E. H. GOMBRICH

THE IMAGE
AND
THE EYE

*Further studies in the psychology of
pictorial representation*

Visual Discovery through Art

I

NOT ALL art is concerned with visual discovery in the sense in which I propose to use this term here. Our museums show us a dazzling and bewildering variety of images which rival in range the creations of the living world of nature. There are whales among these images as well as hummingbirds, gigantic monsters and delicate trinkets, the products of man's dreams and nightmares in different cultures and different climes. But only twice on this globe, in ancient Greece and in Renaissance Europe, have artists striven systematically, through a succession of generations, step by step to approximate their images to the visible world and achieve likenesses that might deceive the eye. I realize that most critics' admiration for this achievement has considerably cooled off in this century. Their taste has veered towards the primitive and the archaic. There are good and interesting reasons for this preference, to which I hope to return in a different investigation,[1] but taste is one thing, history another. The ancient world certainly saw the evolution of art mainly as a technical progress, the conquest of that skill in *mimesis*, in imitation, that was considered the basis of art. Nor did the masters of the Renaissance differ here. Leonardo da Vinci was as convinced of this value of illusion as was the most influential chronicler of Renaissance art, Giorgio Vasari,[2] who took it for granted that in tracing the evolution of a plausible rendering of nature he was describing the progress of painting towards perfection. It goes without saying that in Western art this evolution did not come to an end with the Renaissance. The process of the conquest of reality through art continued, at a varying pace, at least as far as the nineteenth century, and the battles fought by the Impressionists were fought over this issue—the issue of visual discoveries.

One thing stands out from this story and demands a psychological explanation. It is that this imitation of visual reality must be a very complex and indeed a very elusive affair, for why should it otherwise have taken so many generations of gifted painters to learn its tricks? It was to explain this puzzle that I set out, in my book on *Art and Illusion*,[3] to explore the relation between visual perception and pictorial representation. It may be time to take stock once more and present some afterthoughts. Not that I see any reasons to repudiate the results of my investigations, such as they were. In fact, the reader who has worked through that rather groping presentation may have to put up with some recapitulations here. But I think that today I can render some of my explanations less elusive by anchoring them more firmly in an experience that is accessible to everyone. If I were to start the book today I would pivot the argument on the distinction between *recall* and *recognition*.

For the relevance of recognition to art, I can quote venerable authority, an authority, moreover, who wrote at a time when naturalistic paintings were still an object of wonder. Aristotle, writing in the fourth century B.C., discusses in his *Poetics* why 'imitation' should give man pleasure, why we enjoy looking at the perfect copies of things we find painful to behold in reality. He attributes this pleasure to man's inborn love of learning, which, as he politely concedes, is not confined to professional philosophers. 'The reason why we enjoy seeing likenesses is that, as we look we learn and infer what each is; for instance, that is a so-and-so.' The pleasure, in other words, is one of recognition. Naturalistic painting enables us to recognize the familiar world in the configurations of paint arranged on the canvas. Unlike Aristotle and his contemporaries, we may be so used to this experience that it no longer offers us a thrill. But most of us still feel the pleasure of recognition when the situation is reversed and we suddenly exclaim in front of a real scene, 'this is a so-and-so', a Whistler, perhaps, or a Pissarro.

Clearly, as historians we must approach this second experience through the first. For if Whistler or Pissarro had not been enabled to create on their canvases recognizable images of the visible world, we would not in our turn have been able to recognize their images in nature.

II

But though recognition is clearly an act of remembering, it must not be confused with that other aspect of memory: our power of recall. The difference is easily demonstrated with 'a little experiment which also introduces us to its bearing on art. Take paper and pencil and draw anything

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1. Jean Dubuffet: *The Cow with the Subtile Nose.* 1954. Oil and enamel on canvas, 89 × 116cm.
Collection, The Museum of Modern Art, New York,
Benjamin Scharps and David Scharps Fund

from memory with which you think you are utterly familiar; the design of the chairs in your study or the shape of an animal you know very well. Even without paper and pencil we can check our power of recall if we ask ourselves such simple but awkward questions as how exactly are the horns of a cow related to its ears.

Looking at the painting of a cow by the modern primitivist Jean Dubuffet (Fig. 1) you will discover that he has shirked this issue. His *Cow with the Subtile Nose* does not boast any ears I can discover. His *Cow with Fine Teats* (Fig. 2) certainly makes up for this deficiency, but is the relationship right? Surely not. And here is the important paradox to which I must draw immediate attention. Even where we find it hard to recall, we know when we *recognize*, and say, in Aristotle's words, 'this is a so-and-so'. And failing to recognize, we claim the right to criticize and to say, 'but cows don't look like this'.

It so happens that Dubuffet's curious creatures are not really primitive, but rather over-sophisticated pictures. He wants to 'show the appearance of objects as they have been impressed on a man's brain when his attention or consciousness did not intervene, or at least intervened only vaguely, or not more than in the daily life of any ordinary man who is normally preoccupied with all sorts of other things at the moment his eyes light upon any object.'[4]

2. Jean Dubuffet: *The Cow with the Fine Teats*. 1954. Private Collection

3. Anonymous Austrian *Ex Voto*. 1896

We shall discover that there is a fallacy here. The man in the street may not be able exactly to recall a cow, but what he sees when he meets a cow is a very different matter. One thing is sure. Our difficulties of recall have nothing to do with the fact that we are men in the street, or streets, and not farmers in the fields. Take the *ex voto* of an Austrian peasant (Fig. 3). In this genuinely naïve picture, too, the animal is hard to recognize. Is it a cow or is it a goat? And yet, the peasant who painted this would know not only how to recognize cows and goats, he would even recognize every individual cow of his herd. He would also, of course, immediately recognize in a picture what he cannot recall, and so can we if we look at a painting by the most famous specialist in cattle painting, the Dutch seventeenth-century artist Paulus Potter (Fig. 4). It proves, if proof is needed, how immediate and effortless is recognition.

There is another paradox here connected with the first: the paradox that confused Dubuffet, and not only him. Recognition is easy, it is almost automatic, but, perhaps because of its automatic quality, largely unconscious. Not unconscious, to be sure, in the Freudian sense, but in the sense of those automatic processes to which we need not and often cannot attend. We do not know how and why we recognize a correctly drawn cow, but we soon notice if something is amiss in a real or a pictured cow. If the transition from cows to people is not too offensive, let me refer to the difficulties portrait painters so often experience. Troublesome relatives of their sitters will insist that there is still something around the mouth that is not right, that they still
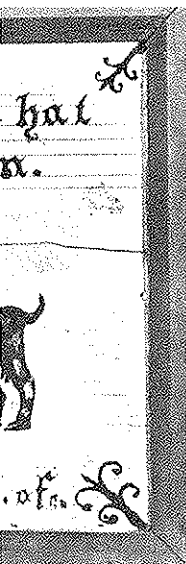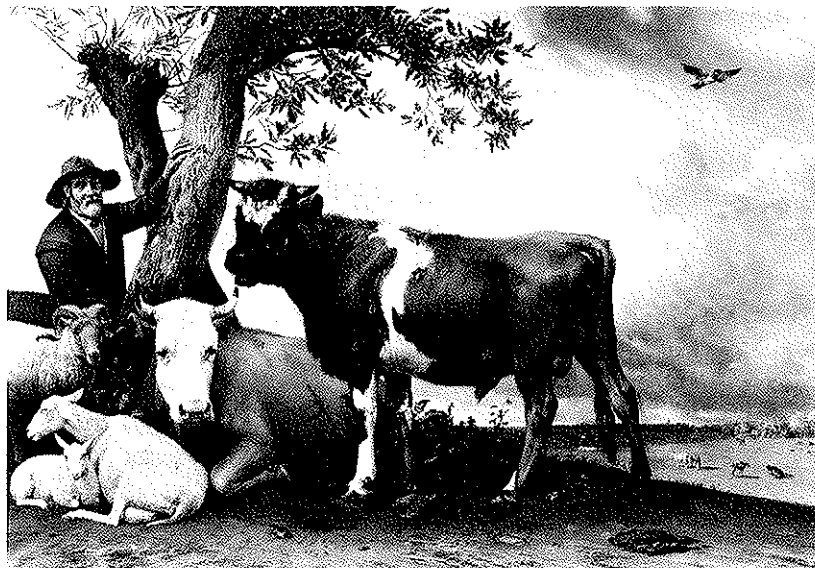
4. Paulus Potter: *The Bull.* 1647. The Hague, Mauritshuis

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cannot quite recognize Uncle Jimmy. Yet they are rarely willing or able to say why the mouth looks wrong to them. Maybe the painter will succeed in satisfying them by working through a period of trial and error until, at last, the mouth looks 'right'. Unlike the exasperated painter, I tend to believe that the relatives probably knew what they were talking about. It is genuinely disturbing to feel an element of strangeness unsettling a familiar sight. We tend to notice at once if something in our room has been shifted, though few of us could ever recall, let alone draw, the contents of our rooms.

This is the point at which art educators often start a little sermon. They have become quite expert in creating in us a sense of guilt for failing to use our eyes and never noticing the wonderful variety of the visible world which we so lazily take for granted.[5] I am all for making people use their eyes, but unless the sermon is carefully phrased it really makes little psychological sense. The teacher whose pupil fails to attend to the lesson has a right to scold him; but he would not get far if he asked him to attend to everything around him: the flies on the ceiling, the hum of the traffic or the play of light on the desk. It is of the essence of attention that it is selective. We can focus on *something* in our field of vision, but never on *everything*. All attention must take place against a background of inattention. A heightened awareness of reality as such is something mystics may dream about, but cannot realize. The number of stimuli that impinge on us at every moment—if they were countable—would be astronomical. To see at all, we must isolate and select.

The true miracle, it seems to me, is that we still store so many impressions that recognition of the familiar is guaranteed.

It is clear that the distinction between the familiar and the unfamiliar must be of utmost biological importance, not only to man, but even to animals. Insects and birds must recognize their homeground and regard with suspicion any changes that may betoken danger. Whether they also have a power of recall is perhaps an idle question. Ours, as we have seen, is rather imperfect. But we have developed an instrument to overcome this disability, an instrument we retain largely in our grasp, namely, the symbol.

For though what we call reality is too rich and too varied to be reproducible at will, symbols can be learned and recalled to a surprising extent. The same person who could perhaps not recall the appearance of his own right hand may reproduce for you any number of Shakespeare's sonnets or cricket and basketball scores. The power of recall of symbols varies of course enormously, but thanks to their economy of elements, symbols are much more amenable to availability in storage. Think of music, perhaps the extreme example. Most people in our culture can recall a great variety of tunes at will; indeed, tunes will keep running through their heads and be whistled and hummed as a kind of mood music accompanying many of their waking hours.

Whatever can be coded in symbols can also be retrieved and recalled with relative ease. The tricks of how to draw this or that—a cat for instance—of which I speak in *Art and Illusion* at some length, can really be described as such simple methods of coding. The need for a schema is the need for a code.

There are many styles in the history of art that operate with ready-made memorizable codes alone, styles in which the artist learns from his masters how to represent a mountain or a tree, or the ox and ass at the manger according to a well-proven formula (Fig. 5). Indeed, the majority of artistic traditions operate in some such way. An older psychological art theory, including that of my teacher Emanuel Loewy, described these schematic images as 'memory images'. I now think that this description confuses cause and effect. It is not likely that anybody ever remembers reality in precisely that way, but images of this schematic kind admirably serve as codes that are aids in memorizing.

Of course, it is open to us, within limits, to codify and thus to memorize whatever we especially wish to recall. In inspecting a house we may think of buying, we will sketch a schematic diagram as an *aide-mémoire*, only to find to our annoyance that the diagram occasionally has superimposed itself on our memory of the place. We have to return to modify and enrich it.

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5. *Nativity. c.* 1340. Altenberger Altar. Frankfurt, Städelsches Kunstinstitut

noticed, for argument's sake, that you do not know enough about the relationship of those horns and ears of the cow, you can check and verbalize this information, or better still, enter it onto your schema and you are safe; safe, that is, until the next person asks you an awkward question about its nostrils—and the number of such potential questions is virtually unlimited.
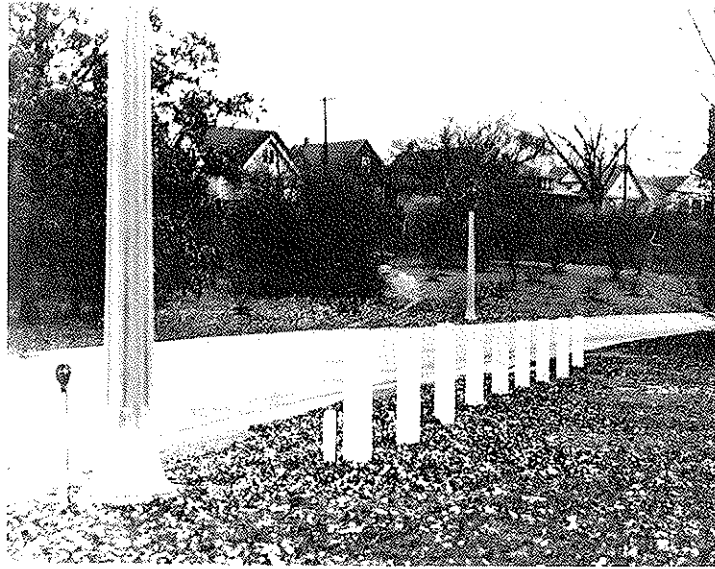
Clearly, an expert cattle painter such as Potter would have been able to meet most of them head-on. He knew about cows, he could paint them by heart, and paint them so correctly that recognition accepted them as familiar and convincing.

In my book I chose for this process of approximation to nature the psychological formula of 'schema plus correction'. The evolution of naturalistic art can be seen in terms of this formula. I cannot expect this solution to be accepted by the reader before I have answered a question that may have irked him for some time: Is there not a fundamental difference between the so-called 'conceptual' styles that operate with a remembered

code and those periods of naturalism to which Potter belonged? Is not the secret of Potter quite simply that he drew cattle from nature, even though he may later have used these sketches for his studio paintings? Is not all naturalism grounded on the discipline of drawing from the model or motif? And if these artists really trained themselves to observe and to draw what they saw in front of their eyes, what relevance has the distinction between recall and recognition to their type of art?

The answer must be one which every art teacher would give who has had to teach the traditional skills of representation—if such are still around. It is that, strangely enough, the difference between drawing from memory and drawing from life is only one of degree. Max Liebermann somewhere quotes his teacher as saying, 'What you cannot paint from memory you cannot paint at all.' It is true that in painting from the motif you have the inestimable advantage of easy comparison between your work and your model. You can always pause to see whether you recognize your motif in your picture or your picture in the motif. But though such comparisons will make it easier for you to spot mistakes, the example of the portrait painter I have mentioned shows that a feeling of discrepancy is one thing, the invention of a fitting code another.

