

The Secrets of Plastic Language Revealed

Multimodality, Polysemiosis, and Iconicity

Göran Sonesson

Abstract

The notion of “plastic language” (or, as we will say in the following, the plastic layer) of the picture goes back to French structuralism, where it was supposed, just like “iconic language”, to be fundamentally based on arbitrary conventions. Nobody nowadays takes seriously the idea of depiction being purely conventional, but we will argue that the same counterclaim should be made with regard to the plastic layer of the picture. The *Ganzheitspsychologie* of the early 20th century, notably that of the Leipzig School, offered fruitful ideas on how to analyze plastic meanings, as did their later followers in the United States, such as Rudolf Arnheim, on one hand, and Heinz Wellek and Bernard Warren, on the other. It is, however, the rather anecdotic evidence presented by Wolfgang Köhler, a member of the more well-known Berlin school of *Ganzheitspsychologie*, customarily known as *Gestalt* psychology, which was taken up more recently by V. S. Ramachandran, and applied in a more systematic way by Felix Ahlner and Jordan Zlatev, which paves the way for a serious study of plastic meanings. In this paper, I try to show that, in semiotic terms, plastic meanings tend to manifest secondary iconicity, which means that they have a rich, but indeterminate, potential for similarity, the meaning of which can only be fixed using structural oppositions, and more precisely, proportionalities, that is, relations between two pairs of opposed terms. From the point of view of the indeterminacy of iconic meaning, the plastic layer of pictures is similar to doodles, which, however, manifest this indeterminacy on the level of depiction, and their meaning are usually settled by the means of labels. Doodles differ from pictures, in the narrow sense, which rely on primary iconicity, and thus convey a determinate meaning on their own precisely on the level of depiction.

Introduction

It is impossible to determine, at present, who first invented the distinction between “the plastic language” and “the iconic language” of a picture, whether it was Jean-Marie Floch (1986), of the Greimas school, or the notorious Groupe μ (1992), but Floch certainly gave the best description extant of plastic language, as the way of considering a picture, in the everyday sense of the term, as if it were an example of nonfigurative art. Nonetheless, there are two terminological problems, which are at least partly conceptual, and a third more fundamental issue which does at least in part results from the latter problems. First, it may be better to talk about layers of meaning, rather than languages, since we are not concerned with anything resembling spoken (or written) language. Second, it is seriously misleading to call the depictive layer of the picture iconic, since iconicity is a much wider notion, including all kinds of similarity, even of the most generic kind. Third, there is every reason to think, contrary to what is taken for granted by both Groupe μ and Floch, that meanings of the plastic layer are preponderantly iconic, whether based on similarity within a specific sense modality, or on correspondences between the senses.

Before proceeding, it is urgent to clear up some of the mess resulting from the current use of the term multimodality. We can derive some secours from the distinction proposed by some of my close colleagues (Louhema et al. 2019; Stampoulidis, Bolognesi, and Zlatev 2019) between multimodality in a narrow sense, as involving different senses, such as visuality, audition, tact, etc., and polysemiosis, in the sense of distinct semiotic systems, which, for instance, accounts for the difference between pictures, gesture, and written language, which are all ordinarily conveyed by visuality. There may in fact be more issues involved in the current notion of multimodality than can be covered by these two distinctions, but, in the following, I will attend to the difference between multimodality and polysemiosis. No doubt, the separation between the Peircean categories of iconicity, indexicality, and symbolicity, is often also taken to be part of multimodality. Nevertheless, iconicity, as indeed indexicality and symbolicity, clearly spans the distinction between sense modalities and polysemiosis.

The Plastic and Pictorial Layers of the Picture

Since the final decades of the last century, there has been something of a consensus in pictorial semiotics, according to which standard pictorial signs can be divided into two layers: the iconic function, which is thought to be the features by means of which the picture depicts one thing or another, normally corresponding to a fragment of a scene as perceived in real experience; and the plastic function, which is the meaning conveyed by the picture as a surface on which colour spots are disposed in a particular way, i.e. the picture considered as it if had been a piece of abstract art. Indeed, as Jean-Marie Floch (1986) points out, studying the plastic function of any picture amounts to treating figurative pictures as being "non-figurative", in the sense in which "figurative" means depicting. Something that is, on one level, a sun, or a flower, and even a human body huddled together, Groupe μ (1992) chimes in, may on another level appear as a circle or another roundish shape.

To reduce iconicity to the illusion of seeing a scene from the real world, as given in direct perception, is, of course, quite contrary to Peirce's definition, which embraces all kinds of similarity. While what is here called the iconic layer connects relatively concrete expressions and contents corresponding to familiar objects within the individually perceptible world of our experience, the plastic layer uses shapes the properties of which are abstract, to convey to us meanings usually at even higher levels of abstraction ("roundness" for "nature", etc.). In this sense, the latter may well be iconic, to the extent that they are synesthetic and/or physiognomic, which is part of the secret of abstract art. To avoid confusion, however, it is important not to use the same term for two notions which do not have to coincide: we use the term "pictorial function" to epitomize the rendering of perceptual appearances, while opposing it to the plastic function which has to do with the meanings of shapes and colours. The pictorial function is always iconic, but there are also other types of iconicity, some of which are characteristic of the plastic layer.

