

The Logic Structure of Pictorial Representation

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We use the term »representation« in many different contexts. Danto tells us, for example, that the word Icarus »represents« Icarus; Goodman mentions, in passing, that an ambassador represents his country; pictures represent, maps represent, it is also said that photographs represent. Now what tempts us to group all these together initially, is the fact that they all involve a semantic function. Even in the case of the Ambassador, we are entitled to invoke this function marginally insofar as his activity is a presentation of his country's as opposed to his own interests. His authority ultimately »refers back« to the powers that granted it. It is the semantic function which has thence led Goodman to assert that denotation is the »core« of representation.

This core has a twofold character. On the one hand a representation as in the case of portraiture, can embody a genuine two term relation – there is a picture, and there is a person who the picture is »of«. On the other hand, there are pictures which involve only one term – the picture itself, insofar as their subject-matter – Mr. Pickwick or Pegasus or whatever, are fictional entities. A clarification of the relation between one and two term picturing, has I think to be the foundation of any coherent theory of representation.

However, we immediately face a crucial problem. We have found that representation is used synonymously with »stands for«, »refers to« or in Goodman's case »denotes« i.e. variants of semantic function. But we characteristically associate representation, not with just any old semantic function, but one where the representation perceptibly resembles the subject it is denoting. I mean of course, such things as pictures, maps and photographs. These, we might claim, are the classes of artifacts which give the term »representation« its ontological potency. It is clear then, that an investigation of representation must take as its central task, the clarification of »resemblance« and its role in the context of one and two term representations.

Now by far the most impressive treatment of this whole area is found in Flint

Schier's *Deeper into Pictures*.¹ His basic approach deals with it in terms of a theory of »natural generativity«. The basic outlines are as follows:

»Pictorial competence in a symbol system is the ability to generate naturally interpretations of arbitrarily many novel members of the system. When an initial interpretation of some symbol does in fact effect an ability in someone to interpret novel symbols without further ceremony, then that initial interpretation was iconic or pictorial, the symbol so interpreted was a picture.«²

Schier's point here is that picturing is a mode of communication, which, *once learnt*, is decisive. To recognise *X* as a picture of *y* in the most basic sense does not require anything in the way of further *ad hoc* conventions. Any new picture we encounter draws on natural abilities to recognise similarities between it and that which it pictures. Interestingly, however, whilst this clearly involves some question of resemblance, it is the »recognition« aspect which Schier gives massive emphasis to. We are told in this respect that

»... the theory of natural generativity is soaked in causation. Essential to that theory are two causal claims' that an interpretation of S as being of 0 is iconic or pictorial in so far as it has been prompted by the interpreter's 0 – recognising abilities and that a picture of 0 is precisely something which can trigger the interpreter's 0-recognising abilities. Iconic interpretation and iconicity are thus functionally defined.«³

For the present writer, there is a problem here. Schier's analyses are substantially sound but they are embedded in a framework, which emphasises a causal theory of perception. This functionalist approach tends to somewhat obscure the logical core of picturing, and, indeed, to point in a direction which also obscures the more important philosophical ramifications of picturing's relation to self-consciousness. Now in this discussion I shall not address the latter issue. I shall be content rather, to foreground the logical features of pictorial representation through an interpretation of defence of resemblance which (unlike Schier's) is orientated toward the pictorial object and the conditions of its creation. As a means to this, I will critically engage with ideas from Goodman and (to a lesser extent) Joseph Margolis and others.

First, Goodman's approach to picturing has, as its central feature, a rejection of the centrality of resemblance. We differentiate pictorial representation from other modes of denotation, by virtue of the fact that it, in common with other forms of representation, is »syntactically dense«.

¹ Flint Schier, *Deeper Into Pictures*, Cambridge University Press, Cambridge 1986.

² *Ibid*, p. 46.

³ *Ibid*, p. 195.