There are many reasons for this difficulty, some of which I analysed at some length in my book. I also quoted Sir Winston Churchill, who rightly emphasized that even in painting from nature we must use our memory as we move our eye from motif to canvas. This would even be true of an artist copying a picture. But in painting from nature, more formidable psychological problems intervene. For psychologically it does not make much sense to say that we 'copy' what we see in the visible world. What we see extends in depth, while our painting surface is flat. The elements of what we see differ in colour. To invent a code of colour combinations distributed on a plane for the variety of experience in the real world is, of course, the achievement of naturalism. It is an achievement simply because, as I said several times in my book, the real world does not look like a flat picture, though a flat picture can be made to look like the real world. The reason for this paradox is discussed in psychology under the heading of the *constancies*. The name covers the totality of those stabilizing tendencies that prevent us from getting giddy in a world of fluctuating appearances. As a man comes to greet us in the street, his image will double in size if he approaches from twenty yards to ten. If he stretches out his hand to greet us, it becomes enormous. We do not register the degree of these changes; his image remains relatively constant and so does the colour of his hair, despite the changes of light and reflection.

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6. Photograph showing perspective diminution. From Ralph M. Evans,
An Introduction to Color (New York, John Wiley & Sons, 1948)

Even the amateur photographer knows something about this effect. He has learned how disappointingly small an object may look in his picture if he fails to move close enough for it to fill most of the field of vision. Painters, of course, have learned to break down the constancies by measuring the apparent size of an object against the brush held at arm's length (see Fig. 219). The novice who tries this simple technique for the first time is in for surprises if he knows how to watch his visual experience. And yet he would be mistaken if he inferred from this surprise effect that the methods he is taught only represent a 'convention', a fortuitous code that differs from the way we 'really' see the world. Arguments of this kind have frequently been used by critics of mathematical perspective. I believe them to be as misleading as is Dubuffet's claim that we never 'really' see a cow in the way Potter represents it. Both these criticisms fail to take into account that we know very well when a picture looks 'right'. A picture painted according to the laws of perspective will generally evoke instant and effortless recognition. It will do so to such an extent that it will in fact restore the feeling of reality, including—and this is most important—the constancies.

I am afraid I somewhat muffed this decisive point in my book by taking a poor example. I am all the more glad to be able to reproduce here the brilliant demonstration which originally convinced me of the crucial relevance of this transformation. It comes from the book *An Introduction to Color*, by Mr. Ralph Evans of the Kodak Laboratories in Rochester (Fig. 6).

All Evans has done is duplicate the image of the lamp-post in the background nearer the picture's lower edge and to do the same with the last of the row of posts. The effect is surprising indeed. Even with the illustration we must have recourse to measurement to convince ourselves that the lamp-post in the background is *really* so small and that the row of posts *really* diminishes to such an extent. The constancies operate even in a photograph. Yet nobody would deny for a moment that we have no difficulty in recognizing the familiar appearance of a suburban street when looking at the picture. Perspective diminution, however surprising, results in recognition. It is a valid instrument, and Vasari was right when he regarded perspective as a genuine discovery.

III

And yet there remains a question which Vasari failed to ask because he took the answer for granted. If only the tricks of naturalistic painting result in convincing images that make for effortless recognition, how can we explain the fact that most cultures are quite happy with schematic representations?

A humorous contemporary drawing, done in a medieval schematic style, which an unknown reader of my book kindly sent me from Australia, not only poses this question afresh, but may also contain the germ of an answer (Fig. 7). The caption tells us (as the king watches with exasperation while his meal slides from the table to the ground): 'It's the way they draw these wretched tables.'

To us, at least, the medieval convention suggests in fact that the table is tilted and that nothing could stand on it. If we could find out when this feeling first arose and when this kind of criticism would have been understood, we would be a long way nearer an explanation of why artists felt that the schema was in need of correction. Once this process was set in motion, the rest may have been a matter of trial and error, of taking thought, and trying again. *Il n'y a que le premier pas qui coûte.*

In my book I have tried to sketch an answer to this question as far as the beginnings of the Greek revolution are concerned. I shall try here to apply it briefly to the Renaissance, leaving it to another occasion to fill in the outlines.[6] My answer was that the purpose of art that led to the discovery of illusionistic devices was not so much a general desire to imitate nature as a specific demand for the plausible narration of sacred events.

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7. Harvey: 'It's the way they draw these wretched tables,'
The Bulletin, Sydney, Australia

narration. One may be called the pictographic method. Here the sacred event
is told in clear and simple hieroglyphs which make us understand rather than
visualize it. Within the context of such a style, it may be argued, the
'conceptual method' of drawing a table surface produces no discomfort. The
hieratic figures of the Three Angels represented on the Romanesque tapestry
as partaking of Abraham's meal (Fig. 8) may look pictographic to our eyes,
but the scene as such is impressive in its solemn consistency. It is only where
the artist aims more visibly at telling us not only *what* happened but *how* it
happened that the conceptual method becomes vulnerable to criticism. The
rise of naturalism, in other words, presupposes a shift in the beholder's
expectations and demands. The public asks the artist to present the sacred
event on an imaginary stage as it might have looked to an eye-witness. There
is some evidence, I think, that this demand was in fact insistent around the
time of Giotto's revolution. It is, of course, generally agreed that Giotto in his
Biblical narratives aimed at such a dramatic evocation. We know that at first
the effect of his art was stunned surprise at the degree of lifelikeness the

8. *Abraham's Hospitality*. 2nd scene of 12th century tapestry. Halberstadt Cathedral Museum

master's brush could achieve. But if I am right, it was this very success that made certain remaining inconsistencies in the spatial framework of his narratives more obtrusive. In front of his rendering of the Feast of Herod (Fig. 9), an irreverent wit might easily have asked whether the dishes were safe on that table. I do not know whether such a joke was cracked, nor even
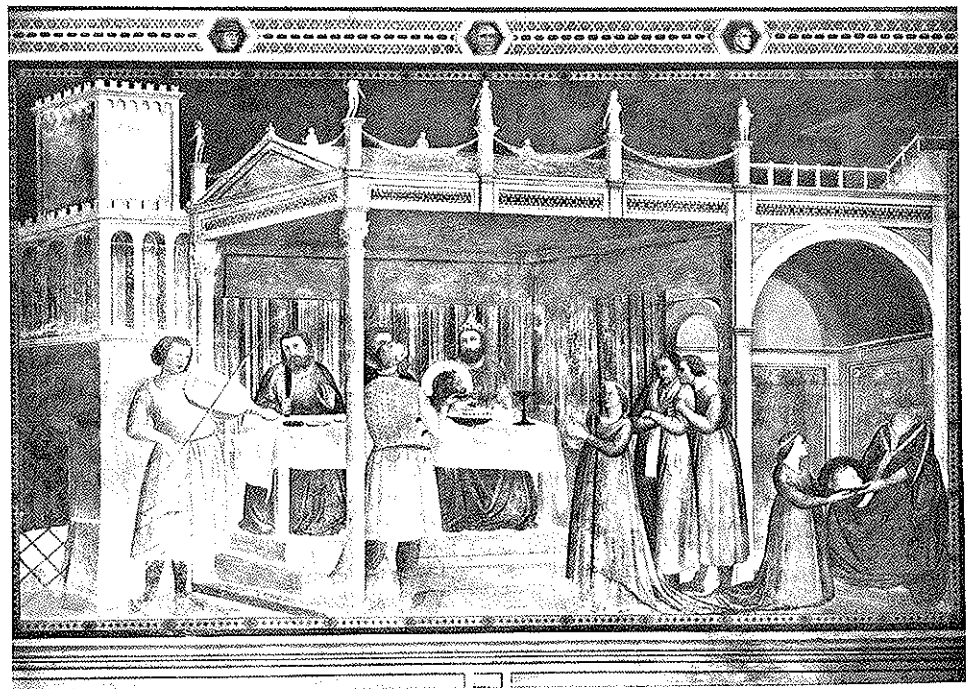
9. Giotto: *The Feast of Herod. c.* 1330. Florence, Santa Croce
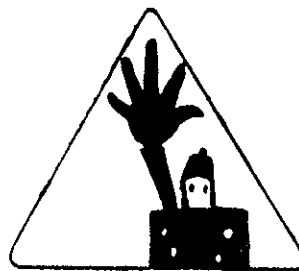
10. Pictographic road sign

whether such criticism of Giotto's method was in fact voiced.[7] But clearly, the invention of perspective three generations later eliminated this potential discomfort. Its rapid spread throughout Europe suggests at least that it met an existing demand. The closer the code came to the evocation of a familiar reality the more easily could the faithful contemplate the re-enactment of the story and identify the participants.
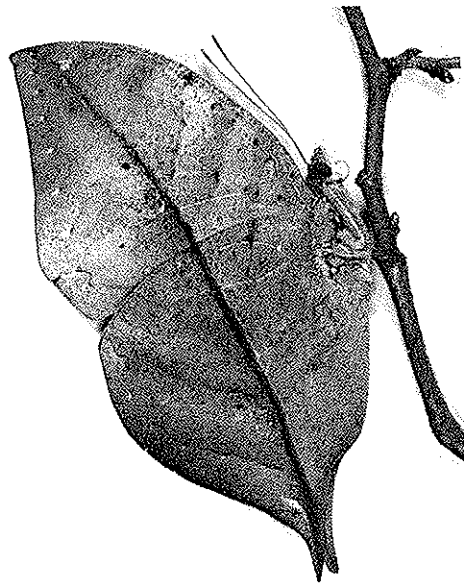
It is true that if this was the purpose it soon became overlaid by technical interest. The rendering of depth, of light, of texture and facial expression was singled out for praise by the connoisseur, and the problems of the craft became aims in themselves. But these aims, to repeat, were only achieved by a long process of trial and error that was guided by the critical scrutiny of paintings that failed to pass the 'recognition test'. The motive force we may imagine as underlying the growth of naturalism is not the wish to imitate natural appearances as such, but to avoid and counter the critic's impatient questions: 'What does this onlooker feel?'; 'What sort of fabric is his cloak?'; 'Why does he throw no shadow?'

Once we describe the rise of naturalism in terms of such scrutiny, it also becomes clear that there are rival functions of the image which do not elicit this kind of question at all. Even within the context of a sacred art, it may be didactic clarity that is demanded of artists designing images that should above all be as legible from afar as are Byzantine mosaics. Today there are such functions of the image as advertising (favouring some 'striking' effect) or diagrams and pictographic roadsigns (Fig. 10) which are better served by a reduction of naturalistic information. Accordingly, the poster and the pictographic illustration have gradually 'evolved' away from nineteenth-century illusionism.

Cathedral Museum

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IV

I think that in strictly definable contexts such as these, the term 'evolution' is more than a loose metaphor. Indeed, the schematic process I have sketched out here could be presented in almost Darwinian terms. The fitting of form to function follows a process of trial and error, of mutation and the survival of the fittest. Once the standard of either clear or convincing images has been set, those not conforming will be eliminated by social pressure.[8]

There is a real Darwinian parallel here which should not be overlooked. For the evolution of convincing images was indeed anticipated by nature long before human minds could conceive this trick. I am referring to the wonders of protective colouring and mimicry, of deterrent and camouflaging forms in plants and animals. As we have all learnt at school, and as we can see with amazement in zoological displays, there are insects that look exactly like the leaves of the tree which is their habitat (Fig. 11). There are caterpillars which, when they freeze into immobility, look deceptively like twigs; there are mammals which are so coloured that their dappled or striped skin merges surprisingly with the play of light in their native forest; there are harmless insects which deceptively imitate the shape and colour of dangerous species and thus manage to increase their chances of survival.


11. Indian leaf butterfly (*Kallima inachus*)

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12. British eyed hawkmoth (*Smerinthus ocellata*)

The art historian and the critic could do worse than ponder these miracles. They will make him pause before he pronounces too glibly on the relativity of standards that make for likeness and recognition.[9] The eye and the brain of the bird from which protective colouring must hide the butterfly surely differ in a thousand ways from ours. And yet we can only assume that both for the bird and for us the butterfly and the leaf have become indistinguishable. The naturalistic style of these butterflies deceives a great range of predators including ourselves. Thus, in comparing earlier the bewildering variety of shapes in art with that of living creatures, I had a little more in mind than a mere illustration of multiplicity. For might it not be argued that the shapes of art are also arrived at through adaptation to various functions? I have spoken of the evolution of naturalistic styles in the animal world. Clearly nature is not always naturalistic in that sense. Some forms and colourings are explained by scientists as deterrents or attractants in a more general sense. Take the 'eyes' we frequently see on the wings of moths (Fig. 12). If we can believe the prevailing hypothesis, these have a deterrent effect on predators.[10] If you paint them out, the moths so treated are more likely to be eaten than those able suddenly to display these pairs of threatening eyes. It has been suggested that it is not accidental that the threatening shape takes this particular form.[11] Maybe predators are attuned from birth to the danger of this particular stimulus. A pair of large, watching eyes would signify a predator dangerous to them. But these, we might say, are not naturalistic in the same sense in which the imitated leaf is. They are rather in the nature of
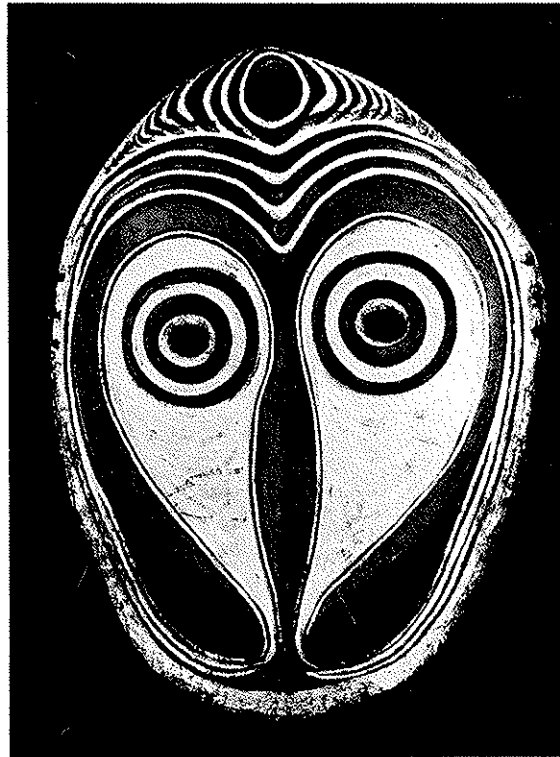
13. Gable decoration from a male tribal house in the
Sepik region of New Guinea. Stuttgart, Lindenmuseum

generalized, schematic—but expressive—images. They represent, if you like, the Expressionist style of nature.

