidence. In *Iconicity - A Fundamental Problem in Semiotics.* Troels Deng Johansson, Martin Skov & Berit Brogaard (eds.), 81-90. Aarhus: NSU Press

Deacon, T. (1997). *The Symbolic Species: The Co Evolution of Language and the Brain.* NY: Norton.

Deregowski, Jan, (1973) Illusion and culture, in *Illusion in Nature and Art.* Gregory, R. L., & Gombrich, E. H., (eds.), 160-191. London Duckworth & Co, Ltd. Third impression 1980.

– (1976) On seeing a picture for the first time, in *Leonardo* 9:1, 19-23.

Donald, M. (1991). *Origins of the Modern Mind. Three Stages in the Evolution of Culture and Cognition,* Cambridge, Mass.: Harvard University Press.

Eco, Umberto, (1968) *La struttura assente.* Milan: Bompiani (quoted from the Swedish translation, *Den frånvarande strukturen,* Lund, Cavefors 1971)..

– (1971) Die Gliederung des filmischen Codes. In *Semiotik des Films,* Knilli, F, (ed.), 70-93. München: Hanser Verlag.

–(1976*),A theory of semiotics.* Bloomington: Indiana University Press.

– (1984). *Semiotics and the philosophy of language.* Bloomington: Indiana University Press.

– (1997) *Kant e l'ornitorinco.* Milan: Bompiani

– (1998) Réflexions à propos du débat sur l'iconisme (1968-1998). In *Visio,* 3, 1, 9-32.

– (1999) *Kant and the platypus.* New York: Harcourt Brance & Co.

Ernst, Bruno, (1978) *Der Zauberspiegel des M. C. Escher.* München: Moos (Dutch original).

Escher, M. C., (1967*) The graphic work ot M. C. Escher. ,* New York: Ballentine books (Dutch original 1960).

Genette, Gérard (1983) *Nouveau discours du récit.* Paris: Seuil.

Gibson, Elenor (1969) *Principels of perceptual learning and development.* New York: Appleton-Century-Crafts.

Gibson, James, (1966). *The senses considered as perceptual systems.* Boston: Houghton Mifflin Co.

– (1971) The information avaiiable in pictures, in *Leonardo* 4:1, 27-35.

– (1978). The ecological approach to visual

perception of pictures, *Leonardo,* 4:2: 227-235.

– (1982), *Reasons for realism.* Reed, Edward, & Jones, Rebecca, (eds). Hillsdale New Jersey: Lawrence Eearlbaum Ass.

Gombrich, E. H., (1960): *Art and Illusion.* London: Phaidon Press. Second edition 1962.

– (1963) *Meditations on a hobby horse.* London: Phaidon.

– (1972) *Symbolic images. Studies in the art of the Renaissance.* Londo: Phaidon.

– (1982) *The image and the eye.* Oxford: Phaidon.

Goodman, N. (1968). *Languages of art.* London: Oxford University Press.

– (1970) Seven strictures on similarity, in *Experience and Theory,* Foster, L., & Swanson, J.W., (eds.), Cambridge. MA: University of Massachussets Press 1970; pp. 19-29.

_ (1984) *Of mind and other matters.* Cambridge. Mass., Harvard University Press.

Greimas, A.J. & Courtés, Joseph, (1979) *Sémiotique: Dictionnaire raisonné de la théorie du langage.* Paris: Hachette.

Greenlee, Douglas, (1973) *Peirce's Concept of Sign.* The Hague & Paris: Mouton.

Gregory, Richard (1966) Visual illusions, in *New horizons in psychology 1.* Foss, Brian, ed., Penguin, 68-96. Harmondsworth 1966. Reprinted 1973.

– (1997) *Mirrors in mind.* Oxford: W.H. Freeman-Spectrum.

Groupe *µ* (Dubois, J., Edeline, Fr., Klinkenberg, J.M., Minguet, Ph, , etc.) (1976). La chafetière est sur la table, *Communications et langages,* 29, 36-49.