The classical Greimas school was wedded to the proposition that all meanings had to be conventional. I have abundantly discussed elsewhere the antinomies produced by this proposition in the case of the pictorial level (Sonesson 1989, 1994b, 2008, 2015a). But, if the plastic level is also conventional, the question becomes how we will be able to discover its meanings. Floch (1981) sets out to do this in his analysis of Kandinsky's *Composition IV* (Fig. 1).¹ Not even the structuralist principle of binary contrasts, on which Floch relies, is sufficient tell us how to find the first element of the pair, as I have pointed out elsewhere (Sonesson 1987, 1989, 152): once we have A, we can find non-A, but that leaves us with the problem of finding A. This first phase must therefore remain intuitive.

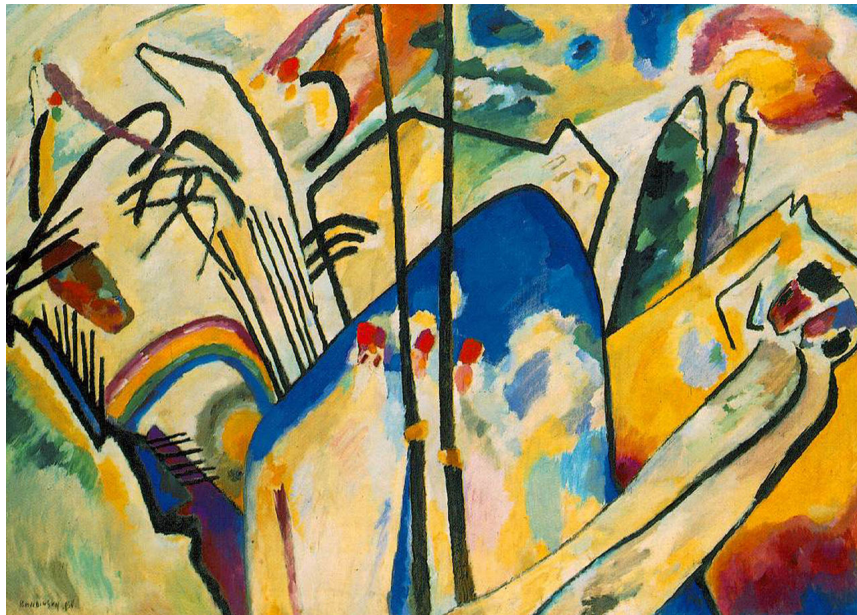


Figure 1. Wassily Kandinsky, *Composition IV*, 1911, oil on canvas, 159,5 x 250,5 cm, Kunstsammlung Nordrhein-Westfalen, Düsseldorf, Copyright: U.S. public domain.

In the specific case of Kandinsky's *Composition IV*, Floch aims to discover the meanings expressed in this abstract piece of work by scrutinizing other works of Kandinsky made more or less at the same time, in which he deems the plastic layer to be more or less similar to that of *Composition IV*, and which happen to be figurative paintings, that is, they come closer to represent objects of the real world, and they have titles saying something about their content.² Sometimes, Floch (1981, 145) goes beyond this principle to pay attention also to the particular context: the light area in the middle field of *Composition IV* should only be compared to other light fields also found below dark, bluish masses. Thus, while Floch is supposedly searching for the content plane of the plastic layer, he actually is all the time concerned with the content plane of, in his terms, the iconic language (our pictorial layer), because he presupposes, instead of demonstrating, that they must be identical.

But why should we bother to analyse the plastic layer if what it tells us is anyhow the same thing that the iconic language tells us, and in fuller detail? While Floch is perhaps not aware of this problem, there seems to be at least one interpretation which makes this procedure worthwhile: perhaps different artists will correlate the plastic and the pictorial layers in different ways, so that the correlation itself becomes significant. For instance, using the same plastic shape for a captive princess, a person in a fight, a woman holding her chin, etc., Kandinsky seems to

suggest that they have something in common, i.e., he creates a new category that no other artist would have used. Now, if we can attribute specific meanings to the figures on the plastic layer, the correlation between the plastic layer and the pictorial layer may tell us something worth considering about some pictures as opposed to others, for instance, about Kandinsky's pictures, which would not be true of all other pictures. Elsewhere, I have tried to show that something like this holds true of the work of Rothko, relying on plastic meanings which are fairly well established, such as those of roundness and angularity (Sonesson 1994a, 2014). However, most plastic meanings are so far unaccounted for, and need to be established by experiments, in the tradition of what has already been done by Gestalt psychologists, as well as by René Lindekens (1976) and Hartmut Espe (1983), who however, in concord with the spirit of the age, take for granted that these meanings are conventional. But we can already conclude that the way in which meaning is conveyed by the pictorial and the plastic layer of the picture pertain to different kinds of polysemiotic systems, while being, so far, addressed to the same sense modality, visibility. We will understand more about this difference, after we have explored the notions of primary and secondary iconicity.