We may assume that evolution in art as well as in nature could also approximate other specifications than that of effortless recognizability. Maybe the immensely disquieting and expressive forms of those tribal styles we call 'primitive' also evolved step by step towards awe-inspiring or terrifying configurations (Fig. 13). Admittedly, there was nobody around to express and formulate these standards. They may also have been less easy to formulate. One might imagine that it was merely felt that certain masks, images or ornaments were charged with more potency, more *mana*, than others, and that those features that made for their magic power survived and increased in the course of time.

And yet, I do not want to overstress the parallelism between human art and the creativity of nature. The comparison seems to me as illuminating for what the two processes may have in common as for their differences. In studying the evolution of natural forms that extend over geological epochs, we have learnt to beware of the teleological fallacy. Nature does not set itself aims.

Man does. Admittedly, he does so to varying degrees. It is fashionable to doubt this, too. We are constantly warned against indulging in parochial pride, and against seeing our culture as superior to other varieties. I confess that I am an unrepentant parochial. I believe that the birth of critical rationalism in Greek culture gave mankind a new tool towards the shaping of its own destiny, a tool that other cultures lack. We call it science. The evolutionary series of Greek and Renaissance painting differ from other evolutions precisely through the admixture of science. The science of anatomy, the sciences of projective geometry and of optics were called in to hasten the experimentation towards recognizable images. In the end, as we know, science overtook art in this respect through the evolution of photography, the colour film and the wide screen.

Maybe it is only in these periods of directed research that we can legitimately speak of 'visual discovery'. Indeed, what is usually described in these terms differs quite significantly from the unconscious process I have tried to characterize so far. It differs so much that it might appear at first sight to contradict and disprove my description of the processes of recognition and recall. For contrary to what this description would make us expect, there are visual discoveries which the public at first refused to accept as convincing.

The standard examples are the discoveries of the Impressionists, the methods of *plein air* painting which concentrated on coloured reflections and coloured shadows. These, we are told, did not at first look convincing. The public had to learn to see them by attempting their verification. Sympathetic observers noticed to their surprise that, having looked at Impressionist paintings, they, too, could recognize these coloured shadows in nature. The whole process seemed to be reversed. In fact, it was mainly this experience that led to the dismissal of Vasari's theories of learning as naïve, and to an increasing stress on visual relativism that I should like to criticize in my turn.

V

It is vital to my whole approach that I be allowed to specify a little more closely in psychological terms what is going on when, as the saying goes, the artist 'teaches us to see'. In the remaining sections, I should like to give at least a sketch of a tentative answer, knowing full well that it cannot be the whole story.

We must here return to the fact that recognition is largely unconscious and automatic. Even so, both logically and psychologically, this task of

recognition is far from simple. For in fact, the stimuli can hardly ever be identical with those received before. A different angle of vision, a change in illumination, transforms the stimuli—and yet the impression of familiarity is not necessarily affected. Psychology discusses some of the stabilizing mechanisms involved here under the heading of the constancies with which we are already familiar. But the stability of recognition reaches beyond them. Take the most mysterious of all: our ability to recognize a familiar face in a crowd.[12] There is nothing more mobile to our senses than the human physiognomy, for every slight shift in its configuration has a strong expressive meaning. And yet, we also establish a framework of identity in change that is recognized through all the transformations of expression. It is the same face that now looks happy, now morose. It remains the same face even throughout the relentless transformations wrought on it by time and age. Familiarity is not to be confused with identity.

I have chosen the example of facial recognition because it may serve best to bring home even to the sceptic the plasticity of our visual experience. What we 'see' is not simply given, but is the product of past experience and future expectations. Thus, it may happen that we meet an old friend after many years and receive a shock—he has changed so much, we would hardly have recognized him. But after an hour, we do recognize the earlier face in the altered features, memory and impression merge again and we 'see' the old friend once more through, or across, the signs of age. Indeed, try as we may, we can hardly recover the first impression of strangeness, we no longer see him as unfamiliar.

And yet, the recognition of faces also teaches another lesson. The framework is more easily upset than we might expect. The unrecognizable disguise is not the mere fancy of old-fashioned dramatists. Change the hairstyle of a girl or add or subtract a beard, and recognition will be disproportionately difficult, as I have learned to my embarrassment when my students turned up thus transformed. Obviously, recognition demands some anchorage. Even in trying to remember the participants of a class, we look for some method of 'coding' these faces for recognition. Miss Smith is the girl with the ponytail; Mr. Jones, the boy with the moustache. Subsequent learning relies on this mark of identity that determines the *gestalt*.

We return here to the example of the portrait painter and his difficulty in achieving a likeness that is recognized as such by the sitter's relatives. Clearly, what is required is the choice of a code that coincides with the way these critics 'see' the sitter. I have suggested that their criticism may well be more valid than the painter is inclined to admit. But we may now add that the painter's own version may also win through. He may be able to persuade the

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14. Honoré Daumier: *A. L. Coquerel.*
From *Charivari*, 3 October 1849

relatives of the validity of his own vision; looking at the sitter, they may suddenly recognize the portrait in him. Art has imposed a fresh vision on a face.

The most extreme case of this exploitation of the instability of vision is portrait caricature. It is also the most instructive, because the caricaturist need not be a great artist to seize upon those invariants which are all we generally remember of the appearance of politicians or actors. In distilling this framework into a simple code, he shows us the formula and helps the public figure to secure recognition. But the caricaturist can also transform his victim. He can single out characteristic invariants which we have yet never used for recognition, and in thus focusing our attention on these features, he teaches us a fresh code (Fig. 14). We then say that the caricaturist has made us see the victim differently—we cannot help thinking of the caricature whenever we meet the man.

It is in this direction that I propose to look for a solution to the problem of visual discovery in art. Its most striking effects presuppose a degree of plasticity in the way we 'see' the world which leaves recognition unaffected. This must be connected with the wealth of cues at our disposal for coding our visual experience. The painter, like the caricaturist, can teach us a new code of recognition, he cannot teach us to 'see'.

VI

Having stated the direction in which I think we have to go, I should like to proceed a little more slowly and to introduce a number of distinctions I failed to make in *Art and Illusion*.

I am afraid as a first step I must slightly reduce the importance generally attached to the artist and painter in this process of discovery. It is true, of course, that, being professionally concerned with visual experience, artists have played a conspicuous role in the discovery of unexpected features in the visible world. But there is no intrinsic reason why such discoveries need be coded in paint and not in words. Our coloured shadows are a case in point. As early as 1793, Goethe sent the German physicist and writer Lichtenberg a section of his colour theory dealing with the phenomenon of coloured shadows. Lichtenberg replied in a most interesting letter, in which he said that ever since receiving Goethe's paper he had been running after coloured shadows as he ran after butterflies as a boy. Lichtenberg discusses the general failure to notice these things 'because in our judgments which are based on visual impressions, sensation and judgment interpenetrate to such an extent that after a certain age it becomes hardly possible to separate them; every moment we believe that we perceive what we merely infer. It is for this reason that bad portrait painters lay in the entire face all over with pink flesh colour. They are unable to realize that there could be blue, green, yellow and brown shadows in a human face.'

I feel we would get further in our study of visual discoveries if we made some distinction between change of interest and change of perception. Lichtenberg's interest, once aroused, led him to notice things he had not noticed before. In itself, there is not much of a problem here. It can and does happen all the time. If you want to buy new curtains, you will probably notice curtains and their features that you would otherwise overlook. If you read about facial asymmetry, you will become aware of deviations from symmetry which you had never noticed. Some of these fluctuations are superficial and transitory, others more permanent. If fashion arouses interest in vintage cars, old cars will acquire a new look; if collectors should make news by paying high prices for a particular type of dustbin, we would begin to look at dustbins on our way to the office.

(Some five years after this lecture was given the London *Times* printed a report by Michael Leapman (24 August 1972) that about one third of New York's litter baskets had been stolen, since 'there seems to be something enormously camp and attractive about them'. I can only hope that my hypothetical prophecy did not contribute to this minor crime wave.)

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15. Robert Rauschenberg: *Hazard.* 1957.
Private Collection

Clearly, art is a frequent source of such novel interests. Contemporary artists such as Rauschenberg have become fascinated by the patterns and textures of decaying walls with their torn posters and patches of damp (Fig. 15). Though I happen to dislike Rauschenberg, I notice to my chagrin that I cannot help being aware of such sights in a different way since seeing his paintings. Perhaps if I had disliked his exhibition less, the memory would have faded more quickly. For emotional involvement, positive or even negative, certainly favours retention and recognition.

And yet, I would think, this experience of noticing things because artists have drawn attention to motifs still differs from visual discoveries at least in some degree.

I recently experienced the surprise of such a discovery. It may sound trivial enough as I describe it, but it will show that this function of art is not confined to representational painting. Our kitchen floor at home happens to have a simple black-and-white checkerboard pattern. As I was taking a glass of water from the tap to the table, I suddenly noticed the delightful and interesting distortions of this pattern visible through the bottom of the glass. I had never seen this transformation before, though I must have made this same movement hundreds of times. And suddenly I recognized the pattern and knew why I saw it now. I had visited an exhibition of the paintings of Lawrence Gowing, a painter who shares my interest in perception and was experimenting with abstracts. I had looked with interest at one of the paintings in which the illusion of space and light in a forest is created through the systematic distortion of a checker pattern (Fig. 16). It was a classic case of what might be called inverted recognition—the recognition not of reality in a painting but of a painting in reality. Clearly it was interest that had triggered
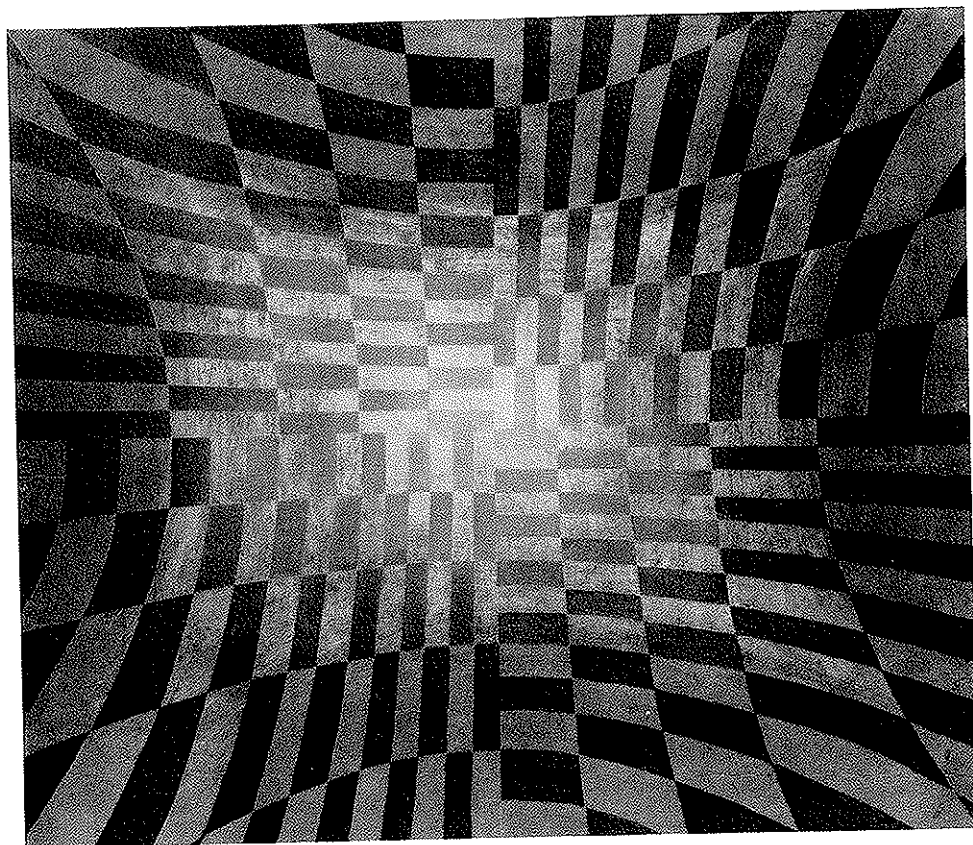
16. Lawrence Gowing: *Parabolic Perspective*. London, The Tate Gallery

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it off. Without it, I might have taken a hundred or a thousand more glasses from the tap to the kitchen table without noticing the appearance of the floor through the bottom of the glass. Without noticing, not really without seeing. For of course I must have seen the pattern before, if we mean by 'seeing' that the stimuli must have reached my retina and my visual cortex. But I had attended to these as little as I attend to millions of other impressions that impinge as I move through the world.

I must draw attention to the difference between this and the former example, although it is only a difference of nuance. Rauschenberg may have created an interest in old billboards as possible motifs of artistic attention, but it would be stretching usage beyond common sense if I said in this instance that I had never seen billboards before. But this would be true of the pattern Gowing enabled me to arrest and to see. Moreover, he also enabled me to discuss and recall it. I suppose we might say his painting had unwittingly provided a symbol in which this fleeting impression could be coded and had thus isolated it from the stream of 'pre-conscious' or 'subliminal' perception. I thus experienced the thrill and shock of recognition when I encountered the configuration of the painting in this unexpected context, though I was not immediately aware of the cause of this isolation.

To probe a little deeper into this kind of visual discovery, we should, I think, investigate the effect of isolation from context, not only through art but also through other agencies. For isolation will easily break up familiarity and thus transform the experience. Take the example of our familiar room. Anybody who has ever moved house can tell how unfamiliar that old room can look when emptied of furniture. Not only unfamiliar, but strikingly different. Its very size seems to have changed. The once pleasant and cosy place seems to have shrunk into a small, stark cell. Admit the demolition firm, break down the walls and visit the foundations for a last time, and they will look tiny in relation to the total landscape. What was once a comfortable framework for your actions, as you moved from the easy-chair to your bookshelf, is now a speck on the terrain. The context completely transforms the experience. Yet it would be quite misleading to say you had never looked at your room before or never knew its real size. Your experience of familiarity was as real as is that of your unfamiliarity.