»A scheme is syntactically dense if it provides for infinitely many characters so ordered that between each two there is a third... [Hence]... no mark can be determined to belong to one rather than to many other characters.«⁴

We need not detain ourselves over the many general puzzles that this definition might raise; a more pressing difficulty is presented by the relationship between picturing's »dense« character as a system, and its denotative function. Specifically, how do the two correlate? One can conceive of *ad hoc* situations where one might say things like »if you should find a picture of Sartre on the front door, it means I'm out« – but this would be simply using the picture to denote, and not an instance of a picturing relation. The correlation would be a case of an arbitrary convention. If, however, the term pictorial representation is to have any descriptive potency, we must have non-arbitrary criteria for correlating picture and denotation. Goodman, however, does not specify any criteria whatsoever. Indeed he has inaugurated something of a tradition for rejecting the most plausible criterion of correlation, namely visual resemblance. Let us review his objections to this notion.

First Goodman posits the »naive« theory:

»'A represents B if and only if A appreciably resembles B', or 'A represents B to the extent that A resembles B'.«⁵

As I shall show a little later Goodman's »naive« theory is actually two theories, the first of which is valid, and the second not. But first, let me consider his objections. Goodman claims that an object »resembles itself« to a maximum degree, but rarely »represents« itself i.e. resemblance, unlike representation, is reflexive. Additionally; resemblance is symmetric whereas representation is not.

»B is much like A as A is like B, but whilst a painting may represent the Duke of Wellington, the Duke doesn't represent the painting.«⁶

Now I (unlike many⁷) am not happy at the idea of reflexivity being ascribed to terms such as resemblance, which find their descriptive potency in the context of two term relations. And indeed, if one chooses to follow this very dubious path, I can think of no reason why an object should not represent itself as much as resemble itself. It is also worth noting that Goodman, in the above objections, has not (as he set out to do) countered the »naive theory« i.e. – that resemblance is a necessary condition of pictorial representation, but rather an

⁴ Nelson Goodman, *Languages of Art*, Hackett Publishing Co., Indianapolis 1976, pp. 136 and 137.

⁵ *Ibid.*, p. 3.

⁶ *Ibid.*, p. 4.

absurd theory of his own devising which holds that resemblance is a sufficient condition of representation.

Goodman does, however, eventually come up with two plausible objections to resemblance as a necessary condition. First, Constable's painting of Marlborough castle resembles any other painting more than it resembles Marlborough Castle, yet we say the picture of »of« the castle, and not simply of an-other painting. Hence resemblance cannot be the criterion for correlating picture and denotation. Margolis has objected to this account that

»Goodman utterly fails to meet the objection that some respect or other may be specified in which the Constable perceptually resembles the Castle more than it resemble any other picture.«⁸

This objection seems to be made redundant, however, by the fact that Goodman holds that any painting (no matter what criteria of perceptual resemblance we invoke) will always resemble a good copy of itself, more than it will its subject-matter. Even so, this would only count against an extreme resemblance theorist such as Beardsley, who holds that

»If P is a design, P depicts an F if and only if P contains some area that resembles more closely the visual appearance of F's than it resembles any other object.«⁹

Insofar as a picture always visually resembles a good copy more than it does its subject-matter, this account cannot hold. However, we must remember that the »naive« theory which Goodman takes himself to be criticising only contends that for A to be a representation of B there must, to use Goodman's own words, be some »appreciable resemblance«. Clearly Goodman is vacillating as to what sort of resemblance theory he is wishing to reject.

This becomes even more apparent when we consider his second objection to resemblance as a necessary condition of pictorial representation. Goodman entitles the relevant sub-section of *Languages of Art* as »Imitation« but occupies most of his discussion with a rejection of the »copy theory« i.e. the argument that a picture is to be construed as a picture »of« something insofar as it depicts that subject with absolute verisimilitude. Against this view he holds that phenomenological appearances have a multitude of aspects of which the copy theorist is after the »natural« one; hence, for example, he is not out to depict the Duke of Wellington

⁷ Such as Max Black, Joseph Margolis, and Roger Scruton.

⁸ Joseph Margolis, *Art and Philosophy*, Harvester, Brighton 1980, p. 101.

⁹ Monroe Beardsley, *Aesthetics: Problems in Criticism*, Harcourt Brace, New York 1958, p. 270.