– (1979) Iconique et plastique: sur un fondement de la rhétorique visuelle, *Revue d'ésthétique,* 1-2, 173-192.

– (1992). *Traité du signe visuel, Pour une rhétorique de l'image.* Paris: Seuil.

– (1995) Iconicsm., in *The semiotic web 1992/93: Advances in visual semiotics,* Sebeok, Th., & Umiker-Sebeok, J., eds., 21.46. Mouton de Gruyter, Berlin & New York.

Gudnitz, Fred (1962) *Broncealderens Monumentalkunst.* København: Martins Forlag.

– (1972) *Bronzealderens billedkunst.* Holbæk: Historiskt Samfund for Holbæk Amt.

Halliday, M.A.K., (1967-68): Notes on transitivity and theme in English, in *Journal of linguistics,* III:1, 37-81; III:2, 199-244; IV:2, 179-215.

Hellberg, Staffan (1984) Satsens subjekt och textens. I *Nysvenska studier,* 64, 29-81.

Hermerén, Göran (1983) *Aspects of aesthetics.* Lund: CWK Gleerups.

Hochberg, Julian (1972) The representation of things and people, in *Art, Perception, and Reality,* Gombrich, E. H., Hochberg, J., & Black, M.(eds,) 47-94. Baltimore and London: John Hopkins University Press.

– (1978a) *Perception.* Second, revised edition. Englewood Cliffs: Prentice-Hall, Inc.

– (1978b) Art and perception, in *Handbook of Perception, vol. X;* Carterene, E., & Friedman, M., (eds.), 225-258. N. Y. and London: Academic Press.

– (1979) Some of the things that paintings are, in *Perception and pictorial representation.* Nodine, C., & Fischer, D., eds., 17-41. New York: Praeger Publishers.

– (1980) Pictorial functions and perceptual structures, in *The perception of pictures, Volume II: Dürer's Devices.* Hagen, Margaret, (ed.), 47-93. New York: Academic Press.

– (1994) The construction of pictorial meaning. In *The semiotic web 1992/93: Advances in visual semiotics,* Sebeok, Th., & Umiker-Sebeok, J., eds., 109-162. Mouton de Gruyter, Berlin & New York.

– (1998) Gestalt theory and its legacy: organization in eye and brain, in attention and mental representation. In *Perception and cognition at century's end.* Hochberg, J., ed., 253-307. San

Diego: Academic Press.

Hoffman, Donald, (1998) Visual intelligence. how we create what we see. New York: Norton.

Husserl, Edmund (1939). *Erfahrung und Urteil*. Prag: Academia Verlagsbuchhandlung.

—(1980) *Phantasie, Bildbewusstsein, Erinnerung*. Husserliana XXIII. The Hague: Nijhoff.

Hünig, Wolfgang (1974) *Strukturen des Comic strip*. Hilsesheim & New York: Olms Verlag.

Ivins, William M., (1938) *The rationalization ot sight*. New York: Metropolitan Museum of art.

– (1946) *Art & Geometry*, Harvard university press. New York: Dover publications, Inc., 1964.

Jakobson, Roman, (1963) Linquistique et poétique. In *Essais de linguistique générale /I/*. Paris: Minuit.

– (1965a) À la recherche de l'essence du langage. In *Diogène* 51, 1965: 22-38

– (1965b) Poesie der Grammatik und Grammatik der Poesie. In *Mathematik und Dichtung,* Gunzenhäuser, R, & Kreuzer, H, (eds.), 21-32. München: Nymphenburger Verlagsbuchhandlung.

– (1975) *Coup d'œil sur le développment de la sémiotique*. Bloomington: Indiana University Press.

Janlert, Jan-Erik, (1985) *Studies in knowledge representation*. Umeå: Institute of information processing.

Janson, Sverker, Lundberg, Erik B., & Bertilsson, Ulf, eds. (1989). *Hällristningar och hällmålningar i Sverige*. Third, revised edition. Helsingborg: Forum.