The Two Brands of Iconicity

In many of my papers, I have discussed the notion of iconicity, in the sense suggested by Charles Sanders Peirce (Sonesson 1989, 1994b, 1998, 2008, 2016), which is to be distinguished, to begin with, from the meaning of terms such as orthodox icon, iconic codes (in cognitive science), computer icons, cultural icons, and, last but not least, from the idea of producing an illusion of seeing a scene cut out from perceptual reality. It is the latter notion which figures in the definition of iconicity within the Greimas school and the work of Groupe μ . No doubt this is a kind of iconicity, but it is by far not the only one extant. Once such potential misunderstandings have been cleared up, we have to start the real work, which consists in trying to find out what Peirce really meant by the term—and to determine if, thus understood, this notion is susceptible of contributing to the advance of semiotic inquiry.

It should be clear that, in Peirce's system, iconicity does not, as such, stand for similarity. Elsewhere I have made use of some terminology, which Peirce seems to have abandoned rapidly, but which I think contributes hugely to clarify the issues (Sonesson 2013b). Comparing Peirce's different definitions, I have suggested that, as an instance of one of the three Peircean categories, Firstness,

iconicity can be paraphrased as “something there.” If we add Secondness to such a Firstness, we arrive at a relation, that is, a ground, which, as long as we are still concerned with iconicity connects two instances of Firstness, which can be considered a kind of similarity. Accordingly, we can paraphrase it as “something connected.” But to arrive at a similarity which is also a sign, we need to enter into Thirdness, which, in this case, means the sign function. Since there must be more to Thirdness than the sign function (which Peirce at least sometimes admits), its proper paraphrase is “something reflected upon.”

Everything hinges on what this “something there” is. If we think about our most common everyday experience, that is, what Husserl terms the experience of the Lifeworld, what is immediately given to us is the thing presented from a peculiar perspective and in a particular environment, that is, in Husserlean terms, a noema. This seems to concord with the interpretation of Peirce’s *quale* offered by Marc Champagne (2018, 38ff). Nevertheless, there are too many passages in Peirce’s writings which suggests that analytical philosophers are more correct in understanding this term coined by Peirce as standing for sense data. This would seem to make iconicity into a kind of non-configurational whole, in the sense first defined by Felix Krueger (as cited by André Wellek in Weinhandl 1960, 385), the original master of the Leipzig Branch of *Ganzheitspsychology*, less familiar to us than the Berlin branch, with such representatives as Köhler, Koffka, and Wertheimer, who made a certain impact in the United States. Indeed, according to the Leipzig School, all wholes (*Ganzheiten*) are oversummative, that is, they are perceived as being something more than their parts, but only configurations (*Gestalten*) are transposable. Emotions, as well as the experiences of small children, are non-configurational wholes. It will help in the following to think of iconicity as an instance of such a non-configurational whole.

An iconic sign is only such, according to Peirce’s stipulation, if its iconicity is not only independent of the relationship between the things involved, as is also the case with indexical signs with respect to indexicality, but the independence, in the sense in which Peirce uses this term,³ must also obtain between the respective iconicities of the things joined in the sign. If iconicity is simply the (list of) properties of the things concerned, then those properties must certainly inhere in the two things independently.

The case of the relation between the two things, that is, the ground, is different, as I have argued elsewhere. If we want to account for all kinds of signs, and, in this specific case, for all varieties of iconic signs, we have to admit that there are cases in which the iconic ground is not independent of the sign function. I have suggested that we have to distinguish primary iconic signs, in which the perceived similarity between the two things (the ground) is a least part of the reason for positing a sign function, and secondary iconic signs, where, on the contrary, it is

the perception of the sign function which leads us to posit the iconic ground. The picture, to the extent that it depicts something, is clearly an instance of primary iconicity. The plastic layer of the picture, however, is more likely to pertain to secondary iconicity. Secondary iconicity, as I have characterized it elsewhere, simply means that there is indeed a virtual iconic ground, but that the sign character remains indeterminate. This may be so, either because the iconicity is so completely realized, as to suggest that we are rather concerned with an item of the category of things involved, as for instance, the car, not on the road, but at the car show—or because the similarity remains as indefinite and abundant that something is needed to fix its meaning. The latter no doubt applies to the plastic layer of the picture.

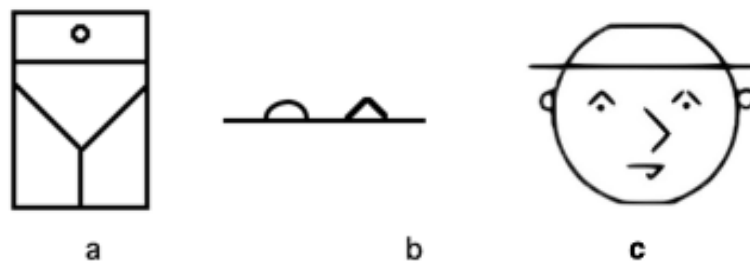


Figure 2. Two doodles and a picture which can be read as a doodle: a. Olive dropping into Martini glass or Close-up of a girl in a scanty bathing suit (inspired from Arnheim as adapted in Sonesson 1992a). b. Carracci's key (Mason behind wall); c. face or jar (inspired by Hermerén 1983, 101). This and all following figures (except Figures 1 and 7, which are in the public domain) were designed by the author.