»... as he looks to a drunk through a raindrop.«¹⁰

He is after, in fact, a sure »seeing«; an »innocent eye« that perceives in »aseptic« conditions. Goodman, however, shown that perception is by its very nature interpretative and creative; and cites Gombrich's *Art and Illusion* as showing how pictorial representation reflects this interpretative quality. Hence, given the fact that there are no pure visual »givens« or »facts«.

»The copy theory is ... stopped at the start by inability to specify what is to be copied.«¹¹

Indeed, the copy theory takes a further beating in that

»Where a representation does not represent anything there can be no question of resemblance to what it represents.«¹²

Now I am substantially in agreement with Goodman's notion of perception, through (for reasons I shall make clear further on) I do not think he has drawn much benefit from reference to Gombrich. However, the question again arises as to exactly which resemblance theory Goodman is rejecting. We will remember that his initial formulation of the naive theory had two aspects. A represents B only if it appreciably resembles B; and A represents B to the extent that it resembles B. I think that the »copy theory« which Goodman has been rejecting is really a variant of the second aspect (though one can not be absolutely sure of this, since Goodman is so grudging in the depth to which he outlines alternatives to his own position). Hence, whilst I am in substantial agreement with Goodman's contention that the »copy theory« is incoherent this still leaves the first aspect of the »naive« theory untouched. All sorts of confusion as to Goodman's intention lurk here. Margolis observes that

»Goodman does not deny that what represents and what is represented may resemble one another, only that representation as such does not as such depend on resemblance.«¹³

But of course Goodman has not established this conclusively, and in the absence of criteria for the correlation of pictured being forthcoming from him, it is to the notion of »appreciable resemblance« we must return.

An objection might be launched at the outset. Max Black declares for example:

»My chief objection to the resemblance view ... is that when pursued, it turns out to be uninformative ... The objection to saying that some paintings re-

¹⁰ Goodman, *op. cit.*, p. 7.

¹¹ Goodman, *op. cit.*, p. 9.

¹² Goodman, *op. cit.*, p. 25.

¹³ Margolis, *op. cit.*, p. 102.

*semble their subject-matter is not that they don't, but that so little is said when only this is said.*¹⁴

The fact, however, that »little is said« in saying that picturing presupposes visual resemblance, does not of itself disprove such a contention. Unfortunately, all the other arguments which Black proposes are substantially the same as Goodman's objection to resemblance as a sufficient condition of representation. This, however, still leaves open the possibility of visual resemblance as a necessary condition. I shall argue that from it, knowledge of a quite informative nature arises.

However, we must first dispose of one admittedly tautological sense of saying that one visual object resembles another. A fried egg for example resembles a mountain insofar as they are both »extended« (in Locke's sense of the term). However, it is rather empty to say that one thereby resembles or »looks like« the other, in that extension is a property possessed by any visual object whatsoever by definition. For the term »visual resemblance« to be less than empty, then, to ascribe such a relation between objects, involves us specifying some more precise way in which their visual aspects correlate. Andrew Harrison puts us, in general terms, on the right road as follows:

*»... one thing represents another either if the two can be relevantly held to be similarly structured so that in accordance with this structure it is possible to pair the unity of one with the units of the other, or else they are themselves such units.*¹⁵

This definition is a start, but will require some modification as we progress. For example, in the case of pictorial representation the »units« must be certain visual aspects of pictured. Specifically they will be a function of common shape, colour, and texture (though texture resolves ultimately into aspects of the other two). Harrison, however, rejects this invocation of »visual aspects«. For example:

*»... a standard Renaissance drawing of an egg or face will present the viewer with a mass of lines and hatching [sic] that certainly represent, but do not at all resemble the surface of an egg or the appearance of skin.*¹⁶

However, Harrison is wrong here, in that, viewed from the right distance and angle, masses of line and hatching do resemble visual aspects of eggs or skin, and enable us in fact to specify eggs or skin as elements in what is pictured.

¹⁴ Max Black, »How Do Pictures Represent?« in *Art Perception, and Reality*, ed. M. Mandelbaum, Johns Hopkins University Press, Baltimore 1972, p. 122.

¹⁵ Andrew Harrison, »Representation and Conceptual Change« in *Philosophy and the Arts*, Royal Institute of Philosophy Lectures, Vol. 6, p. 126.

