

**E. H. Gombrich, Preface to Art and Illusion 2000, Princeton University Press, 2000. [Trapp no.1960A.30]**

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PREFACE TO THE 2000 EDITION

IMAGES AND SIGNS

I am most grateful to my publisher for inviting me to write a new Preface to this book, for though *Art & Illusion* has now been around for some forty years, I have found that its title has misled some people to think that I value, or even advocate illusionistic paintings. There can be no such misunderstanding of its subtitle, a Study in the Psychology of Pictorial Representation, for this is indeed what the book is about. Anyone who has ever attempted to draw a likeness of a friend, or to sit down in front of a motif to reproduce it faithfully on paper or canvas, will have had experience of the psychological problems which are here involved. What the ancient Greeks called mimesis (the imitation of nature) has proved a difficult task: it took the artists of the ancient world some 250 years of systematic research to achieve this end, and artists of the Renaissance took the same time before they were able to eliminate what Albrecht Dürer called "falseness" in pictures.

But this commonsense interpretation of the history of Western art has recently been attacked on the ground that the whole idea of mimesis, truth to nature, is a will-o'-the-wisp, a vulgar error. There never was an image that looked like nature; all images are based on conventions, no more and no less than is language or the characters of our scripts. All images are signs, and the discipline that must investigate them is not the psychology of perception - as I had believed - but semiotics, the science of signs.[1]

I have little doubt that this reaction is connected with the radical transformation the visual arts have undergone in the past century, when mimesis was indeed rejected as a worthy aim of art. But it seems to me a little rash to assert that what you do not like does not exist - after all, it was precisely in this century that what we may call the "entertainment industry" became instead the provider of illusions, and pursued this aim systematically and with increasing success.

Many readers will have experienced the coming of colour television and its psychological and social effects. To be sure, people had been enchanted with their black and white television sets, but the more they became habituated to its images, the more they were apparently captivated by the addition of colour that approximates the image even more closely to reality. The value attached to this new invention was not only expressed in the different licence fee: - "penny plain and tuppence coloured" - it also created a new demand which the black and white no longer satisfied. It lacked an element that could, and therefore should, be there, and those who had to do without it felt "deprived" and disadvantaged. Families have been known to go without necessities to indulge in this advance, which is also a status symbol. Surely it is worth investigating the psychological factors involved.

Remember also the improvements in the gramophone industry since the time of Edison's contraption, immortalised in the logo of His Master's Voice, to the developments of CD and stereo, which claim to

transport us directly to the concert hall. I am old enough even to recall the times when, as a schoolboy, I saw movies in the cinema in which the dialogue had to be read on the screen between the sequences of actions. Later I experienced the sensation - in every sense of the word - of the first "talkies", when Al Jolson first intoned his tear-jerker Sonny-Boy. films. Then came "glorious technicolor" and the various experiments with three-dimensional.

Meanwhile, of course, technical developments in the creation of illusions made much further progress. Simulators were developed for the training of pilots, who put on a helmet through which their eyes were fed the appearance of an environment rushing past them, which they were also asked to control. More recently so-called "virtual reality" has been perfected, which allows us not only to see and hear an invented reality but even to touch it with specially-constructed gloves. I do not know whether this device will, or can become a medium of art; all that matters in the present context is the undeniable evidence that images can be approximated to the experience of reality.

Is the same also true of signs? Long before the gurus of Paris made semiology fashionable, a much greater mind had seen to what extent art can be approached as a system of signs. The mind was that of William Shakespeare. In quoting from the Prologue to Henry V, I shall try to throw some fresh light on the problem broached, but obviously not solved, in *Art & Illusion*:

But pardon, gentles all,  
The flat unraised spirit, that hath dared  
On this unworthy scaffold, to bring forth  
So great an object: Can this cockpit hold  
The vasty fields of France? or may we cram  
Within this wooden O, the very casques  
That did affright the air at Agincourt?  
O, pardon! since a crooked figure may  
Attest, in little place, a million;  
And let us, ciphers to this great accompt,  
On your imaginary forces work...  
Piece out our imperfections with your thoughts...  
And make imaginary puissance:  
Think, when we talk of horses that you see them...

To come down from these dizzy heights, let us remember that the Prologue is indeed talking about signs, not images. The word "horse", of course, is a conventional sign, so that only those who have learned the language can obey the playwright's injunction to see a horse when the actor talks of one. There was a famous film made of the play, with Laurence Olivier as Henry V, where we could actually see the horses "printing their proud hoofs i' the receiving earth."