The difference between primary iconicity, epitomized by pictures, and secondary iconicity, exemplified by doodles, which require a key, can be spelled out by comparing Arnheim's (1969, 92f) figure which can represent "Olive dropping into Martini glass or Close-up of a girl in scanty bathing suit", and no doubt many other things (Fig. 2a), as well as Carracci's mason behind a wall (Fig. 2b), to the face in figure 1c. According to Göran Hermerén (1983, 101), it is only because of "the limitations of human imagination" that we see the latter 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". That is, Hermerén treats it as a doodle. In fact, Gestalt principles, the face as a privileged perceptual object (Eleanor Gibson 1969, 347 ff.), and so on, all conspire to make one of the readings determined. While it is possible to find the elements Hermerén suggests should be there in the picture, it is impossible to see them without the primary interpretation of the figure as a face disturbing this interpretation. 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. An example of the opposite confusion is found when Erik von Däniken (1979) points to prehistoric pictures supposedly showing what nowadays could be seen as wristwatches, thus testifying to the presence of visitors from other more advanced civilizations already as far back in the past as when the pictures were made (Fig. 3b). What von Däniken describes as wristwatches are really doodles, that is, cases of secondary iconicity: it is our knowledge of a world in which there are wristwatches which suggests this specific interpretation. A more complex example is offered by the Maya Glyph for the god of writing, which takes the shape of a rabbit (Fig. 3c). Given the context of Maya civilization, we know that the rabbit is incising letters on a stone tablet. I have been using this glyph for a long time already as a signature, because, in contemporary culture, it could easily be interpreted as the rabbit using a portable computer. But we do not confuse the rabbit with something else (although we do not necessarily know that the rabbit is the Maya god of writing). The rabbit is a case of primary iconicity, while the stone tablet/computer only can be made sense of thanks to secondary iconicity. In this case, the part of primary and secondary iconicity in the drawing is clearly separate. But it can also be said about Anati's so-called prayer (Fig. 3a), that it is primary iconicity for a human being, but only (possibly) a secondary iconicity for a person making his prayers. Of course, in the same sense, the rabbit is only on a secondary reading the God of writing, but then this secondary interpretation seems to function more in symbolic, than in iconic terms.

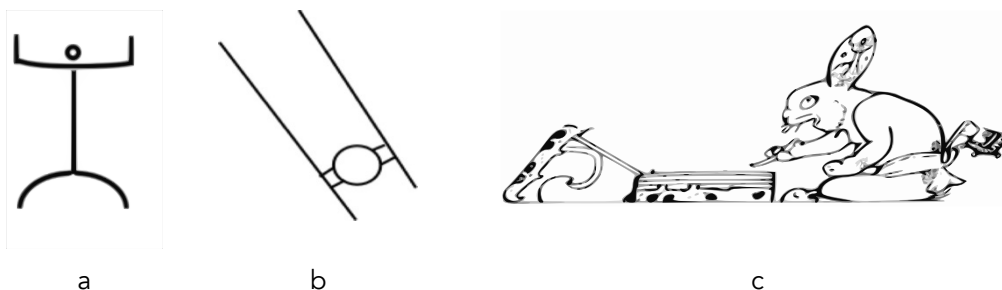


Figure 3 a. Anati's "prayer" (see Anati 1976; Sonesson 1994b); b. Prehistoric watch, according to von Däniken (1979); c. The Mayan Glyph for the rabbit-God of writing.

The Iconic Sources of Plastic Meaning

Elsewhere, I have discussed the important contributions to the study of plastic meanings offered by the different branches of *Ganzheitspsychology*, and in particular, of the Leipzig School, initiated by Felix Krueger. Although these ideas were explored experimentally by Friedrich Sander and Hans Volkelt (1962), as well as, as is more generally known, by Heinz Werner and Bernard Kaplan (1963), and by Rudolf Arnheim (1969), one cannot help feeling that the theory remains very much in advance on the empirical evidence (Sonesson 2004, 2013a, 2015b, 2012).

It will be remembered that, according to the summary of the results of the Leipzig School made by André Wellek, all wholes are oversummative, that is, they are perceived as being something more than their parts, but only configurations are transposable. Adopting additional criteria suggested by Sander & Volkelt (1962, 43ff), I have proposed that the wholeness as such, i.e., the general theme, could indeed be transposed. According to Volkelt, a typical configuration stands out from a background and is internally articulated (*gegliedert*), but other holistic properties may well be externally and internally diffuse (*aussen und binnendiffus*). In his studies of children's drawings, Volkelt comes upon holistic properties, more obviously so than emotions, which are non-configurational, for instance the closure and angularity of the cube. In this and similar drawings, non-configurational, holistic properties like angularity and closure, I have suggested (Sonesson 1989, 81ff, 2004, 2013a, 2015b, 2012), have been transposed, contrary to Wellek's claim; the more specific, inner and outer organization is, of course, not transposed. The newly learned melody is, in that respect, a less extreme example. Volkelt and Sander recognize many degrees of demarcation (*Absetzlichkeit*) and articulation (*Gegliedertheit*). The typical configuration occupies a middle position between diffuseness (*Diffusität*) and dismemberment (*Zerstücktheit*), Volkelt (1962, 45) observes. Later, however, he claims these are two different scales, chaos being both diffuse and dismembered. If so, becoming more diffuse, a percept does not have to become less dismembered, and vice versa. Extreme diffuseness, Sander says (1962, 77), produces a non-configurational whole, the extreme case of dismemberment being the breaking up of a whole into many separate objects. But the multiplication of parts in a configuration will never lead to its dismemberment, because the multiplicity and the unity will grow simultaneously (45). If so, there clearly must be two scales, and a configuration requires a relatively low degree of dismemberment as well as diffuseness.