Johansen, Jørgen Dines, (1993) *Dialogic semiosis*. Bloomington: Indiana University Press.

Jappy, Tony. (2000): Iconicity, Hypoiconicity. In Quiroz, João, ed. *The Digital Encyclopaedia of Charles S. Peirce.* **http://www.digitalpeirce.org/jappy/hypjap.htm**

– (in press) In Defense of Iconicity To appear in *VISIO: thematic issue:* *Iconicity revisited/Iconicité revisité*, Sonesson, Göran (ed), Spring 2005

Kennedy, John M. (1974a). *A psychology of picture perception*. San Francisco: Jossey-Bas, Inc.

– (1974b) Icons and information, in *Media and symbols,* Olsen, David (ed), 211-240. Chicago; National Socieity for the study of education.

– (1994) Picture perception, in *The semiotic web 1992/93: Advances in visual semiotics,* Sebeok, Th., & Umiker-Sebeok, J., eds., 185-216. Mouton de Gruyter, Berlin & New York.

– Fox, N., (1977) Pictures to see and pictures to touch, in *The arts and cognition,* Perkins, David & Leondard, Barbara, (eds.), 118-135. London & Baltimore: Johns Hopkins University Press.

Kihlstrom, John F. (2006a) Joseph Jastrow and His Duck – Or Is It a Rabbit? In http://socrates.berkeley.edu/~kihlstrm/JastrowDuck.htm

– (2006b) A new reversible figure – and an old one. In http://socrates.berkeley.edu/~kihlstrm/SEP06.htm

– (2006c) Provenance of the Chef-Dog Reversible Figure. In http://socrates.berkeley.edu/~kihlstrm/ChefDog.htm

Klinkenberg, Jean-Marie (1996) *Précis de sémiotique générale*. Bruxelles: de Boeck

– (in press) Clés cognitivistes pour une solution au problème de l'iconisme. To appear in *VISIO: thematic issue: Iconicity revisited/Iconicité revisité*, Sonesson, Göran (ed), Spring 2005

Kolers, Paul (1977) Reading pictures and reading text, in *The arts and cognition,* Perkins, David & Leondard, Barbara, (eds.), pp. 136-164. London & Baltimore: Johns Hopkins University Press.

Kress, Gunther, & van Leeuwen, Theo 1996: *Reading images. The Grammar of Vusual Design*. London & New York: Routledge.

Kulpa, Zenon, (1982) Oscar Reutersvärds upptäcktsresor i okända världar, in

Reutersvärd, Oscar, *Omöjliga figurer i färg,* 4-15. Lund: Doxa,

Lakoff, George & Turner, Mark (1989) *More than cool reason.* Chicago/ London: Univ. of Chicago Press.

Langacker, Ronald W. (1991) *Concept, image, and symbol.* Berlin & New York: Mouton de Grynter.

— (2001) Viewing and experiential reporting in Cognitive Grammar. In *Linguagem e Cogniçâo,* Soares da Silva, Augusto (org), 19-49. Braga: Associaçäo Portugeusa de Linguística.

– (in press) Viewing arrangements and experiental reporting. In *Papers from the International Conference on Culture and Space, Quebec City, October 2001.* Quinn, Andrew (eds.).

Lessing, G. E., (1766): *Laokoon -- oder über die Grenzen der Malerei und Poesie.* Berlin. Reprint: Stuttgart Philipp Reclam Jun. 1964.

Lindqvist, Cecilia (1989). *Tecknens rike. En berättelse om kineserna och deras skrivtecken.* Stockholm: Bonniers.

Liungman, Carl. G., (1991) *Dictionary of symbols.* Santa Barbara, California: ABC Clio

Lopes, Dominic (1996) *Understanding Pictures.* Oxford: Clarendon Press.

Luckman, Thomas (1980). *Lebenswelt und Geschichte.* Paderborn: Schöning.