Not only can we see such sights on the cinema screen, we cannot help seeing them, unless we close our eyes. The film exploits the weakness, or sluggishness, of our vision to make us see movement where there is only a succession of stills. We do not have to mobilise our imagination; we are the passive, though willing, victims of an inescapable illusion.

Admittedly there will always be some who will rebel against such enslavement of their senses, people who may even prefer to read Shakespeare's play at home rather than have their imagination clash with that of a film director or theatrical producer; and, who can blame them, considering the way unsolicited intruders often impose their vision on the play? And yet, seeing a tolerable production on

the stage still differs from reading. It may not compel our senses in the way the film compels them, but a performance certainly assists our imagination, or, to recall Shakespeare's words, our "imaginary forces".

Very crudely then, the film may reduce our expenditure of mental energy, and it may be classed among the countless labour-saving devices with which technology has provided us, from the invention of the wheel to the pocket calculator.

Here we may also find the reason why moralists and aestheticians have so regularly opposed or resisted any step in the direction of illusion. Perhaps they are right; we should rather keep our mental energy in trim than let others do the work for us. After all, there are social institutions which must remain immune from labour-saving devices: I refer to games and to sport, whose very function is to test and exercise our mental and physical energies.

Apparently there are no such taboos in the nursery. The kind of make-believe we all call playing does not resist the artifice of the toy industry, of dogs which can bark and wag their tails, or dolls which can say "mama". The child can happily play without these expensive aids, but once they are on the market, children long for them.

The link between play and art has often been made. For me it is an important reminder of the fact that illusions must be kept distinct from false beliefs. After all, children can distinguish between dolls and babies, and few people sitting in the theatre believe that there is Prospero's island immediately adjoining the auditorium. Yet if there is a sudden announcement referring to an alarm or a change in the cast, we may need a moment of adjustment to remember where we are.

The best example I know of this experience comes not from the normal stage but from the puppet theatre. Those of us who have watched such a performance may remember that the more we got involved, the more our imagination took over, until we forgot that what was in front of us was tiny puppets. They grew to normal size, as it were. But suddenly, what looked like a gigantic hand appeared among the strings and, for a moment at least, we had to adjust our perception, since the scale of the puppets had become our norm.

I am fond of this example because it so dramatically demonstrates the influence which our expectations can have on our perceptions. No medium of art could function if it did not so influence our perceptions through the expectations that are set up, and if it did not, in Shakespeare's words, "work on our imaginary forces", and "piece out its imperfections with our thoughts."

Psychology describes this form of perceptual tuning by the term mental set, a form of selective attention, which is described in ordinary parlance as the difference between looking and seeing, listening and hearing. Without such a filtering device we would be overwhelmed by the myriad stimuli that reach us from the outer world. I have a good deal to say about this phenomenon in the pages that follow - notably at the end of the Introduction and in the chapter on "Conditions of Illusion", but I believe it will not be unhelpful if I here return to the topic, for it is precisely this process and this possibility that is missed by the semiotic approach to images. To put it briefly, I believe that the difference between signs and images rests in the different mental set we have to adopt for their understanding.

It suits my purpose that one of the most intelligent artists of our century, Magritte, liked to meditate on this difference. In his painting of two framed canvasses, one is just a blue patch, the other says "ciel".

The first, we may say, is an image, the second, signs. In the terminology of the American philosopher Charles Peirce, the image can also be described as an iconic sign, because it has something in common with its meaning or denotation, the blue colour. The word "ciel" is a non-iconic sign; its meaning is purely conventional, and so are the four letters of which it is composed. If we had not learned French, and if we had not learned the Western alphabet, we could only guess at the meaning. Could we necessarily guess that the blue patch represents the sky? Hardly. It might be a sample of a material, or of a paint, but in conjunction with the word "ciel" we would rightly reject such quibbles. Once we are alerted we recognise the sky. Not that this prevents us from distinguishing between more or less faithful, more or less convincing renderings of the sky that we know from the history of art. We do not normally expect the word "ciel" to be more or less like the sky.

The meaning of signs is conveyed not by their overall appearance, but by what are called distinctive features. Among our capital letters, every vertical stroke with two horizontal ones typifies an F, regardless of size, colour or shape. It is characteristic of signs in general that they rely on such distinctive features, the rest being irrelevant. Karl Bühler speaks of abstractive relevance here.[2] In reading we are set to pick out these relevant features quite automatically - so automatically, I believe, that we may be slightly surprised to find that the only difference between Ear and Far is one small, horizontal stroke. Even so, one group of signs says Ear, the other Far. We are so conditioned by our mental set when we read that these squiggles are associated with the sounds of the English language.