Many examples similar to the ones considered above are found in the work of Werner and Kaplan (1963, 205 ff., 337 ff.): their “linear names,” notably, are such non-configurational holistic properties that can be transposed in some limited sense of the term.

As I have done elsewhere, I would like to highlight, in this context, a little-known study by Lotte Hoffman (1943), the research paradigm of which, as far as I know, nobody has pursued further since her time, although the empirical results lend themselves to interesting interpretations. The task assigned by Hoffman to the children in this study was to reproduce a series of simple figures, with the help of some elementary objects that could be combined in different ways. The choice of the children was thus limited by the assortment of elements offered, but, whatever one may think about this limitation, the fact that the responses of the children differed with age would seem to suggest that this experimental layout has captured some important differences. The circle turned out to be the shape used by the children when there was no correlation whatsoever between the model and the figure created, i.e., to represent ‘any object whatsoever’, that is, as pure iconicity or as a non-configural holistic property. Nevertheless, it also reappears later, when other shapes to which it is opposed have been isolated, to represent roundness, in opposition to what is straight, stiff, or angular. At this stage, the circle, as an ideally round object, becomes the exponent of any object containing an element of roundness (Fig. 4). This seems a promising result, but if we are going to get any further, more studies using this paradigm are necessary.

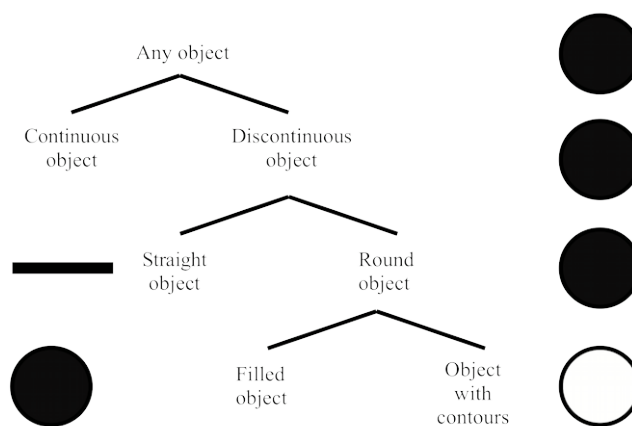


Figure 4. The graphic hierarchy of prototypes, as derived from Hoffman’s work in Sonesson 1989.

This is the sense in which we may say that, at the start, the plastic and the pictorial layers of the picture are not differentiated. Hoffman's children are trying to create equivalents of what they observe, at least when they go beyond 'the object whatsoever.' Their understanding of what is going on is therefore pictorial, but for the addressee, only the plastic meanings are available. This may also be true, as I have pointed out elsewhere (Sonesson 1987, 1994a, 2014) of classical "abstract" paintings, such as those produced by Kandinsky and Rothko.

Werner & Kaplan (1963, 85ff) refer to Piaget's idea of a sensory-motor stage, but, remarkably, they claim that his observations show the pervasive presence of "dynamic-vectorial qualities" such as "direction, force, balance, rhythm, and enclosingness"—properties which are, in part at least, well known to us from topology. What seems to be lacking here is a clear idea of the difference between Piaget's focus and that of Werner & Kaplan. To imitate the opening and closing of eyes by opening and closing one's hands, as in the case quoted by Werner & Kaplan from Piaget, is certainly to attend to figurative properties, but figurativity is essentially a residue concept to Piaget, who is interested in operativity. Just as, according to Piaget, conceptual schemas are abstracted from actions through the many stages of intellectual development, physiognomic properties could also be conceived to take their origin in the actions of one's own body, yet remaining bound up with the body in all their further applications as being the deeper source of their sense.

According to Piaget (1970, 41), "abstraction from the object" permits us to discover the properties of the thing itself, as is the case in the natural sciences, whereas "abstraction from action" starts out from coordinations that are not present in the things themselves, but are added by the particular handling of the object in action. Classification, and even perception itself, to the extent that it gives rise to correct judgment, are to Piaget results of the actions effected by the subject on the object in order to change it, or to change its position. Thus, abstraction from the object accounts for the contents of the sciences, as distinguished from their conceptual framework, and seems to be of no relevance to the activities in the normal social Lifeworld. However, there is a trace of generality, as distinguished from generalization, in the figurative aspects, opposed by the later Piaget to the operative ones. This may be because we do not ordinarily live in the world of the natural sciences, but in the Lifeworld, the world taken for granted. Figurativity, then, would seem to be the imprint of activities to which we submit the world, i.e., a kind of "abstraction from action," though not at the level of the "idealised" practise of the sciences, but of the Lifeworld: the "habits" of Peirce and the "ways things tend to behave" of Husserl.