As far as images are concerned, the most convincing demonstration of this effect of context comes not, perhaps, from art but from photography. We all know that not all snapshots look convincing. Some isolate the phase of a movement from its context and look surprisingly unreal in consequence. Others give such a steep foreshortening that they look startling and almost
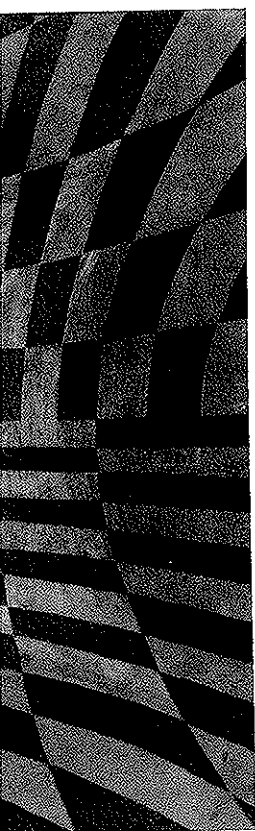
unbelievable. Does it make sense then to say that this is what we really see in such situations? Yes and no. Interaction of cues can restore familiarity. We have the technical means now to put this surprising fact to the test. In Cinerama, the temporal and spatial context so closely simulates the experience of the real world that, far from finding steep foreshortening unrealistic, we tend to duck or blink as the object appears to approach us.

One answer to the question of how the same image can be both verifiably correct and yet unfamiliar surely lies in the effect of isolation. Here we can return to those famous coloured shadows of the Impressionists. In the sixth chapter of Zola's novel *L'Oeuvre*, the painter's rather simple-minded wife ventures to criticize him for painting a poplar quite blue. He makes her look at the motif and notice the delicate blue of the foliage. It was true, the tree was really blue, and yet she did not quite admit defeat; she blamed reality: there could not *be* blue trees in nature.

Was she so stupid? Her experience of familiarity, like that of everyone, was grounded on a knowledge of invariants, on what Hering called, a bit misleadingly, 'memory colour'. Psychologists—since the time of Goethe and of Lichtenberg at least—use artificial means for eliminating this mechanism, breaking down the interaction of cues and isolating the sensation as far as this can ever be done. They use what is called a reduction screen for defeating the constancies and demonstrating, for instance, the degree to which an illuminated surface changes its appearance as we tilt or move it in relation to the light source. Naturalistic painters have always used reduction in one way or another to break down the constancies. They tend to isolate and half close their eyes for this very purpose. But obviously, if they restore the context we do not experience surprise. The correct placing of the right values results in recognition. But there are both technical and artistic limits to this restoration, and hence the shock of incredulity.

If this shock results in interest, however, we can all be made to hunt for coloured shadows or other effects seen in paintings, as Lichtenberg did. We shall not need a reduction screen; interest and attention will do the isolating for us. And here the isolation really can lead to transformation—or, to use a more emotive word, to the transfiguring of reality.

VII

And yet, even this is not the whole story. For something more interesting might intervene to assist transformation through isolation. Briefly, isolation

tends to increase ambiguity. In real life, it is the interaction of innumerable cues that generally allows us to find our way through the world with comparative ease. Yet it is a well-known fact that in certain situations we cannot tell whether an unfamiliar object seen in isolation is large and distant or small and close by, or whether an unevenly shaded area is hollow and lit from the left or protruding and lit from the right. Clearly, in reducing the richness of nature to suit his code, the painter will always increase the ambiguity of his individual stroke or mark. A line can stand for anything from a match to a distant horizon. In what are called 'conceptual' styles, every effort is made to reduce or eliminate these ambiguities and to secure the intended reading. Naturalistic styles mobilize all available means for the mutual clarification of cues and any obtrusive ambiguity counts as a fault to be eliminated. The master in the life class will draw attention to any passage that is not clear, any line that is not recognized for what it stands for. But once art has become emancipated from its purpose of illustration and evocation, this ambiguity acquires a new interest. From Impressionism to Cubism, the exploration of isolation and ambiguity has drawn increasing attention to the instability of the visible world. Once again these lessons can be recalled in real life situations—most easily in conditions of reduced visibility: in mist, in flickering light, or in unfamiliar situations. But increasing experience with the unexpected ambiguity of visual cues in paintings will alert us to the unsuspected ambiguity of visual cues in real life and thus lead to fresh discoveries. In recognizing such pictures in nature we learn about the complexity of vision as such.

Once again, painting has no monopoly here. I remember an unsettling experience of this kind that was elicited by a psychological experiment. I had just attended a demonstration of that intriguing visual teaser, Adelbert Ames's 'revolving trapezoid', in essence a flat foreshortened window frame that turns on its axis but looks stubbornly as if it swayed to and fro. As I walked cross-country, I happened to see a broken farm gate propped up in an inaccessible pond. It reminded me of the trapezoid and I suddenly realized that I could not tell its real shape, or position either. There was a moment of slight anxiety as I woke up to the fact that the same applied to distant trees or countless other configurations in my surroundings.[13] The passing shock has helped me to understand why we prefer to ignore this instability in our readings of the world.

Yet it is clear that if it were not for this instability it would make no sense to say that the painter can impose his vision on our world. He does it at those vulnerable points where coding is more or less optional. What is involved here is perhaps best illustrated with the help of a well-known textbook
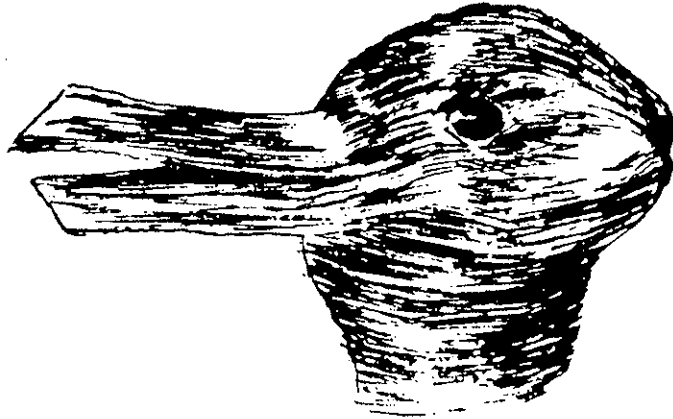
17. 'Rabbit or Duck?' From *Fliegende Blätter*

example of ambiguity, the notorious old 'rabbit or duck' figure I used in my book (Fig. 17). Clearly, in this most simple of cases we can elicit alternate readings depending on captions or a verbal description—but it might be even more effective to impose one of these readings through visual means.

I have not made any experiments, but I would predict that you could bring about a transformation merely by changing the visual context, either spatially, by drawing a duckpond or rabbit warren around the blot, or temporally, by showing a subject a series of pictures of rabbits, before projecting the ambiguous image; in which case, what we call mental set will surely do the trick and determine the reading.

It would be fascinating to go on from here and watch the final transition from interpretation to suggestion. In our figure, there is still an objective anchorage for the reading of either rabbit or duck. You might systematically reduce this anchorage and still make your subjects project an expected image, provided their initial conviction and desire is strong enough. For there is a natural transition here from interest to mental set, and thence to projection. The hungry rabbit catcher will scan the field for his quarry with such intensity that a clod of earth or a clump of leaves may tempt him, unless he has learned to hold his imagination in check. The degree to which a hunt or search can reorganize and transform cues was brought home to me—if I may continue my autobiography—when I was preparing this paper and looking in a library for a book with suitable illustrations of mimicry and protective colouring. Running my eyes along a line of miscellaneous books, I suddenly thought I had got it; I 'saw' a book with the odd but promising title 'Deceptive Beetles'—obviously some treatise on insect camouflage. Alas, as I looked more closely the title turned out to read *Decisive Battles*. I felt pretty silly, but I could not help wondering about the flexibility of the preconscious

mind. Beetles to battles is not a surprising transformation; it involves the misreading of only two letters out of seven. But that, in this joy of false recognition, my preconscious had changed 'decisive' into 'deceptive' to keep the promise of a book on mimicry is almost disturbing.

Have I moved too far away from art? Not, I hope, if this extreme example of my folly illustrates the end of the spectrum, as it were, between perception and projection. I do not know if it is ever possible to separate the two completely. In scanning the world with interest roused by past experience, the previous impression and the incoming sensations tend to coalesce like two drops of water forming a larger drop. When paintings have aroused our interest in certain configurations, we may look for anchorage and confirmation and use every hint in a visual experience to find there what we sought. This may go for the 'conformist' as well as for the 'progressive'. The first will find his prejudices confirmed and recognize only the familiar code in the familiar world; this is what the innovators always complained of. But the other experience may be equally possible. The wish to find confirmation of some new experiment may make the progressive suggestible and may thus facilitate the artist's task of modifying his code. The premium in self-esteem that may be offered to those who can share a new way of seeing should not be overlooked as a determinant.

The experience of visual discovery I have tried to stalk is probably a compound of these elements. I especially mean the experience in which the normal relationship of recognition and recall is reversed, so that we genuinely recognize pictorial effects in the world around us, rather than the familiar sights of the world in pictures. The road to this experience led from interest to isolation and from isolation to increased ambiguity. In discovering an alternative reading of an isolated set of impressions, we receive a kind of minor revelation through recognition. Is this the thrill of learning of which Aristotle speaks?

I have so far steered clear of aesthetics, and it would be out of place to introduce it now. But we can be sure, I think, that this revelation is experienced as a new kind of beauty. It is well known that it was the admiration for the effects of Claude Lorrain, for his symbols of serenity and idyllic peace (Fig. 18), that first led the English connoisseurs of the eighteenth century to discover the beauties of what they called picturesque landscapes nearer home. Richard Wilson learned from Claude's code how to isolate and represent the beauties of his native Wales (Fig. 19).[14] In this momentous development that had its influence on the rise of Romantic nature worship in poetry no less than in art, prestige, new interests and new

18. Claude Lorrain: *Narcissus and Echo*. 1644. London, The National Gallery
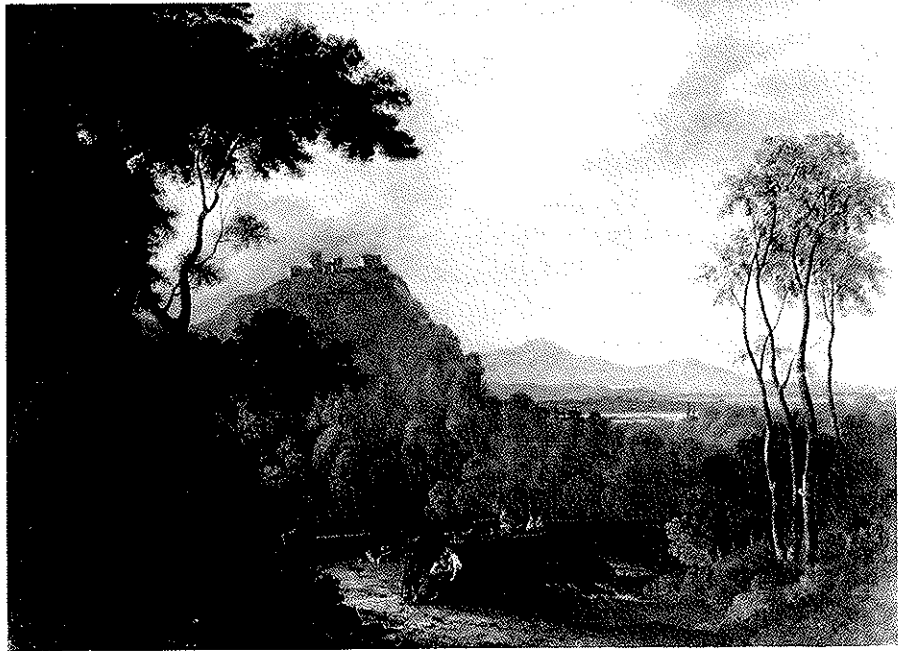
19. Richard Wilson: *Dinas Bran Castle*. *c*. 1770. Cardiff, The National Museum of Wales

visual experiences were no doubt intertwined in a way that is hard to disentangle. Wilson probably wished to see Wales in Claude's terms. But the very word 'picturesque' shows that one element involved was the thrilling and unexpected encounter with beloved pictures in what had previously looked like a familiar reality of the kind that is unconsciously recognized but not consciously recalled.

There is no reason to doubt that this process can and does go on. The world of visual experience is infinite in its variety and richness. Art can code reality correctly and yet paradoxically we have no cause to fear that artists need ever stop revealing to us new facets of this inexhaustible experience.

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I HOPE I may dispense with the ritual of an introduction and plunge *in medias res* with the aid of my first illustration, an anti-war poster of 1924 by the German expressionist artist Käthe Kollwitz (Fig. 40). It shows the various aspects of gesture and expression I should like to single out for discussion. The young man on the poster surely exhibits those symptoms of mass emotion that Konrad Lorenz has recently analysed so convincingly in the penultimate chapter of his book on aggression:[1] the heightened *tonus*, the

40. Käthe Kollwitz: *Nie wieder Krieg.* 1924

A contribution to a Discussion on Ritualization of Behaviour in Animals and Man organized for the Royal Society by Sir Julian Huxley in June 1966.

rigid posture, the raised head with the forward thrust of the chin, even the bristling hair, all the physical reactions that accompany the emotion of mass enthusiasm or *Begeisterung*. If we retain the term *symptom* for these visible signs, we may use the term *symbol* for the other kind of visible sign, the gesture of the hand with two outstretched fingers which conventionally accompanies the swearing of an oath in central Europe, a ritual in the narrow cultural sense of the term. If natural symptom and conventional symbol can be seen as the two extremes of a spectrum[2] we would, I believe, have to place the gesture the young man performs with his left hand somewhere in between these extremes. The hand on the heart is a widespread gesture of sincerity and protestation that has even become a formula in German speech, *Hand aufs Herz*. English is more specifically ritualistic here, with 'cross my heart', a formula that neglects the symptomatic element of the hand gripping the heart in one of those autistic gestures[3] indicative of stress, reinforced, perhaps, by the feeling of the heartbeat that accompanies a 'heavy heart'. But as so often with physical symptoms of emotions, these are still subject to conscious control, they are sufficiently plastic to be moulded by cultural traditions.[4] Few of us, for instance, would seriously make this gesture, for in our anti-

41. *Swearing on the Relic* and *Oath of Allegiance*. From a 14th century manuscript (MS. 32). Dresden. After Amira, *Der Dresdener Sachsenspiegel* (1902, pl. 15).
42. Van Eyck brothers: *God the Father*. From the Ghent Altarpiece. 1432. Ghent, Cathedral of St. Bavo

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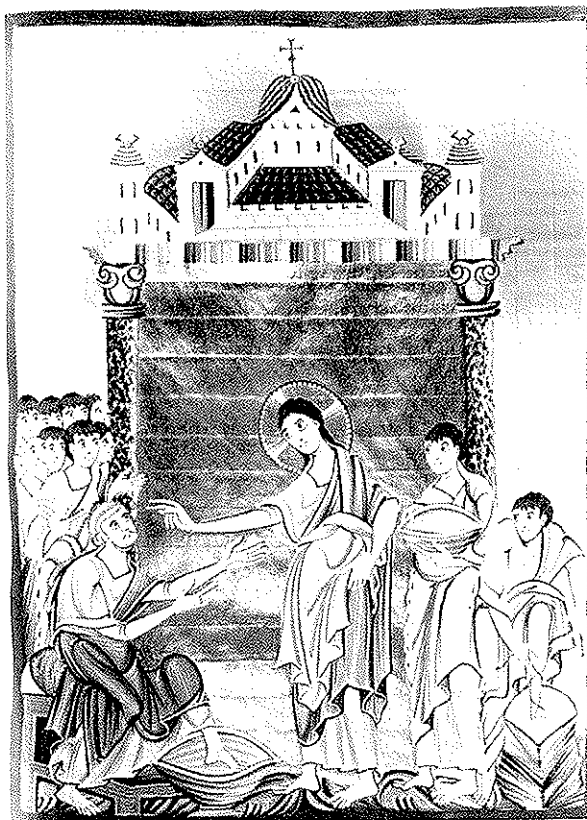
43. *The Washing of the Feet.* From a Gospel Book of
Otto III. *c.* 1000, German. Munich, Bayerische Staatsbibliothek

rhetorical culture it would suggest hamming. Within the context of a political
poster, of course, understatement would be out of place and the hand on the
heart is effective enough. And so, to turn to the other elements of gesture that
concern the student of art, are the traces of the artist's own emotional state,
what might be called the graphological aspect.[5] This element can be seen to
modify and transform the conventional symbols of lettering: '*Nie wieder
Krieg*' (No More War) is obviously written in the same state of tension that
we see in the face of the young man. The underlining mounts to a crescendo,
as would the voice of the man pronouncing his oath, and the writing contrasts
altogether with the script imparting factual information below. Needless to
say, this distinction between emotive symptom and conventional symbol as
ends of a spectrum is an abstraction, the symbolic ritual of oath-taking is
charged with all the symptoms of the emotion both in the way the upraised
arm is tautened and the way it is drawn with emphatic strokes.