Mallery, Garrick, (1880-81): Introduction to the study of sign language among the North American Indians and A collection of gesture signs. In *Aboriginal sign languages of the Americas and Australia I.,* Umiker-Sebeok, J., & Sebeok, Th., (eds.), 1-76; 77-406. New York & London: Plenum Press 1978.

– (1881). *Sign language among North American Indians.* Reprinted: The Hague & Paris: Mouton 1972.

Maldonado, Tomás, (1977) *Vanguardia y racionalidad* (Translation of Avanguardia e razionallta. Einaudi Editore, Turin 1974). Barcelona: Gustavo Gili.

Metz, Christian (1991). *L'énonciation impersonnelle, ou le site du film.* Paris: Klincksieck.

Miller, George A., & Johnson-Laird, Philip N. (1976) *Language and perception.* Cambridge, Mass. The Belknap Press.

Nordström, Gert Z (2000) Semiotiken idag – lingvistisk imperialism eller fenomenologisk narcissism. In *Bild i skolan,* 1, 16-19.

Osmond-Smith, David, (1972) The iconic process in musical communication, In *Versus* 3, 31-42.

Peissig, Jessie, Young, Micahel, Wasserman, Edward, & Biedermann. Irving (2000) The pigeon's perception of depth-rotated shapes, in *Picture perception in animals.* Fagot, Joël, ed., 37-70. Hove: Psychology Press.

Pérez Tornero, J.M. (1982): *La semiótica de la publicidad,* Barcelona: Editorial Mitre.

Perkins, D., (1973) Compensating for distortion in viewing pictures, obliquely, in *Perception & psychophysics,* 14:1, 13-18.

– (1975) A definition of caricature and Caricature and recognition, in *Studies in the anthropology of visual communication* 2:1, 1-24.

– & Cooper, R., (1980) How the eye makes up what the light leaves out, in, *The perception of pictures, Volume II: Dürer's Devices.* Hagen, Margaret, (ed.),. 95-130. New York: Academic Press.

– & Hagen, M., (1980) Convention, context, and caricature", in *The perception of pictures, Volume I: Alberti's Window,* Hagen, Margaret, (ed.), 257-286. New York: Academic Press.

Piaget, Jean (1945). *La formation du symbole chez l'enfant.* Neuchatel: Delachaux & Niestlé. Third edition 1967.

– (1967). *La psychologie de l'intelligence.* Paris: Armand Colin.

– (1970). *Epistémologie des sciences de l'homme.* Paris: Gallimard.

Picado, José Benjamim, (in press) The Problem of Iconism: a semiotical dogma. To appear in *VISIO: thematic*

issue: Iconicity revisited/Iconicité revisité, Sonesson, Göran (ed), Spring 2005

Peirce, Charles Sanders, (1931-58) *Collected Papers I-VIII*. Hartshorne, C, Weiss, P, & Burks, A, (eds.). Cambridge, MA: Harvard University Press.

Prieto, Luis (1966). *Messages et signaux*. Paris: PUF.

– (1975a). *Pertinence et pratique. Essai de sémiologie*. Paris: Minuit.

– (1975b). *Essai de linguistique et sémiologie générale*. Genève: Droz.

Rosch, Eleanor, (1975) Cognitive reference points, in *Cognitive psychology,* 7:4, 1975, pp 532-547.

—, Simpson, C., & Miller, R. S., (1976) Structural bases of typicality effects, in *Journal of experimental psychology: human perception and performance,* 2:4, pp 491-502.

Roupas, T. G. (1977) Information and pictorial epresentation, in The arts and cognition. Perkins, D., & Leondar, B., eds. 48- 79. Baltimore & London: John Hopkins University Press.

Saint-Martin, Fernande, (1994) Avant-propos: Pour en finr avec la mutité de la peinture. In *Nouveaux actes sémiotiques,* 34-35, 1-4.