In the exercise of the cognitive function, according to Piaget (1970), figurative aspects are subordinated to the operative ones, because the former will only acquire meaning when related by transformations. Operativity goes beyond figurativity, since there is no way of rendering it entirely by figurative means, but on the other hand, no thinking is possible without some figurative support. If Piaget's last-mentioned observation is taken seriously, it would seem to imply that figurativity cannot be completely rendered by operative means either. Thus, operativity and figurativity presuppose each other.

Synaesthetic Meanings and Multimodality

Despite his allegiance to the Greimasean consensus, according to which all meaning is conventional, Jean-Marie Floch (1986), in his exemplary analysis of the advertisement for the cigarette brand "News," explores the parallel between the phonetic properties of the slogan and the arrangement of the corresponding picture. But this only makes sense if the relation between the slogan and the pictorial presentation is iconic (and, as we will see below, synaesthetic). That is, it supposes there to be a transposition of the non-configural holistic properties from the verbally formulated slogan to the layout of the pictorial elements, or the reverse. However, the most famous study of the transposition of non-configurational holistic properties being transposed, without using these terms, is due to Wolfgang Köhler (1930), whose analysis of the distinction between "maluma" and "takete" (Fig. 5) and the corresponding drawings has more recently been replicated by Ramachandran and Hubbard (2001) under better controlled circumstances, using the examples "bouba" and "kiki".

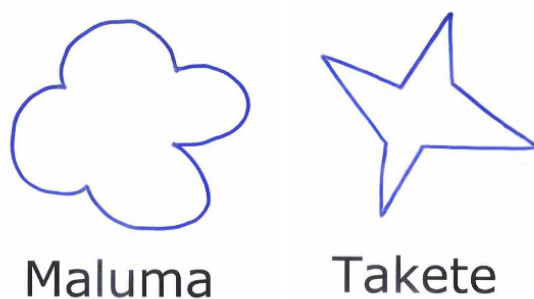


Figure 5. Maluma and Takete according to Wolfgang Köhler (1930), as reproduced in Sonesson (1989, 168).

Taking their point of departure in the work of Ramachandran and Hubbard, Ahlner and Zlatev (2010) realized a more systematic study, presenting the visual shapes labelled “bouba” and “kiki,” together with variations of the corresponding syllables, involving both the consonants and the vowels. Thus, the figures were compared with a) two words with different vowels, but the same sonorant consonant, for example, lili vs. lulu; b) two words with different consonants, but with the same vowel [i], for example, kiki vs. nini; c) incongruent combinations: a word with a “hard” consonant and “round” vowel contrasted with a word with a “soft” consonant and “sharp” vowel, for example, tutu vs. lili; d) congruent combinations: a word with a “hard” consonant and a “sharp” vowel contrasted with a word with “soft” consonant and “round” vowel, for example, titi vs. lulu. As it turned out, not only were all the correlations significant, but both vowels and consonants were highly relevant for the result. This clearly implies that iconic properties are transposable, in the sense of the Leipzig School, between different sense modalities. That which makes these properties transposable is no doubt synaesthesia, which is a rather abstract kind of iconicity. This must be a species of multimodality, although, in this case, the different senses are not merely being experienced concurrently, but are made to correspond to each other on a higher level of iconicity.

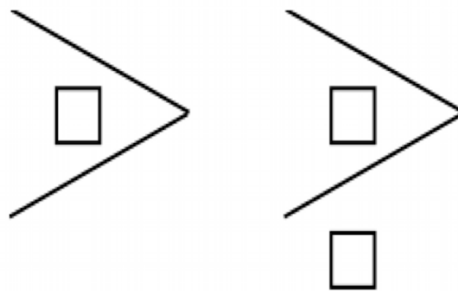


Figure 6. Structure and configuration: a. configuration without structure;
b. configuration with structure (Sonesson 2012).

Synaesthesia is clearly a case of secondary iconicity. The meaning conveyed is dense and replete, but it is also highly indeterminate. One way of setting the panoply of meanings is, as in the case of doodles, to add a label. But the label works differently from the case of doodles, since the meaning imparted relies, not on the verbal content of the linguistic item (which is normally non-existent), but on its “plastic” layer. Even so, it is not certain that this is sufficient to settle the potential of meaning.

What Köhler, Ramachandran, and Ahlner and Zlatev all offer is a proportionality, that is a relation between relations, according to which A is to B as C is to D. Such a formula supposes there to be a similarity on a rather high level of abstraction, between the relations which A entertains to B as compared to the relations C entertains to D. This is a structure in the sense of linguistic structuralism, which is very different from the notion of Gestalt, (configuration) which, unfortunately, has often been rendered by the same word (Fig. 6). In a configuration, the meaning of the parts is resolved into the whole, while, on the contrary, in a structure, it is the whole which imparts meaning to the parts.