¹⁶ Harrison, *Ibid.*

I shall return to both distance and the role of specification later. For the moment, I want to show how visual resemblance gets a purchase in pictorial representation, by describing some aspects of the creation of pictures.

A first point is that the artist has a choice of two or three dimensional media – drawing, painting, and sculpture. Strictly speaking, picturing is a function of the first two. In painting, the artist has colour, shape, and texture, available to him or her; in drawing, shape and texture alone. Let us consider the example of painting. The possibility most closely related to the nature of the medium itself, is the creation of exemplification of two-dimensional entities – such things as individual shapes or textures, or even distinct areas of monochrome colour. Such atomistic elements can be combined to make more complex entities, and this leads in turn to all sorts of interesting ontological possibilities. For example, we can paint a red square upon a white background, and describe it as instantiating just that relation, or as a white square enclosing a red square. Now whichever, of these two descriptions we opt for, it would surely not count as »seeing as« in the way that we see a series of marks on a canvas »as« a warhorse or nude or whatever. This is because the painting of the red and white squares is ambiguous. On the one hand it serves to instantiate certain classes of two-dimensional objects – namely red squares and white squares; on the other hand it might be taken as serving the additional function of referring to these classes. There is however, nothing in the formal configuration itself which would warrant the assumption of this latter function. Indeed we might modify Occam's Razor here, and claim that denoted entities should not be unnecessarily multiplied.

With these points in mind, let us now consider pictorial representation. In this case, the artist creates two dimensional entities i.e. marks upon a canvas, but configures them in such a way that can be seen as something other than marks upon a canvas. What does this involve and imply? Well, we characteristically individuate visual objects in the perceptual fields by reference to their visual aspects. We are able to say that »This is St. Andrews Bay« or »there is a man« not just because we have a language, but because the objects of our judgement have unified re-encounterable aspects of shape, texture, and colour, which enable us to recognise them at a certain distance and angle as particular objects or members of a class of objects. Now I am making no claims here that individuation by visual aspects is necessarily the most important part of our conceptual scheme (though I think a good case should be made for it); nor am I saying that the capacity for visual individuation does not presuppose the unified operation of all the senses. My only claim is that we can and do make individuations by reference to visual aspects alone.

This is the starting point for pictorial representation. The artist is concerned

not with any arbitrary correlation of units between picture and subject-matter but rather those relevant to visual individuation. By organising paintmarks so as to correlate with the subject's visual individuating aspects, the artist's work when viewed from frontal position and appropriate distance (i.e. not too near or far) will be seen as a picture »of« such and such a thing or things. A schematic drawing or painting with no emphasis on texture will generally tend to copy the individuating aspects of *kinds or types* of object, rather than particular instances of them (for example, the schematic male/female pictures often found on Changing Rook doors). Similarly, whilst a complex and heavily textured painting is well suited to picturing the individuating aspect of quite particular objects, it need not do so, and indeed will sometimes move on a very high level of generality. (The images used in commercial art and advertising, for example, are frequently very much of this kind.)

It is clear, from the foregoing, that whilst a picture is »of« a subject-matter and represents its individuating visual aspects at a concrete or more general level, it will not be identical with, or part of, that subject-matter. Indeed, that it is directly and perceptibly distinct from its subject, is surely a necessary condition for calling it a »picture of« that subject, as opposed to saying it »is« the subject matter. There are of course marginal cases. Suppose for example, that I paint a monochromically uniform frontal view, of a child's red plastic building brick. All I would have at the end of this is a red square (or square of red). Even through copying the brick, I would be working from an aspect which was not sufficient to visually individuate it. Hence there would be no criteria generated from the painting itself, for saying that it was a picture »of« a brick. It would simply be the presentation of a two dimensional entity. However, might we not make it a picture by convention? For example we could say: »Whenever you see a painting of a red square it is a picture of a red brick viewed frontally«. The problem here of course, is that when we want the red square to be a picture of a red ceiling, or of a narrow area of a plain red box cover, (or a red square pure and simple), we have to re-make the convention each time, because whilst the presented aspects resemble views of, or parts of, such objects, they do not visually individuate them. Hence each attempt to denote such objects would have to carry an accompanying *ad hoc* stipulation to the effect »red-square = [whatever]«. This would give us a kind of hybrid meaning, midway between picturing, and linguistic description, but logically distinct from both. Let us suppose, however, that I go on to paint the brick from an oblique and titled angle. In this case there would be grounds for calling my work a picture – but only of a red cube. I have considered visual aspects of the brick which individuate it at least as a member of a specific class of three dimensional objects. If I now want to go further, and create a picture of a (member of the class) plastic brick, I must have recourse to complex