Saussure, Ferdinand de (1968-74) *Cours de linguistique générale I-II*. Edition critique par Rudolt Engler. Wiesbaden: Harrossowitz.

Savan, David, (1976) *An introduction to C.S. Peirce's semiotics*. Toronto: Toronto Semiotic Circle.

Sebeok, Thomas A., (1976) *Contributions to the doctrine of signs*. Bloomington & Lisse: Indiana University Press/Peter de Ridder Press.

Sedgwick, H. A., (1980) The geometry of spatial layout in pictorial representation, in in *The perception of pictures, Volume I: Alberti's Window*, Hagen, Margaret, (ed.), 33.90. New York: Academic Press.

Stjernfeldt, Fredrik (in press) Christ levitating and the vanishing square. To appear in *VISIO: thematic issue:* Iconicity revisited/Iconicité revisité, Sonesson, Göran (ed), Spring 2005

Sonesson, Göran, (1988) *Methods and models in pictorial semiotics*. Report of the Semiotics, Project, Lund University.

– (1989a). *Pictorial concepts. Inquiries into the semiotic heritage and its relevance for the analysis of the visual world*. Lund: Aris/Lund University Press.

– (1989b). *Semiotics of photography. On tracing the index*. Report from the Semiotics project. Lund: University.

– (1990). Rudimentos de una retórica de la caricatura. In *Investigaciones semióticas III. Actas del III simposio internacional de la Asociación española de semiótica, Madrid 5-7 de diciembre de 1988; Volumen II,* 389-400. Madrid: UNED.

– (1991). Kroppens byggnad och bruk. Några semiotiska modeller. In *Att tala utan ord. Människan icke-verbala uttrycksformer,* Göran Hermerén, (ed.), 83-100. Stockholm: Almqvist & Wiksell International.

– (1992a) *Bildbetydelser. Inledning till bildsemiotiken som vetenskap*. Lund: Studentlitteratur.

– (1992b). The semiotic function and the genesis of pictorial meaning. In *Center/Periphery in representations and institutions. Proceedings from the Conference of The International Semiotics Institute, Imatra, Finland, July 16-21, 1990.,* Tarasti, Eero (ed.), 211-156. Imatra: Acta Semiotica Fennica.

– (1992c). Comment le sens vient aux images. Un autre discours de la méthode. In *De l'histoire de l'art à la sémiotique visuelle*. Carani, Marie(ed.), 29-84. Québéc: Les éditions du Septentrion/ CÉLAT.

– (1992d). Le mythe de la triple articulation. Modèles linguistiques et perceptifs dans la sémiotique des images. In *Signs of Humanity/L'homme et ses signes. Proceedings of the Fourth congress of the International Association for Semiotic Studies, Barcelona/Perpignan,*

Mars-April 1989, Balat, Michel, Deledalle-Rhodes, Janice, & Deledalle, Gérard, (eds.), Volume I, 149-156. Berlin: Mouton de Gruyter.

– (1992e) Bodily semiotics and the extensions of man. In *Center/Periphery in representations and institutions. Proceedings from the Conference of The International Semiotics Institute, Imatra, Finland, July 16-21, 1990.,* Tarasti, Eero (ed.), 185-210. Imatra: Acta Semiotica Fennica.

– (1993a). Pictorial semiotics, Gestalt psychology, and the ecology of perception. Review of Saint-Martin, Fernande, La théorie de la Gestalt et l'art visuel. In *Semiotica* 99: 3/4, 319-399.

– (1993b) Die Semiotik des Bildes, *Zeitschrift für Semiotik* 15: 1-2, 131-164.

– (1993c) The multiple bodies of man. Project for a semiotics of the body. in *Degrés*, 74, d-d42.

– (1994a). Prolegomena to the semiotic analysis of prehistoric visual displays. In *Semiotica*, 100: 3/, 267-332. 47-64. -

– (1994b) Sémiotique visuelle et écologie sémiotique, in *RSSI*, 14, 1-2, printemps 1994, pp. 31-48. 47-64.