Indeed, from the interaction of the configuration and the structure, complex meanings may be derived. Groupe μ (1992, 352f) tells us that the waves and Mount Fuji in Hokusai's *The Great Wave off Kanagawa* (Fig. 7) are seen as different when they are interpreted as such, but on the plastic layer, they are identified because of the similarity of their triangular shape, both having the point turned upwards, and of their colour, which is blue stained with white spots. From our point of view, it might be added that the waves as well as the mountain immediately form configurations in perception, while the organization of the picture makes the structural relation between one of the waves and the mountain stand out. This should serve to make the difference between structure and configuration clear.



Figure 7. Katsushika Hokusai, *The Great Wave off Kanagawa*, 1830-32, color woodcut, 25,7 x 37,9 cm, MoMA, New York, Copyright: U.S. public domain.

Structure and Meaning

I introduced the notion of resemantization to account for the illusion of structuralist semiotics that the meaning of pictures was in some way similar to that of language, while at the same time demonstrating the difference. All (verbal) languages obey a principle which has variously been denominated "double articulation" and "the duality of patterning", according to which any sentence can be divided into words (morphemes, monemes), which have (relatively) independent meanings, and then further into speech sounds (phonemes or graphemes), which do not have any meaning of their own, but which serve to distinguish meanings (e.g. g substituted for c makes the difference between "gold" and "cold"). In the case of pictures, we can also make a distinction between a configuration which has a meaning of its own, and constellations of lines and shapes which are meaningless, without referring to the context, but, unlike what happens in language, there is no predetermined level on which this distinction occurs, instead depending on the genre and the style of depiction. But this is not the essential difference. If we think of the word, in Gestaltist terms, as a whole that is more than its parts, then this formula applies in a different way to pictures. Once you put the graphemes "f", "a", "c" and "e", together, you obtain that word "face." When you refer the different squiggles you perceive to the whole of which they are a part, the meaning of the whole is not only "face", but the different parts take on the partial meanings of "nose," "eyes," "mouth," etc. This is very different from the case of language. Unlike language, both pictures and doodles may be considered to go through the process of resemantization, but they do so in different ways (Fig. 8).

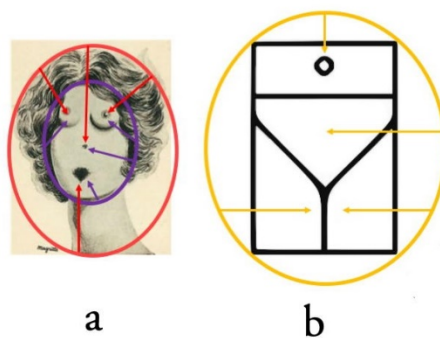


Figure 8. Re-semanticization of a picture (a) and of a doodle (b). While the doodle (b) is a clear case of top-down processing starting out from a label, the picture (a) requires a complicated interplay of top-down and bottom-up perception, which is particularly clear in this case (Magritte's *Le viol*), since the borders of the pictures may be set in two different ways (the body, or the face including the hair).

Structuralism, in the sense given to this term in France at the middle of the last century, wanted to reduce all kinds of semiosis to structure. Even those who were not, like me, early combatants in the battle against structuralist reductionism, seem to have recognized by now (though rarely in explicit terms) that structure cannot account for all kinds of meaning. But this does not mean that structures do not produce meaning, nor that this kind of meaning only exists in language. Structure may be primary in the production of meaning in language but, in the case of other semiotic resources, it intervenes on a secondary level. In Sonesson (1989, 76ff), I discussed the case of an advertisement for a mark of stockings, in which the man and the woman, and all their properties, could be easily observed without any further instruction. However, the argument of the advertisement could only be grasped by an audience that was familiar with the Marilyn Monroe film, *The seven-year itch* (1955), and that could realize that, in the advertisement, the parts of the man and the woman had been inverted. This is a structural opposition, which is not primary, because the picture as such can be perceived without taking any structure into account, but which is still important for the function of the picture as used in the advertisement. It is, however, a secondary strategy applied to the interpretation of the content, and now we are interested in the intrinsic properties of the expression, that, in terms of classical semiotics, the plastic layer of the sign.

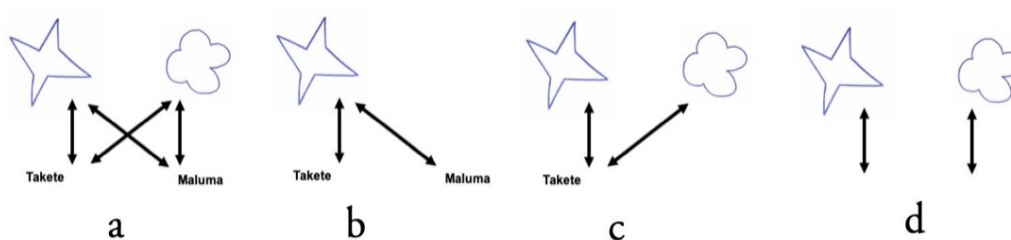


Figure 9. The Köhler (1930) meanings of these figures are most pregnant when there is a proportionality, involving four elements (a). Any combination of three of the elements of such a proportionality (e.g., b and c) may be of assistance, as may, as a limiting case, two elements (e.g., d), but one element only is hardly sufficient.