But if we can agree on some such distinction we may find it easier to discuss

anuscript (MS. 32).
, pl. 15).
. 1432. Ghent,

44. *Lenin*. Anonymous Russian poster. *c.* 1920.
After Polanski, *The Russian Revolutionary Poster* (Moscow, 1924)

their interaction in art and in life. For the representational element of art, of
course, mirrors life at least up to a point. It makes use of gestures that have
their meaning in human intercourse. The gesture of the oath is quite an
interesting case.[6] It is represented in the Bayeux Tapestry and frequently
shown among the formalities of a German legal manuscript of the fourteenth
century, the *Sachsenspiegel*,[7] where the swearing fingers touch the holy relic
upon which the oath is taken (Fig. 41). But the position of the fingers is not
specific to the oath. We all know it as the Christian gesture of blessing[8]
exemplified by the majestic painting of God the Father from the Ghent
Altarpiece (Fig. 42). The gesture here is more relaxed, of course, than that of
the oath on the expressionist poster, but its very calm adds to the impression
of a gesture of power.

Originally this position of the fingers signified neither blessing nor the
oath. It accompanied any solemn spoken pronouncement and belongs to the
repertory of movements recommended by ancient teachers of rhetoric.[9] In
medieval narrative art it comes therefore to function simply as a 'speaking
gesture'. An Ottonian miniature (Fig. 43) shows Christ thus explaining to St.
Peter the new ritual of washing the feet, illustrating the account in the Gospel
of St. John (13: 8, 9), 'Peter saith unto him, Thou shalt never wash my feet.
Jesus answered him, if I wash thee not, thou hast no part with me. Simon
Peter saith unto him, Lord, not my feet only, but also my hands and my
head.' His eloquent gesture recalls once more the range between the symbolic
and the more spontaneously expressive, the 'initiated action' of the apostle,
grasping eagerly what he is offered. Perhaps it is in considering the difference
between these gestures that we can also come nearer to explaining the
peculiar speaking gesture—it may be described as a gesture of unambiguous

non-action, the hand is immobilized and can neither grip nor push. We still used this conventional speaking gesture of '*aufzeigen*' at school in Vienna, to signify that we wished to speak.

Its most important distinctive feature is the raising of two fingers, which renders it more artificial but also more humble and innocuous than the pointing hand, which indicates a degree of emphasis that can be unbecoming.[10] The Baptist thus reinforces his words written on the Isenheim Altar (Fig. 45), and the Revolutionary in his shrill didacticism (Fig. 44), but children are still taught, I believe, that pointing is rude, because in some form it implies a command, a sign of dominance universally understood.

The speaking gesture, by contrast, which accompanied solemn pronouncements and thus survived at least up to this century in the specialized rituals of the oath and the blessing, is certainly part of a particular tradition, a symbol of a gesture language. The literature about these languages, alas, is

45. Mathias Grünewald: *St. John the Baptist.*
From the Isenheim Altar. *c.* 1515. Colmar,
Musée d'Unterlinden. Photo O. Zimmermann

46. Raphael: Figure from *The Coronation of the Virgin. c.* 1503.
Rome, Pinacoteca Vaticana

patchy and undeveloped.[11] I would not know, for instance, where to look for information about the frequency in real life of that other gesture of the hand on the heart. As an historian of art I know it as a formula in a particular tradition, that of Western religious art (Figs. 46 and 53).[12] I doubt if it occurs with quite the same meaning in either ancient or Eastern art.

This raises the whole vexed question of the relation between the gestures we see represented in art and those performed in real life.[13] It is a vexed question for two reasons, one because in many cases art is our principal source of information about gestures, and secondly because art arrests movement and is therefore restricted in the gestures it can show unambiguously.[14] You cannot paint even the shaking of the head we use in the West for 'no'.

One thing is certain, there were great periods in art when artists considered it their task to make the figures in their painting speak through gestures. Dante describes the rendering of certain scenes he sees in Purgatory as *visibile parlare* (*Purgatorio*, x, 95), 'visible speech', because the attitude of the figures so clearly expressed their mind, and Leonardo da Vinci never ceased urging that, as he put it in the *Trattato della pittura*,[15] 'the most important in painting are the movements originating from the mental state of living creatures, the movements, that is, appropriate to the state of . . . desire, contempt, anger or pity . . .' (fol. 48). He advises artists to 'take pleasure in carefully watching those who talk together with gesticulating hands, and get near to listen what makes them make that particular gesture . . .' (fol. 125). He
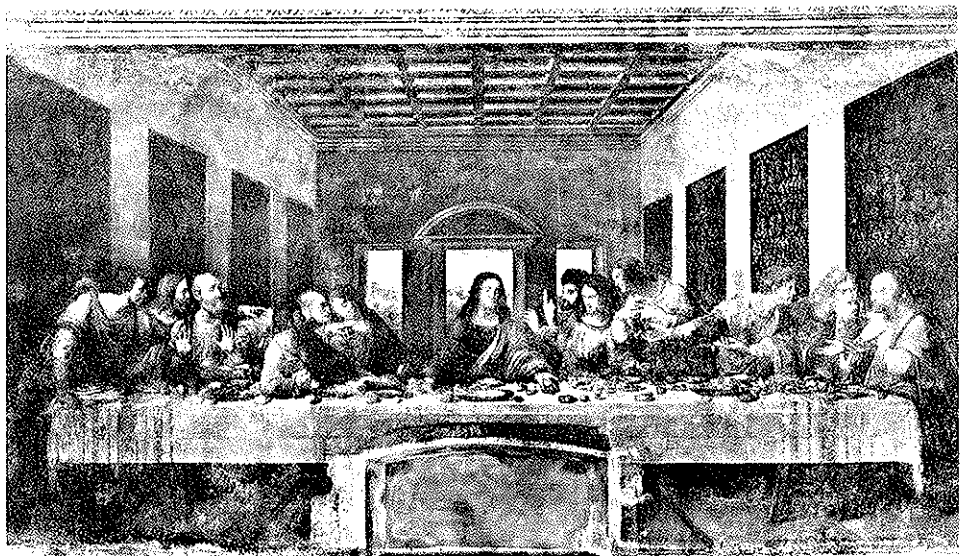
47. Leonardo da Vinci: *The Last Supper*. 1495–8. Milan, S. Maria delle Grazie

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48. Monument to Naram Sin. Detail. 23rd century B.C. Paris, Musée du Louvre.
49. Balthasar Permoser: *Apotheosis of Prince Eugene of Savoy*. 1718–21.
Vienna, Österreichische Galerie im Belvedere

even goes so far as to advise studying deaf-mutes, who have no other means of communication (fol. 46).

He applied his own precept in his *Last Supper* (Fig. 47), which shows the reaction of the Twelve Apostles to Christ's announcement of the impending betrayal, a painting which none other than Geothe retranslated into a masterly dramatic dialogue.[16] I do not want to dwell too long on his famous example, beyond saying that clearly Leonardo made use of that intermediate range of gestures that lie between the spontaneous symptom of emotions and the conventionalized. It has always been felt that these are typically Mediterranean gestures, the protestation with hands towards the breast, the shrinking back in horror, the warding off with upraised hands, but clearly even these could not convey their meaning in the context if we did not know the Gospel story. The likelihood, moreover, that even in the Mediterranean such as announcement would result in such configuration is small, despite the attempt in the film *La Viridiana* to bring it to life in a group of beggars.

Yet, with great respect to Leonardo and the academic teachers who have followed him in his incessant advice to the artist to study life in the raw, it seems to me that observation alone would never have resulted in such works.

50. Filippino Lippi: *St. Thomas Aquinas*. Detail from *St. Thomas Confounding the Heretics*. 1489–93. Rome, S. Maria sopra Minerva.   51. Surrendering barbarian. Coin of Trajan. Early 2nd century A.D. London, The British Museum.   52. Kneeling captive. Roman, early Imperial. Paris, Bibliothèque Nationale

Life in movement is just too rich and too manifold to allow of imitation without some selective principle. Random snapshots of people in random situations could never have given us that narrative art that was considered the artist's highest task. I admit that I am biased here. For I have also argued in another context, in my book on *Art and Illusion*,[17] that the painter's starting-point can never be the observation and imitation of nature, that all art remains what is called conceptual, a manipulation of a vocabulary, and that even the most naturalistic art generally starts from what I call a schema that is modified and adjusted till it appears to match the visible world.

I should like to propose as my principal hypothesis that as far as gesture is concerned the schema used by artists is generally pre-formed in ritual and that here as elsewhere art and ritual, using the word in its narrow cultural sense, cannot easily be separated.

Within the context of this symposium, the transition from action to ritual and hence into art can perhaps be followed in an age-old formula, that for triumph, which shows the victorious ruler trampling on his defeated foe, as on this Mesopotamian Stele of Naram Sin (Fig. 48). I am afraid this is not artistic licence. I remember reading that even in Byzantium the ritual of triumph sometimes included the barbarous ceremony of the Emperor publicly setting his foot on the neck of the vanquished ruler. Art, I am sorry

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to say, preserved this gesture of ritual domination even beyond its natural life. Many monuments to victorious heroes like Balthasar Permoser's statue of Prince Eugene of Savoy (Fig. 49) show the victor setting his foot or his knee on the writhing body of the defeated, no doubt with the lingering feeling that the perpetuation of the humiliation will also perpetuate the victory. Even within the realm of spiritual conflict this ritualistic image is preserved, as in a fresco by Filippino Lippi in Rome, where it is St. Thomas Aquinas (Fig. 50) who is shown trampling victoriously on that arch-heretic Averroes, with whose interpretation of Aristotle he disagreed.

Such extremes, admittedly, leave not much room for gesture in the stricter sense of the word, but the preceding stage of a ritualized gesture of submission is even more frequent in art, contrasting the victorious hero with the defeated foe who sues for mercy or displays otherwise in his attitude all the signs of self-humiliation. In Roman art this contrast between authority and submission is such a leading theme that a long book has recently been published with the significant title *Gesture and Rank in Roman Art*.[18] The place in the pecking order of a military society is clearly visible in the relationship of postures and gestures that befit the leader and the led. Needless to say, this ritualized relationship of command and submission is also capable of spiritualization. The stereotyped gesture of surrender which displays the helplessness of the vanquished who 'throws up his hands' in an appealing movement showing him unarmed and incapable of further aggression (Fig. 51) is also the most important source of gestures of worship and prayer before the Godhead. Indeed the representation of a barbarian with upraised hands in the Bibliothèque Nationale (Fig. 52) has been described as surrendering by Brilliant and as praying by Ohm.[19]

No doubt the gesture of praying with folded hands also belongs in this category. Its evolution and transformation really parallel the process of ritualization that is the subject of this symposium, because few who use it today will think of the original purpose of this sign of surrender, delivering oneself more or less 'bound hand and foot', or at least ready to be bound without offering resistance. In India the origins of this gesture are lost in the distant past, but it appears to have been unknown to classical antiquity and even to the early Christians, who still prayed with upraised hands. It has been suggested that its gradual ascendancy in the Middle Ages was due to the influence of the feudal ritual of the oath of allegiance in which the liegeman placed his hands between those of his Lord (Fig. 41), an act of submission that is illustrated in legal manuscripts and is still performed at graduation in Cambridge. Isolated representations of figures praying with folded hands can be found in Western art since about A.D. 1000,[20] but at least one authority

53. Tomb of Sir Henry Norris. Detail. 1603.
London, Westminster Abbey

traces its more general adoption to St. Francis of Assisi, who may have inspired its incorporation in the ritual of the Mass.[21] Be that as it may, from the thirteenth century on innumerable images of saints, donors and worthies perpetuate the act of submission in ecclesiastical art on tombs (Fig. 53), altars and illustrations. To us, its original meaning has merged with the general expression of a mood. The folded hands evoke the atmosphere of piety and contemplation that transcends a narrow ritualistic interpretation.[22] Owing, however, to the association of prayer with a request to the deity, the gesture has also become one of begging in central Europe.[23] Small children are taught in Austria to accompany their '*bitte*' ('please') with a movement of the hands that can easily develop into impatient and insistent clapping—the final change from submission to the signalling of a demand. As far as art is concerned, the very frequency of the gesture allows us to illustrate the difference between the cheapened formula that can embarrass us in devotional art (Fig. 54) and the way a great artist such as Rembrandt can mysteriously restore its original validity in his wonderful etching of David in prayer (Fig. 55).