– (1995a) On pictorality. The impact of the perceptual model in the development of visual semiotics, in *The semiotic web 1992/93: Advances in visual semiotics,* Sebeok, Th., & Umiker-Sebeok, J., eds., 67-108. Mouton de Gruyter, Berlin & New York.

– (1995b) Indexicality as perceptual mediation, in *Indexicality*. Pankow. Christiane (ed.), 127-143. SSKKII Report 9604.Gothenburg: Gothenburg University.

– (1996a) An essay concerning images. From rhetoric to semiotics by way of ecological physics. Review of Groupe μ, Traité du signe visuel. *Semiotica*, 109-1/2, 41-140.

– (1996b) Le silence parlant des images, *Protée* 24:1, 37-46.

– (1996c). De la retórica de la percepción a la retórica de la cultura/Från varseblivningens till kulturens retorik, in *Heterogénesis* 15, 1-12.

– (1996d) Iconicité de l'image — Imaginaire de l'iconicité. De la ressemblance à la vraisemblance. Actes du Premier Congrès de l'Association internationale de sémiologie de l'image, Blois, novembre de 1990. In *VISIO*, 1, 1, pp. 23-34.

– (1997a) Approaches to the Lifeworld core of visual rhetoric. *Visio* 1, 3, 49-76.

– (1997b) The ecological foundations of iconicity, in *Semiotics Around the World: Synthesis in Diversity. Proceedings of the Fifth International Congress of the IASS, Berkeley, June 12-18, 1994.* Rauch, Irmgard, & Carr, Gerald F., eds., 739-742. Berlin & New York: Mouton de Gruyter.

– (1998a) /Entries/ in *Encyclopaedia of Semiotics*. Bouissac, Paul, ed., New York & London: Oxford University Press.

– (1998b) That there are many kinds of pictorial signs, *Visio*, 3, 1, 33-54

– (1999) Post-photography and beyond. From mechanical reproduction to digital production. In *VISIO* 4, 1, 11-36.

– (2000a) Iconicity in the ecology of semiosis, In *In Iconicity - A Fundamental Problem in Semiotics*. Troels Deng Johansson, Martin Skov & Berit Brogaard (eds.), 59-80. Aarhus: NSU Press.

– (2000b) Ego meets Alter: The meaning of otherness in cultural semiotics", in *Semiotica*, 128-3/4, 537-559.

– (2001a) La retorica del mondo della vita. In *Modo dell'immagine*. Bologna: Esculapio, Pierluigi Basso (ed.), 93-112. Actes of the 5th Congress of the International Association for Visual Semiotics, Siena, Italy, 1998).

– (2001b) De l'iconicité de l'image à l'iconicité des gestes. *In Oralité et gestualité. Actes du colloque ORAGE 2001*, Cavé, Christian, Guaïtella, Isabelle, Santi, Serge (eds), 47-58. Paris. L'Harmattan.

– (2001c) From semiosis to ecology. On the theory of iconicity and its consequences for an ontology of the lifeworld. In *VISIO,* 6, 2-3, 85-110.

– (2001d) The pencils of nature and culture: New light on – and in – the Lifeworld. In *Semiotica* 136-1/4, 27-53.

– (2003a) The *Symbolic Species revisited.* Considerations on the semiotic turn in biology and cognitive science. Workings Papers of the SGB poject. In **http://www.arthist.lu.se/kultsem/pro/SGBWP3.pdf**

– (2003b) Why the mirror *is* a sign — and why the television picture is no miror. Two episodes in the critique of the iconicity critique. In *Special issue. Iconicity. European journal for semiotic studies*. 15-2/4, 2003, 217-232.

— (2003c) Uber die Möglichkeit von bildhaften Metaphern. In *Zeitschrift für Semiotik, 25: 1-2, 2003: Metaphern in Bild und Film, Gestik, Theater und Musik,* Johansen, Jørgen Dines, & Posner, Roland, (Hrsg.), 25-38

– (2004a) Rhétorique du monde de la vie. In *Ateliers de sémiotique visuelle,* Henault, Anne, & Beyaert, Anne (eds), 83-100. Paris: PUF.