The meaning of the four characters PAIN is obvious to us when confirmed by the sequence spelling TROUBLE. However if the same four characters are followed by ET COUVERT, and if we are at all conditioned to switching to French, we shall read "pain et couvert" as it is seen on a menu. Ambiguities of this kind turn out to be a useful testing ground for observing the mechanism we are after, since the need to switch our mental set tends to make us aware of its power.

Shakespeare was obviously in a semiotic mood when he wrote the Prologue to Henry V, which prompted him to describe the Globe as a "wooden O". As far as I know, actors habitually pronounce this description by the vowel "o" (as in Globe), but is it not more likely that the sign on the page should be read as "naught" - after all, the Prologue then goes on to speak of "figures" and "ciphers", which applies to a zero,[3] but not to a vowel? Normally the two meanings of the upright oval on the page are unlikely to bother us, but we can always construct a sequence of signs that trips up our mental set, so that the meaning remains unresolved. Should AE1023 be read as two vowels and four figures, or as four vowels and two figures? Only the context can decide. Not that we must read any oval as a sign. A string of ovals can also be an ornament purely used for decoration, as in this case: OOOO. But add the word "PLUM" underneath PLUM and you transform the mental set: the oval no longer appears to stand on a neutral background, it is surrounded by an infinite halo of space, because we expect plums to be solid, and not only to be edible, but also graspable - an effect we can further

enhance by the suggestion of a foreshortened stalk and leaves:



We come to realise in such cases that the required mental set did not precede the reading, but followed in a rapid feedback process. Where signs and images appear together on the page the feedback works almost instantly - witness the ease with which our youngest read so-called comics, combining pictures with a simple story.

The difference between images and signs, then, does not lie in the degree of iconicity or conventionality. Images can function as signs as soon as they are recognised. We need only think of the labels on cans to realise that a perfect iconic image can function as a sign; but experience also

shows that where the image is used as a sign - as in heraldry, trademarks or hotel guides [P.1: Images used as signs in travel guides] - it tends to become increasingly conventionalised.

In the history of human civilisation, signs and images tend to have a common ancestry. Most scripts started out as pictograms, as rudimentary images, and there are several instances allowing us to observe how the needs of their users gradually modified them into signs, exhibiting merely select distinctive features, like the letters of our alphabet. Here is a series of Chinese signs to be read from right to left [P.2: Development of idiograms in the Chinese language]: The top row shows how the pictogram for mountains became the current character for mountain. The next, a horse with four legs, was turned into the character for horse unknown to Shakespeare. The next is a diagrammatic image of a chariot. Something analogous happened to the Egyptian hieroglyphs, when the need for fluency and speed turned them first into hieratic, and then into demotic script.

Was it not the mental set looking for distinctive features in reading that turned the images into signs? And might not a different mental set have led to the opposite effect? There is a chapter in *Art & Illusion* entitled "Reflections on the Greek Revolution" which suggests such a development.

Meanwhile I have come across a passage in Herodotus that appears to confirm my reading:[4] Herodotus tells us that the Egyptians considered Pan to be one of the eight gods that existed before the other twelve, and that their artists represent him (Pan) exactly like the Greeks do, with the head and legs of a goat. "They so represent him," Herodotus assures us, "not because they really think he looks like that. On the contrary, they do not believe him to look different from the other gods, but that is how they depict him - why, I prefer not to say."

What interests me in this passage is not so much whether Herodotus' report is correct - I know of many Egyptian gods with animal heads, but I have never seen one with the feet of a goat. What excites me is the fact that the Greek historian obviously took it for granted that the image of a god shows us what he looks like, but that his Egyptian informants had told him that, at least in one case, they did not share this assumption, in fact it was a conventional sign.

It is interesting to reflect that, at the time when Herodotus wrote this, that one of the most famous cult images of the ancient world took shape: the Zeus at Olympia. We have no copies of that work, except for a poor rendering on a Roman coin, but we have a good many literary sources, which tend to confirm that the Zeus made by Pheidias was felt to evoke his majestic presence. Indeed, the remark recorded by a Roman writer of the impression the statue made on a Roman general sums up this feeling: "When he saw Jove as if he were present he was moved in his heart." ("lorem velut praesentem intuens motus animo est.")[5]

No doubt, in his lost statue Pheidias had not omitted what we may call the "distinctive features" of the god - his traditional attributes, such as the thunderbolt and the eagle. But he turned the sign into an image by conveying the divinity of the Lord of Olympus through his physiognomy, reflecting, as we read, the famous description of the god in Homer, where his nod shakes Olympus.