I here come to the second point I wanted to make in this brief survey. Important as are the areas of contact between ritualized behaviour in animal and man, and far-reaching as is their bearing on a study of art, I could not

agree to an equation of that discharge of emotion that occurs in ritual with the motivations of human art. Whatever may be true of so-called primitive societies where art may mainly serve the canalizing of collective emotions, for the individual in our kind of society the ritual is not only a help but also a hindrance in that discharge. We may be happy in the ritual of applause at the end of a lecture or concert, but when we stand face to face with the performer we are embarrassed to hear everyone say, 'thank you for a most interesting lecture'. We are embarrassed precisely because it is a ritual and we know that it is used after good and bad lectures alike. We try as we approach the lecturer to make our voice more charged with symptoms of sincere emotions, we press his hand in raptures, but even these tricks are quickly ritualized and most of us give up and lapse into inarticulacy. It takes a Rembrandt, or, on a lower level, a Käthe Kollwitz, to repeat a ritualized gesture in a way that is felt to be charged with genuine expression, not *only* a ritual, but a symptom as well.

I suspect that animals are rarely plagued by this feeling of inadequacy when they perform a ritualized act of submission or ingratiation. For animals probably lack that distinctly human achievement, the lie. The Judas kiss, the use of a ritual of love as a signal of aggression is not within their range. What we mean by expression in human behaviour and particularly in human art

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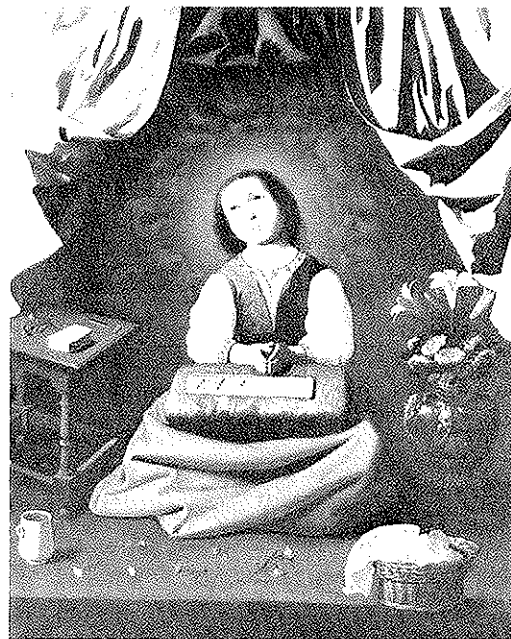
54. Zurbaran: *The Virgin as a Child. c.* 1630.
New York, The Metropolitan Museum of Art,
Fletcher Fund, 1927

55. Rembrandt: *David in Prayer.* 1652.
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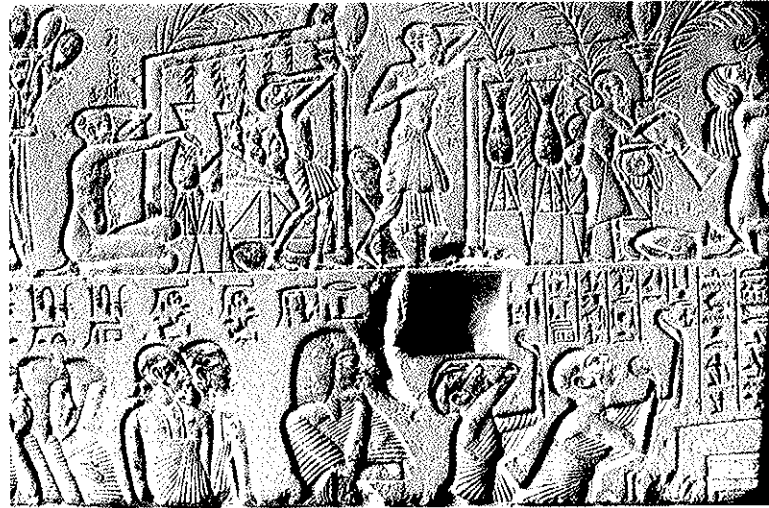
56. Relief from the tomb of a priest. Detail. Egyptian, nineteenth dynasty.
Berlin, Staatliche Museen

implies some kind of correspondence between inwardness and outward sign.
How often have not religious leaders and reformers decried ritual when they
found this correspondence wanting, how often have not critics done the
same. In the study of animals I am sure this very distinction would be invalid.
Professor Lorenz rightly insists that for the goose the friendship ritual *is* the
friendship. We cannot separate the behaviour and its inwardness, as it were.
Even in man, I believe, that duality has its limits. There is surely much truth
in the James-Lange theory which stresses the extent to which behaviour
reacts back on the emotions. It may really be difficult to 'smile, and smile, and
be a villain', or to feel sad while doing a gay dance; difficult, but it can be done.

And yet no student of art, I think, should neglect this more complex
relationship that exists in human society between emotion and its expression.
I may here take for an illustration the most typical ritualized behaviour that
certainly influenced the language and conventions of art, I mean the ritual of
mourning the dead. It both sums up my hypothesis about the roots of
expressive gesture in ritual, and illuminates the complexities of the situation.

It comes perhaps as a surprise to encounter so vivid an expression of
emotions within the rigid conventions of Egyptian art (Fig. 56), even though
the relief dates after that period in the eighteenth dynasty in which these
restraints were much relaxed in the El Amarna revolution. Even so it is
relevant to both my themes that what we have in front of us is not so much a
symptom of personal grief as its enactment in the ritual of wailing that plays
such a part almost everywhere in primitive societies in the discharge of
emotions.[24] Wailing-women are still hired for the purpose of such rituals in
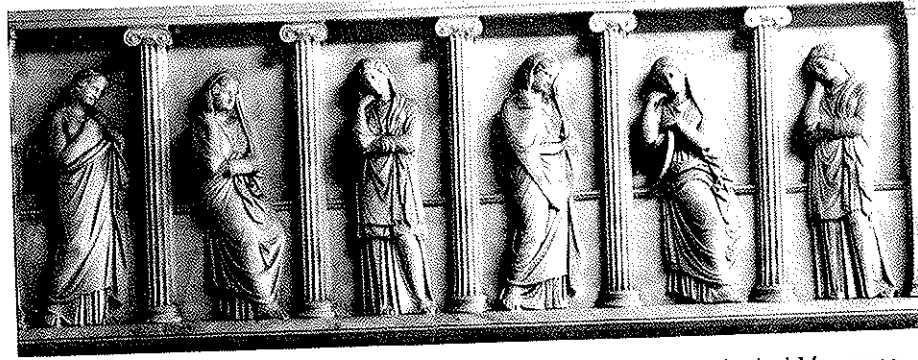
57. Sidonian sarcophagus. Mid 4th century B.C. Istanbul, Archaeological Museums

the Middle East to increase the lament. The tearing of hair, the scattering of ashes, the mutilations of garments and even of the body, all these are the appropriate ritual that not only expresses but produces the emotion. I suppose a good wailing-woman learns to experience the grief she is paid to express and so does the artist who perpetuates the wailing in stone. But what matters is not his feeling but his awareness of the ritual. Now one gesture of mourning we see on the Egyptian relief, the heavy head supported by the hand, carried over into Greek art,[25] as in the famous Sidonian sarcophagus (Fig. 57), where the wailing-women are perpetuated in stone in a timeless
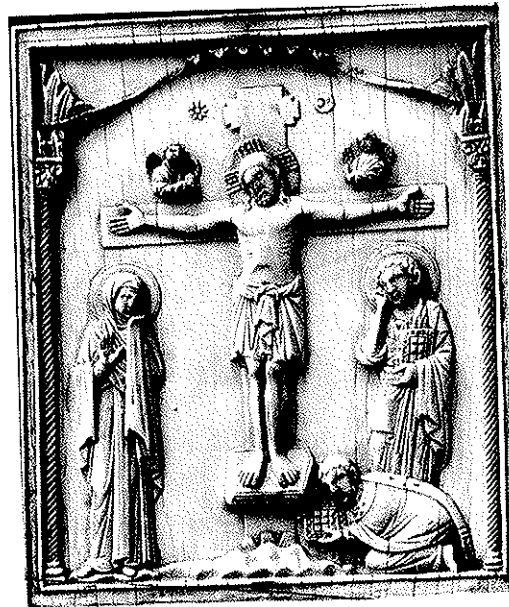
58. *Crucifixion*. Byzantine ivory. 10th century.
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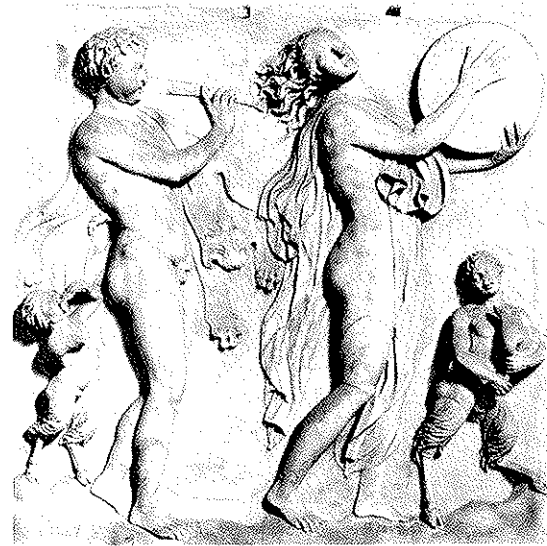
59. Donatello: *A Mourning Woman under the Cross*. Detail from the pulpit relief. *c.* 1460–70.
Florence, S. Lorenzo.   60. Dionysiac revels. Roman Imperial relief. Rome, Musei Vaticani

lament. The figure on the right with her head on her hand prefigures the ritualized gesture of mourning that entered the vocabulary of medieval art,[26] belonging to the Virgin and St. John under the Cross, as on Byzantine medieval ivories (Fig. 58).

Clearly it needs a real artist to recharge such a formula with emotion, to attune the whole body and *tonus*, the colour and composition, to the expression of grief that is part of the ritual. Donatello's reliefs on the San Lorenzo pulpits are a sublime example of that intensity of emotion that expresses itself in these gestures of abandon (Fig. 59).

It was the conviction of Aby Warburg,[27] the founder of the Warburg Institute, that this new feeling for the language of the body, its expressiveness in extremes, was in itself engendered through fresh contact with the monuments of ancient ritual, the representations of the Dionysiac thiasos with its maenads dancing in ecstatic frenzy (Fig. 60). Warburg was certainly right that these renderings of a ritual were much admired and studied by Renaissance artists trying to penetrate the language of emotive symptoms.[28] He was also right in stressing the dangers that arose in art through an inflation of these gestures, that crescendo of frenzied gesticulation that characterizes some of the Baroque. It was an inflation that inevitably produced the reaction of a return to the gold standard of classical restraint, the taste of our generation for Piero della Francesca's calm.

Aesthetic problems of this kind are usually treated by critics under the

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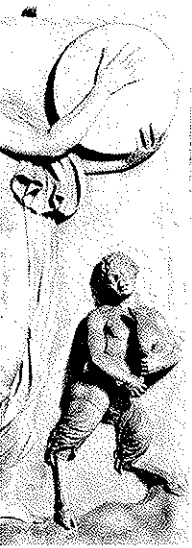
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categories of 'sincere' versus 'theatrical' expression. I am not sure that this is right. Both the rhetorical and the anti-rhetorical, the ritualistic and the anti-ritualistic, are in a sense conventions. Indeed what else could they be, if they are to serve communication between human beings?

I have left myself very little time to apply these findings, such as they are, to the situation in contemporary art and criticism which shuns any ritual except, perhaps, the ritual of father-killing, and which still is left with the dilemma of expression and ritual unsolved. It matters little that it is no longer the gesture in narrative contexts that is the problem but that graphological gesture to which I drew attention at the outset, that alleged symptom of the artist's emotion that is discharged in the brush-stroke of an artist such as Van Gogh with his magnificent flaming lines.

Today it is this gesture-trace that is to carry expression, according to a theory of painting that is itself not uninfluenced by the more ritualistic philosophy of Chinese calligraphy. Tachism and Action Painting, if I understand these movements, have made a ritual of Dionysiac frenzy in the throwing and pouring of paint as a sign of ecstasis. But like all purely expressionist theories the theories of abstract expressionists were caught in the dilemma to which I referred before, the dilemma of being human and being aware of what others do. It may have been liberating for Jackson Pollock to break all bonds and pour his paint on the canvas, but once everybody does it, it becomes a ritual in the modern sense of the term, a mere trick that can be learned and gone through without emotion. In trying to avoid this dilemma we get anti-art and anti-anti-art, till we are all in a spin of ritualistic innovation for its own sake. The dilemmas that underlie this crisis are real enough, I believe. We cannot return to the anonymous ritual of mass emotion as we are enjoined to do on the other side of the Iron Curtain. But we can, I hope, face these issues and learn from the study of behaviour that neither the total sacrifice of conventions nor the revival of collective ritual can answer the needs of what we have come to mean by art.[29]

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The Mask and the Face :
The Perception of Physiognomic Likeness in Life and in Art

THIS ESSAY takes its starting-point from a chapter in my book on *Art and Illusion*, the chapter entitled 'The Experiment of Caricature'.[1] Caricature had been defined in the seventeenth century as a method of making portraits which aims at the greatest likeness of the whole of a physiognomy while all the component parts are changed. It could thus serve me for a demonstration of equivalence, the proof that the images of art can be convincing without being objectively realistic. I made no attempt, however, to investigate more precisely what was involved in the creation of a striking likeness. It does not look as if anyone has explored the whole vast area of portrait likeness in terms of perceptual psychology. There must be reasons for this omission even beyond the appalling complexity of the problem. Somehow concern with likeness in portraiture bears the stamp of philistinism. As I mentioned before it evokes the memory of quarrels between great artists and pompous sitters whose stupid wives insist that there is still something wrong around the mouth. These dreaded discussions, which may be much less trivial than they sound, have made the whole question of likeness a rather touchy one. Traditional aesthetics has provided the artist with two lines of defence, which have both remained in vogue since the Renaissance. One is summed up in the answer which Michelangelo is reported to have given when someone remarked that the Medici portraits in the *Sagrestia Nuova* were not good likenesses—what will it matter in a thousand years' time what these men looked like? He had created a work of art and that was what counted.[2] The other line goes back to Raphael[3] and beyond to a panegyric on Filippino Lippi, who is there said to have painted a portrait that is more like the sitter than he is himself.[4] The background of this praise is the Neo-Platonic idea of
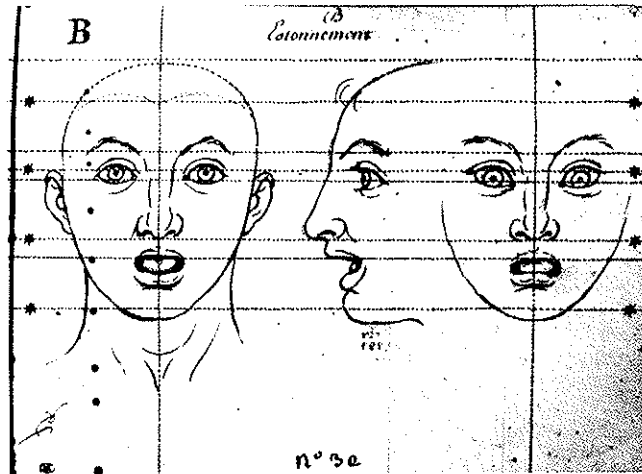
the genius whose eyes can penetrate through the veil of mere appearances and reveal the truth.[5] It is an ideology which gives the artist the right to despise the sitter's philistine relatives who cling to the outward husk and miss the essence.