_ (2004b) Perspective from a semiotical perspective. In *Essays on fiction and perspective*. Rossholm, G., ed, 255-292. Bern: Peter Lang.

– (2005) De la métaphore à l'allégorie dans la sémiotique écologique. In *Protée,* 33:1, printemps 2005, 77-92

– (in press a) From Iconicity to Pictorality. A view from ecological semiotics. To appear in *VISIO: thematic issue: Iconicity revisited/Iconicité revisité,* Sonesson, Göran (ed), Spring 2005

– (in press b) Iconicity strikes back: the third generation – or why Eco still is wrong. To be published in *Actes of the 6th congress of the International Association for visual semiotics, Quebec City, 2001*

– (in press c) La rhétorique de la perception. Recherche de méthode. To be published in the *Acts of the Urbino symposion on rhetorics, Urbino 2002,* Badir, Sémir, / Klinkenberg, Jean-Marie (eds.)

– – (in press d) The extensions of man revisited. From Primary to Tertiary Embodiment, in Krois, John, ed., *The body and embodiment*. London & New York: Rouledge.

— (in press e) From the meaning of embodiment to the embodiment of meaning. In: Zimke, T., Zlatev, J. and R. Frank (eds.) *Body, Language and Mind. Vol 1. Embodiment*. Berlin: Mouton.

Tilley, Christopher, (1991). *Material culture and text. The art of ambiguity.* London & New York: Routledge

Tomasello, M. (1999). *The Cultural Origins of Human Cognition*, Cambridge, MA: Harvard University Press.

Tversky, Amos, (1977) Features of similarity, in *Psychological review*, 84:4, pp 327-352.

—, & Gati, l., (1978) Studies of similarity, in *Cognition and categorization*, Rosch, E. & Lloyd, B., eds., pp 79-98. Hillsdale: Erlbaum Ass.

Uspenskij, Boris, (1972): Structural isomorphism of verbal and visual art, i *Poetics 5,* ss. 5-39

— (1973): *A poetics of composition. The structure of the artistic text and typology of compositional form.* Berkeley, Los Angeles, & London: University of California Press.

— (1976a) *Semiotics of the Russian Icon.* Lisse: Peter de Ridder Press.

— (1976b): The language of ancient painting, i *Dispositio. Revista hispanica de semiótica literaria* 1, 3, ss. 219-246

Vaillant, Pascal (1997) *Interaction entre modalités sémiotiques. De l'icône à la langue*. Paris: Université Paris-Sud (Orsay)

– & Castaing, Marie-Françoise (in press) Iconicity as Recognizability. To appear in *VISIO: thematic issue: Iconicity revisited/Iconicité revisité*, Sonesson, Göran (ed), Spring 2005

Vandeloise, Claude (1986) *L'espace en français.* Paris: Seuil.

Vierkant Alfred (1912) Das Zeichnen der Naturvölker. In *Zeitschrift für angewandte Psychologie* 6, 299-373.

Vilchez, Lorenzo (1983) *La lectura de la imagen.* Barcelona: Paidós.

Volkelt, Hans, (19673) Grundlagen der Psychologle. München: C. H. Beck'sche Verlagsbuchhandlung.

Volocñiov, V.N. (1973) *Marxism and the Philosophy of Language.* New York : Seminar.

Wellbery, David E. (1984) *Lessing's Laocoon. Semiotics and aesthetics in the Age of Reason.* Cambridge: Cambridge University Press.

Wittgenstein, Ludwig (1971) *Philosophische Untersuchungen.* Frankfurt/M.: Suhrkamp

Wollheim, Richard (1980) *Art and its objects.* Cambridge: Cambridge University Press.

Yates, Frances (1966) *The art of memory.* London: Routledge & Kegan Paul.