details of texture. If I want to picture just this particular brick and no other, I must look for visual aspects that individuate it from other bricks; or else by depicting it in the context of its visual surroundings.

These points lead to the general principle that no two dimensional artifact can be called a picture unless its formal elements correlate with enough visual aspects of some other object or objects given in three dimensional space, for us to specify (from looking at the picture alone) what that object is – either as a concrete particular, or instance of a certain kind of thing.

This account provides us with materials for refuting Goodman's objections to the resemblance theory. First we can stipulate which features of his or her subject, the artist needs in order to make a picture resemble. He or she is not concerned with a blanket reproduction of all his subject's visual aspects, but rather those which individuate it as a concrete particular, or as an instance of a specific type or kind. It is these aspects which he or she makes the formal and material aspects of the picture resemble. The relevant aspects will be chosen with necessary reference to the above criteria, but the artist's particular style of rendering them will be influenced by his or her own expressive ends, and the nature of the medium worked in. Indeed the artist will make use of various cultural conventions that surround the medium. I mean here, the kind of thing which Gombrich calls a »stereotype«. For example, in *Art and Illusion*, he shows how Wolgemut's woodcuts, purporting to depict different medieval cities, turn out in fact to be variants of one stereotype city. Goodman takes such things as testimony to the »relativity of vision and representation«. ¹⁷ However, this is to misconstrue them. Gombrich says that:

*»Without some starting points, some initial schema, we could never get hold of the flux of experience.«*¹⁸

Now it is clear that whilst Gombrich's »schema« are conventional in the sense of being models or formulas for picturing, they are not arbitrary constructions i.e. *purely* conventional. Rather they serve to embody minimal visual aspects necessary for individuating members of specific classes of things given in three-dimensional space. The use of such stereotypes enables picturing to get to grips with its subject-matter. They are not an alternative to making artifacts with aspects that visually resemble other objects; but rather a generalised starting point. Whilst different cultures or individual artists will make use of different stereotypes, this gives no ground for postulating the »relativity« of picturing except in a very qualified sense. Indeed if such stereotypes were not founded on visual resemblance of some basic sort, we would not think of

¹⁷ Goodman, *op. cit.*, p. 10.

¹⁸ Ernst Gombrich, *Art and Illusion*, Phaidon, London 1977, p. 76.

calling them »pictures« so much as another form of representation. Goodman actually criticises Gombrich for not being relativist enough, on the grounds that the latter holds »perspective« to be more than a mere convention. Again, this point needs to be qualified. Perspective is construct founded upon the problem of depicting the visually individuating aspects of objects and relations on three dimensional space, on a two dimensional surface. To this extent it is a convention. Other conventions can be used to solve such a problem, but what is significant is that perspective is the solution that enables the closest general visual resemblance between a two dimensional surface an objects and their *interrelations* in three dimensions. Hence, whilst being a convention, it is by no means the arbitrary one construed by Goodman. (I shall return to this topic at length elsewhere).