Whatever the use or abuse to which this line of defence has been put in the past and in the present, it must be granted that here, as elsewhere, Platonic metaphysics can be translated into a psychological hypothesis. Perception always stands in need of universals. We could not perceive and recognize our fellow creatures if we could not pick out the essential and separate it from the accidental—in whatever language we may want to formulate this distinction. Today people prefer computer language, they speak of pattern recognition, picking up the invariants which are distinctive of an individual.[6] It is the kind of skill for which even the most hardened computer designers envy the human mind, and not the human mind only, for the capacity of recognizing identity in change which it presupposes must be built into the central nervous system even of animals. Consider what is involved in this perceptual feat of visually recognizing an individual member of a species out of the herd, the flock, or the crowd. Not only will the light and the angle of vision change as it does with all objects, the whole configuration of the face is in perpetual movement, a movement which somehow does not affect the experience of physiognomic identity nor, as I propose to call it, physiognomic constancy.

Not everybody's face may be as mobile as that of Mr. Emanuel Shinwell, whose characteristic changes of expression during a speech were caught by the candid camera of the London *Times* (Fig. 83), but the example would seem to justify the reaction that we have not one face but a thousand different
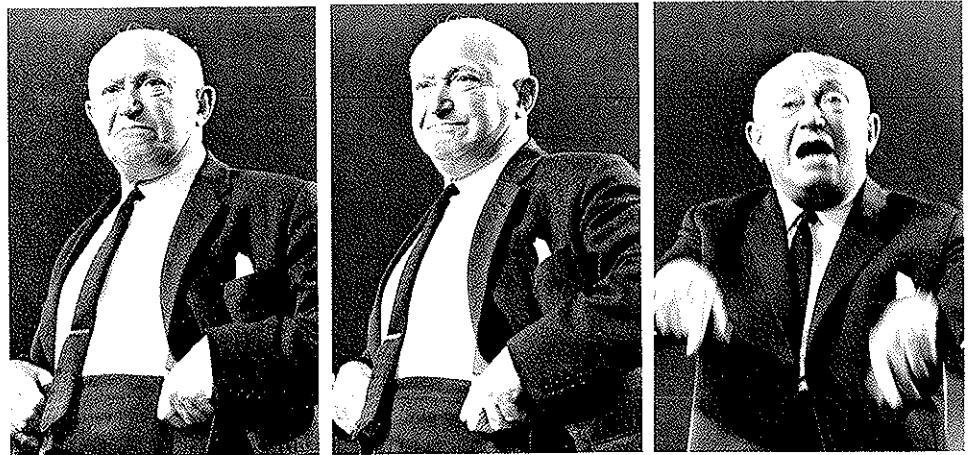
83. *Emanuel Shinwell making a speech.* From *The Times*, 7 October 1966

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84. Charles Le Brun: *Astonishment*. 1698

faces.[7] It might be objected that the unity in diversity here presents no logical or psychological problem, the face just shows different expressions as its mobile parts respond to the impulse of changing emotions. If the comparison were not so chilling, we might compare it to an instrument board with the mouth or the eyebrows serving as indicators. This was indeed the theory of the first systematic student of human expression, Charles Le Brun, who based himself on Cartesian mechanics and saw in the eyebrows real pointers registering the character of the emotion or passion (Fig. 84).[8] On this reading of the situation, there is no greater problem in our recognizing Emanuel Shinwell in different moods than there is in recognizing our watch at different hours. The framework remains and we quickly learn to separate the rigid bone structure of the head from the ripples of changes which play on its surface.

But clearly this explanation operates at best with a gross over-simplification. The framework does not remain static; we all change throughout our lives from day to day, from year to year. The famous series of Rembrandt's self-portraits from youth to old age shows the artist studying this relentless process, but it is only with the coming of photography that we have all become fully aware of this effect of time. We look at the snapshots of ourselves and of our friends taken a few years ago and we recognize with a shock that we all have changed much more than we tended to notice in the day-to-day business of living. The better we know a person, and the more often we see the face, the less do we notice this transformation except, perhaps, after an illness or another crisis. The feeling of constancy completely predominates over the changing appearance. And yet, if the time-
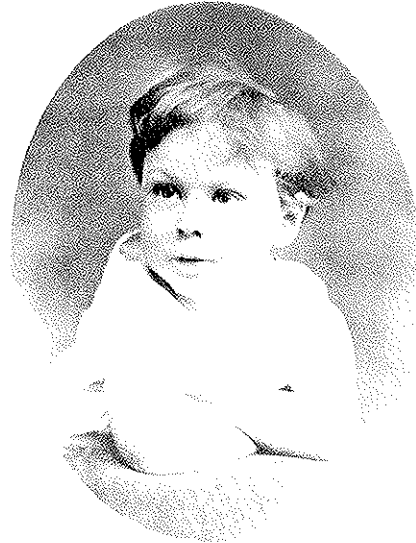

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span is long enough this change also affects the frame of reference, the face itself, which a vulgarism actually calls the 'dial'. It does so most thoroughly throughout childhood when proportions change and we first acquire a proper nose, but it also does so once more in old age when we lose our teeth and our hair. Yet all growth and decay cannot destroy the essence of the individual's looks—witness two photographs of Bertrand Russell, as a child of four (Fig. 85) and at the age of ninety (Fig. 86). It certainly would not be easy to programme a computer to pick out the invariant, and yet it is the same face.

If we watch ourselves testing this assertion and comparing the two pictures, we may find that we are probing the face of the child trying to project into it, or onto it, the more familiar face of the aged philosopher. We want to know if we can see the likeness or, if our attitude is one of scepticism, we want to prove to ourselves that we cannot see it. In any case those who are familiar with Bertrand Russell's striking features will inevitably read the comparison from right to left, and try to find the old man in the young child; his mother, if she were alive, would look in the features of the old man for the traces of the child, and having lived through this slow transformation, would be more likely to succeed. The experience of likeness is a kind of perceptual fusion based on recognition, and here as always past experience will colour the way we see a face.

It is on this fusion of unlike configurations that the experience of physiognomic recognition rests. Logically, of course, anything can be said to be like any other thing in some respect, and any child can be argued to be more like any other child than like an old man, indeed any photograph can be argued to be more like any other photograph than any living person. But such quibbles are only helpful if they make us aware of the distance that separates logical discourse from perceptual experience. Rationally we are free to categorize things in any number of ways and order them according to any quality they may have in common, be it weight, colour, size, function, or shape. Moreover, in this ordering activity we can always specify in which respect one thing is like another.

That physiognomic likeness which results in fusion and recognition is notoriously less easy to specify and analyse. It is based on what is called a global impression, the resultant of many factors which yet in their interaction make for a very particular physiognomic quality. Many of us would be unable to describe the individual features of our closest friends, the colour of their eyes, the exact shape of their noses, but this uncertainty does not impair our feeling of familiarity with their features, which we would pick out among a thousand because we respond to their characteristic expression. Clearly we must not confuse this experience with the perception of contrasting

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85. *Bertrand Russell at the age of four*
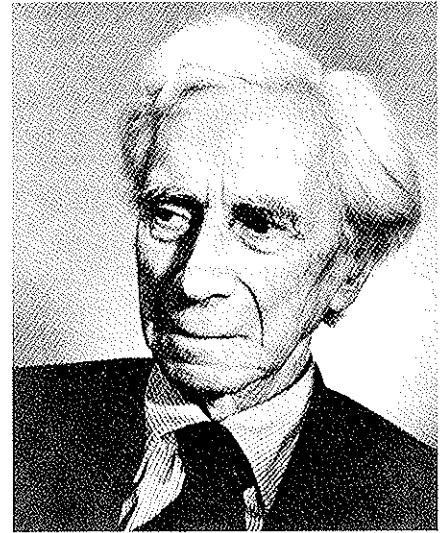
86. *Bertrand Russell at the age of ninety*

expressions on a person's face. Just as we can generalize on a person's voice or on the duct of his handwriting through all the varieties of tone or line, so we feel that there is some general dominant expression of which the individual expressions are merely modifications. In Aristotelian terms it is his substance, of which all modifications are mere accidents, but it can transcend the individual in the experience of family likeness so marvellously described in a letter by Petrarch. Petrarch discusses the problem of imitating the style of an admired author and says that the similarity should be like that between a son and his father, where there is often a great difference between their individual features 'and yet a certain shadow, or what our painters call the *aria*, reminds us of the father as soon as we see the son, even though, if the matter were put to measurement, all parts would be found to be different.'[9]

We all know such examples of family likeness, but all of us have also been irritated by the talk of visiting aunts about baby looking 'exactly like' uncle Tom or aunt Joan, assertions which are sometimes countered with the remark 'I cannot see this.' For the student of perception such discussions can never be boring, the very disagreement about what they see is grist for the mill of those of us who look at perception as a nearly automatic act of categorizing in universals. What people experience as likeness throws light on their perceptual categories. Clearly we do not all have the same impression of a person's *aria* or characteristic face. We do see them differently according to the categories with which we scan our fellow creatures. This fact, perhaps, accounts for the central paradox in the field of physiognomic perception, the

one which is implied in the distinction between the mask and the face: the experience of the underlying constancies in a person's face, which is so strong as to survive all the transformations of mood and age and even to leap across generations, conflicts with the strange fact that such recognition can be inhibited with comparative ease by what may be called the mask. This is the alternative category of recognition, the cruder type of likeness which can throw the whole mechanism of physiognomic recognition into confusion. The art which experiments with the mask is of course the art of disguise, of acting. The whole point of the actor's skill is precisely this: to compel us to see him or her as different people according to the different roles. The great actor does not even need the mask of make-up to enforce this transformation. A great impersonator such as Ruth Draper was able to transform herself from scene to scene with the simplest of means. The illustrations show her as two women in the life of one businessman, the haughty wife (Fig. 87) and the devoted secretary (Fig. 88). The scarf, the costume, and the wig may help, but what really effects the transformation is the difference in posture, in the whole *tonus* of the persons represented.

Sociologists have increasingly reminded us of the truth that we are all actors, we all obediently play one of the roles which our society offers to us— even the 'hippies' do. In the society with which we are familiar we are extremely sensitive to the outward signs of these roles and much of our

87, 88. *Ruth Draper as the businessman's wife (left) and as his secretary.*
Photographs by Dorothy Wilding and Nicholas Murray

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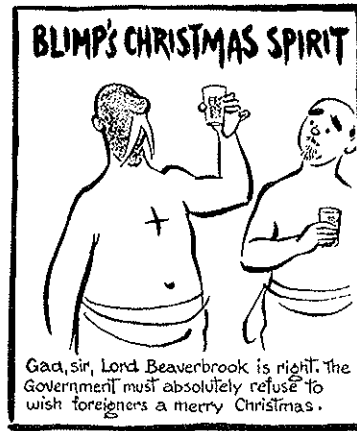
89. David Low: *Colonel Blimp.* 1936

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categorization proceeds along these lines. We have learned to distinguish the types with which our writers and satirists keep us in touch: there is the military type, David Low's Colonel Blimp of blessed memory (Fig. 89), the sporty type, the arty type, the executive, the academic type, and so all through the repertory of the comedy of life. Clearly this knowledge of the cast permits a great economy of effort in dealing with our fellow creatures. We see the type and adjust our expectations: the military red-faced man will have a booming voice, like strong drink, and dislike modern art. True, life has also taught us that we must be prepared for such syndromes to be incomplete. In fact, whenever we meet the exception to this rule and find the perfect embodiment of a type we are apt to say, 'this man is so much the typical Central European intellectual it just is not true.' But it often is true. We model ourselves so much on the expectation of others that we assume the mask or, as the Jungians say, the *persona* which life assigns to us, and we grow into our type till it moulds all our behaviour, down to our gait and our facial expression. It seems there is nothing to exceed the plasticity of man except, of course, the plasticity of woman. Women work more consciously on their type and image than most men used to do, and often they try by means of make-up and hair style to shape themselves in the image of some fashionable idol of the screen or of the stage.[10]

But how do these idols shape their image? The language of fashion gives at least a partial answer. They look for a distinctive note, for a striking characteristic that will mark them out and attract attention through a new kind of piquancy. One of the most intelligent of stage personalities, the late Yvette Guilbert, described in her memoirs how she deliberately set about in her youth to create her type by deciding that, since she was not beautiful in

the conventional sense, she would be different. 'My mouth,' she writes, 'was thin and wide and I refused to reduce it through make-up, because at that time all the women of the stage had tiny heart-shaped mouths.'[11] Instead, she emphasized her lips to contrast with her pale face and to bring out her smile. Her dress was to be simple as a shift, she wore no ornament, but she completed her striking silhouette by adopting the long black gloves which became famous (Fig. 90). Thus her image, which was a deliberate creation, met the artist half way, because it could be summed up in those few telling strokes we remember from the lithographs of Toulouse-Lautrec (Fig. 91).

We are approaching the area of caricature, or rather that borderland between caricature and portraiture which is occupied by images of stylized personalities, all the actors on the public stage who wear their masks for a purpose. Think of Napoleon's forelock and of that gesture of standing with the hand tucked into his waistcoat which the actor Talma is said to have suggested to him. It has remained a godsend to impersonators and cartoonists seeking a formula for a Napoleonic aspiration—and so have the tricks adopted by the lesser Napoleons we have had to endure.

It hardly matters how trivial the distinctive trait may be which is taken up,

90. Bennewitz von Löfen: *Yvette Guilbert.*
1896. Pastel

91. Henri de Toulouse-Lautrec:
Yvette Guilbert. 1894. Lithograph

Achtung!

Ein Stehkragen taucht wieder auf!