That such powers were indeed expected of artists is again confirmed by a near-contemporary, in the *Memorabilia* of Xenophon, where we encounter Socrates in conversation with a sculptor. He makes him admit that the artist's task can never be simply to imitate the physical features, but that he must also represent "the action of the soul" (te erga psyches).[6] My point is again that it requires a very different mental set - a different tuning - to respond to this achievement than it does to recognise the distinctive features of a script or the attributes of a cult image. The first is a finite task that is soon performed, the second is what we would call "open-ended", for it mobilises our imagination.

It was what I have described in the chapter concerned as a chain reaction that led ultimately to that perfection of mimesis of which we read in the accounts of Pliny and others. One of the effects that might still be mentioned here was the rise of two genres in Greek literature which are linked to the visual arts: the epigram on works of art, of which The Anthology has preserved so many charming examples, and the rhetorical exercise of ekphrasis, the interpretation of real or fictitious images in ornate and vivid prose. Both genres like to dwell on illusionistic effects with hyperbolic praise, but we should pause before we dismiss this reaction: Whenever a current style is modified in the direction of realism, our mental set over-reacts: it is the unexpected degree of realism that will surprise and captivate contemporaries, much as we have observed in our entertainment industry.

What is left of ancient murals and floor mosaics amply confirms the high esteem in which illusionistic tricks were held in the ancient world. The Roman architect Vitruvius thoroughly approved of such illusionistic wall paintings, which he called “imitations based on reality”, but he opposed what was then a new fashion for “Stalks instead of columns and curled leaves instead of gables. Such things”, he says rightly, “neither are, nor can be. How can a reed sustain a root or a slender stalk a seated statue?”[7] Evidently Vitruvius was so habituated to seeing wall paintings as mimesis of an imaginary reality that he was unable to switch to the decorative play of forms and serpents we call “grotesques”.

In *Art and Illusion* I merely alluded to developments that spelt the end of classical art, but it goes without saying that the mental set expecting mimesis was in conflict with the new religion of Christianity, that had inherited from the Jews the injunction of the Decalogue: "Thou shalt not make unto thee any graven image or any likeness of any thing" - an injunction which was especially aimed at the fashioning of idols.

The tensions created by the new faith and some of the compromises they generated are far too complex and elusive to be discussed in our particular context. In religious and mystical usage, the distinction between sign and image can be obviated in the symbol which the contemplating mind regards as the image of a transcendent reality - an inexhaustible plenitude of meanings seen through a glass darkly.[8]

The complexity of these issues is best illustrated through a passage in the writings of Dionysius the Areopagite, who, referring to the description in Revelation of the Throne of the Lord supported by a lion, an ox, an eagle and an angel – four creatures which have always been interpreted by the Church as symbolising the four Evangelists – comments that such shocking symbols were used deliberately to prevent us from thinking that we might see a true likeness of those heavenly beings, as might happen were they described as radiant figures clad in shining robes.

The same rejection of mimesis is also implied in the famous formula of Pope Gregory the Great, that “painting presents to the illiterate what writing offers to those who can read.” The mental set that this formula required was bound to result in the transformation of images into conventional signs. As far as such a generalisation can be applied, this is indeed what happened in the early Middle Ages, until the pendulum swung back and the image again replaced the sign.

Many years ago Emil Mâle[9] suggested that the rôle I assigned to drama in the ancient world was performed by the preachers of the mendicant orders in the thirteenth century, asking the audience to visualise the Bible and legendary events. If this mental set led to a great escalation of illusionistic devices, it would help to explain the development of the arts from Cimabue to Michelangelo, familiar, and over-familiar to art historians from Vasari's *Lives*.

Our age has tended to dismiss Vasari's idea of progress as naive triumphalism, but has he really made it all up? He tells us, in a characteristic passage, how Francesco Francia and Pietro Perugino had overcome that "certain dryness of manner" that marked the style of earlier masters, so that "people ran like mad to see that novel and live beauty and thought that it would never be possible to do better. But," Vasari goes on, "their error was clearly shown up through the work of Leonardo da Vinci, who truly imparted to his figures breath and movement."