This brings us to Goodman's point that a picture will always resemble other pictures, particularly copies of itself, more than it will resemble non-pictorial objects, and that picturing therefore cannot be founded on visual resemblance to subject-matter. Picturing is, however, a practice which arose and has been nurtured on making two-dimensional configurations that resemble aspects of other objects in three dimensional space. That is why in looking at pictures we never think of seeing them in relation to things they might more closely resemble; and indeed why we regard them in only secondary terms as two dimensional. But in saying that it is convention which leads us to see the picture »as« something, are we not conceding Goodman's case? No. Because whilst convention may lead us to pick out pictorial qualities on a two dimensional surface, the fact that we *can* do so, is because the surface resembles the individuating aspects of some other visual thing or things. In other words, picturing is founded on a natural phenomenon, namely visual resemblance. The convention arises by focusing on and making a practice out an aspect of this phenomenon; namely that certain two dimensional configurations can resemble the individuating aspects of other objects given in three-dimensional space. Once we have learnt the convention, we can read in a general sense at least what the picture is »of«, without reference to any further *ad hoc* external convention or context (such as was found in the »pseudo-picture« of the red brick viewed frontally). It is this reference by resemblance to individuating visual aspects that constitutes pictorial representation's distinctive logical core.

Let us now consider Goodman's final objection to this view, namely that when a picture is of a non-existent, it cannot be said to resemble that non-existent. On this issue I am substantially in agreement with David Novitz's approach.

»... it is simply untrue that a picture cannot resemble a fictional entity. It can provided the entity in question has certain imaginary visual attributes. Of

course anything which is entirely non-visual, no matter whether it is real or imaginary cannot be picture«. ¹⁹

Margolis sees fit to qualify this view on the grounds that imaginary entities

»... resemble actual entities because, and only in the sense that, their descriptions entail that we take them to resemble natural entities.« ²⁰

However, this is rather to miss the point of Novitz's position. If I interpret him rightly, Novitz is working from something like Hume's theory of imagination (detached from the atomistic theory of perception). On these terms, a picture (like a mental image) of a fictitious object is constructed (with its description as a guide) from visual aspects of existent objects. For example, whilst the monsters who tempt St. Anthony in the *Isenheim Altarpiece* are in themselves like no creatures who ever existed, their parts at least do resemble the parts of such creatures. Hence, to depict a fictitious entity, the picture must resemble visually individuating aspects of members (or parts thereof) of some class or classes of existing visual objects. By overlooking this, Margolis is led to posit visual resemblance as a necessary condition of some types of two term picturing (such as portraiture), but not of picturing as such. As he puts it,

»What picturing (the one term characterisation) does require is that the ordered visual features of a picture be capable of being interpreted, fairly, as conforming to a description of 'what is pictured' – where 'what is pictured' is specified intentionally.« ²¹

Hence:

»Resemblance between pictures that putatively picture (allowing the equivocation) and actual X's inclines us to interpret a picture as picturing X's ... in virtue of postulating an intention to picture X's; otherwise, we have only resemblance without picturing.« ²²

On these terms, to see P as picture of X, entails an inference to the artist's intending to picture X. But surely, if a picture resembles an X closely enough for us to say »that is a picture of an X«, then its logical status as a picture of that kind of item is established without any positing of »intention«.

Indeed, suppose that an artist paints a picture which is meant to be of an effeminate man, but that the female characteristics are so emphatic that it simply looks like a woman. In such a case, the artist has failed to communi-

¹⁹ Novitz quoted in Margolis, *op. cit.*, p. 100.

²⁰ Margolis, *op. cit.*, p. 100.

²¹ Margolis, *op. cit.*, p. 101.

²² Margolis, *op. cit.*, p. 101.

cate. Unless we know the causal origins of the work, we take it to be a picture of a woman. And in this we are entirely justified. For, as we have already seen, the logical distinctiveness of pictorial representation consists in the fact that, once learned, it can be applied without recourse to *ad hoc* external conventions which determine exact denotation. In the present case we would say logically that we are dealing with a picture of a woman and, empirically, that it is one unsuccessfully created in order to secure reference to a man.

The problem then, that has really dogged all discussion of pictorial representation comes down to this. Picturing is intentional in a twofold sense. An artist can have some specific intention which is the reason for creating his or her picture – say to depict Trafalgar Square or whatever. But irrespective of this denotative intention, the taking of a means to an end in accordance with the convention called picturing is also intentional. Irrespective of who or what he or she intends to picture, an artist must at least take up materials and configure them so as to resemble the individuating visual aspects of some specific three-dimensionally given kind of thing. It is *this* layer of function neutral intentional activity which defines picturing. It is the logical structure of which two term and one term representation (i.e. denotation and fiction, respectively) are concrete embodiments.