What we have in the case of Maluma vs Takete is precisely structure, or more particularly, structure upon structure, as in Lévi-Strauss' (1958) notion of proportionality: not only A vs B, but $A : B :: C : D$. That is, the phonetic sequences 'Takete' is to the angular figure as the phonetic sequences 'Maluma' is to the roundish figure. The Köhler (1930) meanings of these figures are most pregnant when there is a proportionality, involving four elements (a in Fig. 9). Any combination of three of the elements of such a proportionately (e.g., b and c) may be of assistance, as may, as a limiting case, two elements (e.g., d), but one element only is hardly sufficient. This is very different from the case of another kind of visual configuration with unclear meaning, that is, the doodle (Fig. 10).

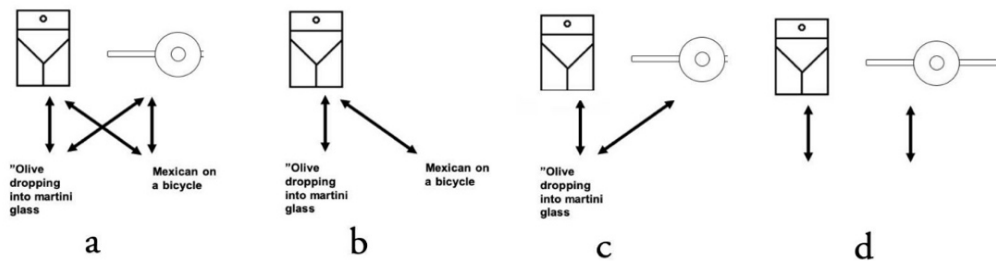


Figure 10. Similar structurations as those in figure 9 but applied to doodles. Here version (d) is insufficient to engender a meaning, but (a-c) would seem to offer more than is required.

Doodles and Maluma-Takete types of figures are similar in that they contain an iconic potential that is lost if no other determination is supplied. The fundamental idea behind the notion of secondary iconicity, as opposed to pure convention, is that there is, beforehand, a potential iconicity, but that it needs to be determined in some way, by means of labels, context, or structure. Doodles are determined by labels, and once the label is set, doodles work in a way which is similar to pictures, that is, the meaning of the whole is redistributed to the parts, which take on different meanings as parts of the whole which is projected onto them. The Maluma-Takete types of figures are determined by structural oppositions, but these oppositions do not lead to any general redistribution of meaning to the parts but, instead, attribute a single (but fuzzy) property to the figure as a whole, that is, in our case, either of roundishness (and its associated meanings) or angularity (and its associated meanings).

Conclusion

Structuralism, whether it was that of the Greimas school or of the Belgian Groupe μ , very much advanced our understanding of the way pictures mean by distinguishing (in our terms) the pictorial and the plastic layers of their meanings. Further inquiry was blocked, nevertheless, by the taken-for-granted axiom that all meaning was conventional. Relying on my own earlier work, but also of the suggestions of the Leipzig School of *Ganzheitspsychology* of the early 20th century, as well as a number of experimental studies, some accomplished at the time, and some more recent, I have tried to bring the theoretical argument further. There can be no doubt, nevertheless, that any further insight into these issues is depending on a renewal of the research paradigm of Köhler-Ramachandran, and, in particular, that of Hoffman. Although I have been involved in experimental works, as well as in theoretical considerations, as a professor emeritus I am reduced to dedicating myself to the second part. I can only hope that someone else will take up this line of inquiry, largely abandoned nowadays.

Author Biography

Göran Sonesson is Professor Emeritus at the Division of cognitive semiotics at Lund University. He holds doctorates in general linguistics from Lund and in semiotics from Paris. He has published numerous papers, both theoretical and experimental, on pictorial, cultural, and cognitive semiotics, as well as on the semiotics of communication and translation and the evolutionary foundations of semiosis. Apart from anthologies, his papers have appeared in journals such as *Semiotica*, *Cognitive Semiotics*, *Cognitive Development*, *Sign System Studies*, *Degrés*, *Signa*, *Signata*, *Sign and Society*, *Frontier of Psychology*, etc. His main book-length works are *Pictorial Concepts* (1989), which is a critique of the critique of iconicity, and *Human Lifeworlds* (2016), which is a study in cultural evolution. His new book, *The Pictorial Extensions of Mind*, will be published next year by deGruyter. Mail: goran.sonesson@semiotik.lu.se ORCID: 0000-0003-2517-2397

Notes

1. According to Greimas and Courtés (1979), the criteria which are to be used in the segmentation of texts comprise the exchange of acting persons, transitions in time and place and changes of emotional atmosphere. Unfortunately, these criteria only seem applicable to verbal texts, or perhaps to texts extended in both space and time, and Floch rightly ignores them. That seems to leave him with intuition alone, but he does have a kind of regulative principle, as we saw below, the idea that all relevant properties should form binary contrasts, and that many of those will join to form bundles of similarities.
2. It should be noted that Floch here takes for granted similarity, when it obtains between different perceptual experiences, and not between expression and content of the sign.
3. There are numerous ways in which things may be dependent or independent of each other, as I have noted elsewhere (Sonesson 2016), but here we shall simply go along with Peirce's use of the term.

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