Once more I venture to compare these reactions with those triumphs of the entertainment industry I mentioned at the beginning of this Preface. But this very analogy may also prompt us to reflect on the reasons which increasingly led to the divorce between the fine arts and the artifices of science.

There is a passage in John Constable's correspondence which seems to me immensely telling in this respect. Constable was one of my principal witnesses in *Art and Illusion* because of his ability and his dogged determination to get rid of all second-hand conventions - or what he called "manner" - and to achieve a maximum fidelity to natural appearances. In 1823 Constable visited a sensational display, the diorama constructed by Daguerre, later the inventor of the daguerrotype. "It is in part a transparency", he wrote, "the spectator is in a dark chamber, and it is very pleasing and has great illusion. It is outside the pale of art because its object is deception. The art pleases by reminding not deceiving." [10]

"Outside the pale of art" what could he have meant by that pale, or limit? Would we go quite wrong in suggesting that, for Constable, art had become something like a game of skill, with its own rules, which must be kept free of labour-saving devices? To deceive the eye is to cheat, for the painter must please by reminding, just as the playwright of Shakespeare's Prologue must work on our "imaginary forces." Fidelity to nature has to be achieved within the limits of the medium. Once this compact between the artist and the beholder is destroyed, we are outside the pale of art. Indeed as soon as Daguerre's and Fox Talbot's mechanical methods entered the field, art had to shift the goalposts, and move the pale elsewhere.

An anecdote about Matisse which I quote in *Art and Illusion* sums it all up. When a lady, looking at one of his portraits told him that the arm of the woman was too long, he replied: "Madam, you are mistaken, this is not a woman, this is a painting." No wonder Matisse's contemporary, the art dealer Daniel Kahnweiler wrote that paintings should be seen as signs, and not as illusory objects: "Elle (la peinture) ne se justifie que si on la considère comme une création de signes et non d'objets feints." [11]

## NOTES

1 See Nelson Goodman, *Languages of Art: An Approach to a Theory of Symbols*, Indianapolis, 1968 (I may here mention that the late author allowed me to quote a letter that he wrote to me dissociating his own views from those of the extremists:- see *The Image and the Eye*, Oxford, 1982, p.284); also Norman Bryson, *Vision and Painting, the Logic of the Gaze*, Macmillan (London), 1983. For the history of this approach, see my article *Voir la Nature, Voir les Peintres* in *Les Cahiers du Musée national d'art moderne*, vol.24, Été 1988, *Art de Voir, Art de décrire II*, pp. 21-43.

2 Karl Bühler, *Sprachtheorie: Die Darstellungsfunktion der Sprache* Jena 1934, Stuttgart 1982, referred to in Klaus Lepsky, "Art & Language: Ernst H. Gombrich and Karl Bühler's Theory of Language" in R. Woodfield (ed.), *Gombrich on Art and Psychology*, Manchester University Press, 1996, pp.27-41.

3 In a discussion I started in the *Times Literary Supplement*, Professor Humphrey Tonkin of the

Department of Humanities, University of Connecticut, does not agree with my interpretation, but points out that the letter "O", pronounced as such, normally stood for zero in Shakespeare's day. See *Times Literary Supplement* (April 14, 2000), p. 21.

4 Herodotus, Bk. II (Aubrey de Selincourt trans.), Penguin Books, 1954, p.121.

5 Livy Bk XLV 28 sq 724 in Hans Schrader, *Phidias*, Frankfurt, 1924, p.14.

6 E. C. Marchant (trans.), Xenophon, *Memorabilia* III X 8, Loeb, 1923, p.237.

7 F. Granger (trans.), *Vitruvius on Architecture* VII 5, London, 1934, II p. 105. See also my *Norm & Form*, Phaidon (London), 1966.

8 I have dealt with this attitude in my chapter "Icones Symbolicae" in *Symbolic Images*, Phaidon (London), 1972.

9 Emile Mâle *L'Art religieux de la fin du Moyen Age en France*, Paris, 1908, referred to in "Paintings on Walls" in my *Uses of Images*, Phaidon (London), 1999, p. 29.

10 John Mayne (ed.), C.R.Leslie, *Memoirs of the Life of John Constable*, Phaidon (London), 1951, p.106. 11 See note 6, op. cit. *Voir la Nature...*, p. 31.

11 See note 6, op. cit. *Voir la Nature*, p. 31.