92a. 'Kobbe': *Hjalmar Schacht.*
From *Der Montag Morgen*,
10 March, 1924

92b. Caricature of Schacht. From
8 Uhr Abendblatt, Berlin,
13 June 1932. Caption reads:
'Look out! A high collar has
turned up again!'

provided it remains consistently identifiable. Hitler's financial wizard, Hjalmar Schacht, was apparently in the habit of wearing a high starched collar (Fig. 92a). The collar itself somehow evokes the social type of the rigid Prussian moving in the company of upright executives (Fig. 92b). It would be interesting to find out by how much the height of Schacht's collar exceeded the average of his class; at any rate, the deviation stuck and gradually the collar came to replace the likeness of the man. The mask swallowed up the face.

If these examples suggest anything, it is that we generally take in the mask before we notice the face. The mask here stands for the crude distinctions, the deviations from the norm which mark a person off from others. Any such deviation which attracts our attention may serve us as a tab of recognition and promises to save us the effort of further scrutiny. For it is not really the perception of likeness for which we are originally programmed, but the noticing of unlikeness, of that departure from the norm which stands out and sticks in the mind. This mechanism serves us in good stead as long as we move in familiar surroundings and have to mark the slight but all-important differences which distinguish one individual from another. But once an unexpected distinctive feature obtrudes itself the mechanism can jam. It is said that all Chinese look alike to Westerners and all Westerners to Chinese. This may not be strictly true, but the belief reveals an important feature of our perception. One might indeed compare the effect with what is known as the masking effect in the psychology of perception where a strong impression impedes the perception of lower thresholds. A bright light masks the
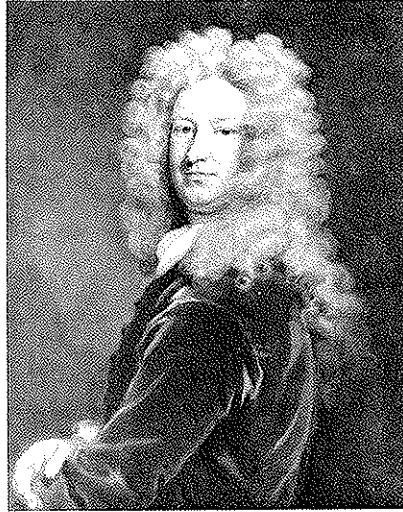
93. Sir Godfrey Kneller:
Sir Samuel Garth. c. 1710. London,
National Portrait Gallery

94. Sir Godfrey Kneller:
John Somer. c. 1702–10. London,
National Portrait Gallery

modulations of the dim nuances in the vicinity just as a loud tone masks subsequent soft modulations of sound. Such unaccustomed features as slanting eyes will at first rivet our attention and make it hard for us to attend to the subtle variations. Hence the effectiveness also of any striking and unusual mark as a disguise. It is not only all Chinese who tend to look alike to us but also all men in identical wigs such as the members of the eighteenth-century Kit-Cat Club displayed in the National Portrait Gallery in London (Figs. 93 and 94).

How far do such portraits represent types or masks, and how far are they individual likenesses? Clearly there are two difficulties in answering this important question, one obvious, the other perhaps less so. The obvious difficulty is the same with all portraits of people before the invention of photography—we have very few objective controls about the sitter's appearance except occasionally a life—or a death—mask or a tracing of the shadow as a silhouette. We shall never know whether we would recognize Mona Lisa or the Laughing Cavalier if we met them in the flesh. The second difficulty springs from the fact that we ourselves are trapped by the mask and therefore find it hard to perceive the face. We have to make an effort to abstract from the wig to see how far these faces differ, and even then changing ideas of decorum and deportment, the social mask of expression, make it hard for us to see the person as an individual. Art historians often write of certain periods and styles that portraits at that time were confined to types rather than to individual likeness, but much depends on how one decides to use
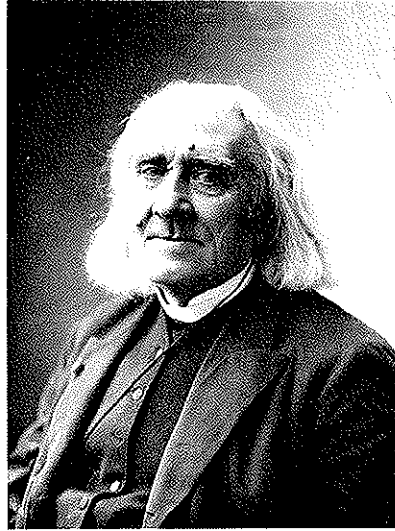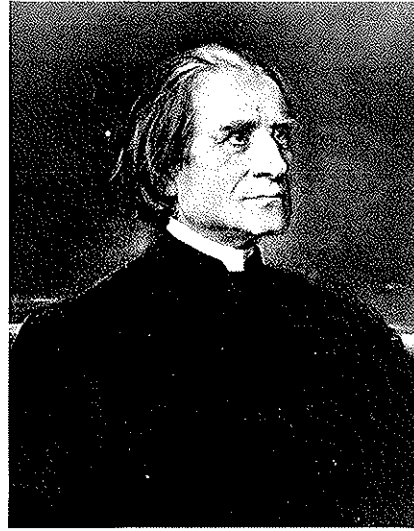
95. *Franz Liszt*. Photographed by Nadar   96. Franz Lenbach: *Franz Liszt*

these terms. Even the stereotypical images of tribal art have been known to embody an individual distinctive feature which would escape us since we neither know the person represented nor the stylistic conventions of the tribe. One thing is sure, moreover: it is almost impossible for us to see an old portrait as it was meant to be seen before the snapshot and the screen spread and trivialized the likeness. We can hardly recapture the full significance of an image commissioned and made to sum up the sitter's social status and career, and to preserve his features as a memorial to his descendants and as a monument to later ages. Obviously in such a situation the portrait had quite a different weight. The artist's reading of the sitter's features would impose itself during his life-time and would totally take over after his death in a manner we can neither hope for, nor need fear, since the multiplicity of records we have will always counter such a psychological take-over bid.

No wonder the coming of the camera found the artists and their friends in a bewildered and aggressive mood. Some of the arguments used against the possibility of a photographic likeness produced in the nineteenth century look surprising to us, for many now will prefer Nadar's splendid portrait of Franz Liszt (Fig. 95) which shows the great virtuoso, warts and all, to the rather theatrical painting by Franz Lenbach (Fig. 96), but, again, we must admit that we have never known Liszt. Here the question is really whether we can even see photographs in the same way in which they were first seen. The candid camera and the television screen have completely changed our mental set towards the image of our contemporaries. Such intimate snapshots as

those showing our modern Franz Liszt, Sviatoslav Richter, at rehearsals in shirt-sleeves (Fig. 97) would not only have been technically impossible in the nineteenth century, they would also have been psychologically unacceptable, they would have struck our grandfathers as both indecorous and totally unrecognizable.

But though the snapshot has transformed the portrait it has also made us see that problem of likeness more clearly than past centuries were able to formulate it. It has drawn attention to the paradox of capturing life in a still, of freezing the play of features in an arrested moment of which we may never be aware in the flux of events. Thanks to the work of J. J. Gibson in the psychology of perception we have become increasingly aware of the decisive role which the continuous flow of information plays in all our commerce with the visible world.[12] Hence we also understand a little more wherein rests what might be called the artificiality of art, the confinement of the information to simultaneous cues. To put the matter crudely—if the film camera rather than the chisel, the brush, or even the photographic plate had been the first recorder of human physiognomies, the problem which language in its wisdom calls 'catching a likeness' would never have obtruded itself to the same extent on our awareness. The film shot can never fail as signally as the snapshot can, for even if it catches a person blinking or sneezing the sequence explains the resulting grimace which the corresponding snapshot may leave uninterpretable. Looked at in this way, the miracle is not that some snapshots catch an uncharacteristic aspect, but that both the camera and the brush can abstract from movement and still produce a convincing likeness not only of the mask but also of the face, the living expression.

Clearly the artist or even the photographer could never overcome the torpor of the arrested effigy if it were not for that characteristic of perception which I described as 'the beholder's share' in *Art and Illusion* and to which I have also referred in this volume. We tend to project life and expression onto

97. *Sviatoslav Richter*. Photographed during rehearsal

98. *Winston Churchill*. 1941. Photographed by Karsh, Ottawa

the arrested image and supplement from our own experience what is not actually present. Thus the portraitist who wants to compensate for the absence of movement must first of all mobilize our projection. He must so exploit the ambiguities of the arrested face that the multiplicities of possible readings result in the semblance of life. The immobile face must appear as a nodal point of several possible expressive movements.[13] As a professional photographer once told me with a pardonable overstatement, she searches for the expression which implies all others. A scrutiny of successful portrait photographs confirms indeed this importance of ambiguity. We do not want to see the sitter in the situation in which he actually was—having his portrait taken. We want to be able to abstract from this memory and to see him reacting to more typical real-life contexts.

The story of one of the most successful and most popular photographs of Winston Churchill as a war leader (Fig. 98) may illustrate this point. We are told by Yousuf Karsh how unwilling he found the busy Prime Minister to pose for this photograph during a visit to Ottawa in December 1941. All he would allow was two minutes as he passed from the chamber of the House to the anteroom. As he approached with a scowl, Karsh snatched the cigar from his mouth and made him really angry. But that expression, which was in reality no more than a passing reaction to a trivial incident, was perfectly

suited to symbolize the leader's defiance of the enemy. It could be generalized into a monument of Churchill's historic role.[14]

Admittedly it is not very usual for photographers to exploit the ambiguity or interpretability of an angry frown. More often they ask us to smile, though folklore has it that if we say 'cheese' this produces the same effect around the mouth. The arrested smile is certainly an ambiguous and multi-valent sign of animation and has been used by artists to increase the semblance of life ever since archaic Greece. The most famous example of its use is of course Leonardo's *Mona Lisa*, whose smile has been the subject of so many and so fanciful interpretations. Maybe we can still learn more about this effect by comparing common-sense theory with unexpected but successful practice.

Roger de Piles (1635–1709), to whom we owe the first detailed discussion of the theory of portrait painting, advises the painter to attend to expression:

> It is not exactness of design in portraits that gives spirit and true air, so much as the agreement of the parts at the very moment when the disposition and temperament of the sitter are to be hit off. . . .
>
>   Few painters have been careful enough to put the parts well together: Sometimes the mouth is smiling, and the eyes are sad; at other times, the eyes are chearful, and the cheeks lank; by which means their work has a false air, and looks unnatural. We ought therefore to mind, that, when the sitter puts on a smiling air, the eyes close, the corners of the mouth draw up towards the nostrils, the cheeks swell, and the eyebrows widen.[15]

Now if we compare this sound advice with a typical eighteenth-century portrait such as Quentin de la Tour's charming pastel of his mistress Mlle Fel (Fig. 99), we see that her eyes are by no means closed as in a smile. And yet the very combination of slightly contradictory features, of a serious gaze with a shadow of a smile results in a subtle instability, an expression hovering between the pensive and the mocking that both intrigues and fascinates. True, the game is not without risk, and this perhaps explains the degree to which the effect froze into a formula in the eighteenth-century portraits of polite society.

The best safeguard against the 'unnatural look' or the frozen mask has always been found in the suppression rather than the employment of any contradictions which might impede our projection. This is the trick to which Reynolds referred in his famous analysis of Gainsborough's deliberately sketchy portrait style, which I quoted and discussed in *Art and Illusion*. Photographers such as Steichen have aimed at a similar advantage by a combination of lighting and printing tricks, to blur the outline of a face and

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99. Maurice Quentin de la Tour:
Mademoiselle Fel. c. 1757. Pastel.
St. Quentin, Musée Antoine Lécuyer

100. Félix Vallotton: *Mallarmé.*
1895. Woodcut

thus to mobilize our projection, and graphic artists, such as Félix Vallotton in his portrait of *Mallarmé* (Fig. 100), have also aimed at similar effects of simplification, much discussed at the turn of the century.[16]

We enjoy this game and we rightly admire the painter or the caricaturist who can, as the saying goes, conjure up a likeness with a few bold strokes, by reducing it to essentials. But the portrait painter also knows that the real trouble starts when you have to proceed in the opposite direction. However skilful he may have been with the first rough outline, he must not spoil the sketch on the way to the finished portrait, because the more elements he has to handle, the harder it is to preserve the likeness. From this point of view the experience of the academic portrait painter is almost more interesting than that of the caricaturist. A remarkably circumspect and revealing report on the problem of catching a likeness can be found in a book by Janet Robertson, whose paintings belong to the tradition of formal portraiture:

> . . . there are certain errors one learns to look for as the possible cause of untrue expression. Does there seem too 'sharp' a quality? Check carefully that the eyes are not too close together; is the look, on the other hand, too 'vague'? Make sure they are not too far apart—often, of course, the drawing can be correct, but overemphasis or underemphasis of shadows may seem to draw the eyes together or widen the distance between them. If, in spite of a conviction that you have drawn the

mouth correctly, it still somehow looks wrong, check the surrounding tones, especially that on the upper lip (i.e., the whole region between nose and mouth); an error in the tone of this passage can make all the difference in bringing the mouth forward or sending it back, a matter that affects expression at once. If you feel there is something wrong and you cannot locate it, check the position of the ear . . . Now, if the ear is placed wrongly it alters the whole impression of the facial angle and you may remedy a jowly look or a weak look by correcting that error without touching those features with the expression of which you have been struggling in vain.[17]

This description by a painter who had the humility to listen to lay criticism is so instructive because it spells out certain relationships between the shape of the face and what the author calls its expression. What she means has less to do with the play of expressions than with what Petrarch called the *aria* of the face. We remember that this 'expression' is not the same as its expressions. The distance of the eyes or the angle of the face are, after all, a matter of bone structure, which is unalterable, and yet, as the painter found, they radically influence that overall quality one might perhaps call the dominant expression. The facts are not in doubt. Long before psychological laboratories were even thought of, artists made systematic experiments which established this dependence. I have paid tribute in *Art and Illusion* to the most thorough and sophisticated of these experimenters, Rodolphe Töpffer, who established what I have proposed to call Töpffer's law, the proposition that any configuration which we can interpret as a face, however badly drawn, will *ipso facto* have such an expression and individuality.[18] Almost a hundred years after Töpffer, the psychologist Egon Brunswik in Vienna launched a famous series of experiments to probe this kind of dependence (Fig. 102). His studies confirm the extreme sensitivity of our physiognomic perception to small changes; a shift in the distance of the eyes which would perhaps be unnoticeable in a neutral configuration may radically affect the expression of the mannikin, though how it will affect it is not always easy to predict.

Brunswik, moreover, in a subsequent discussion of his own and other people's findings was careful to warn against generalizing his results:

> Human appearance, and especially the face, constitutes as tight a package of innumerable contributing variables as might be found anywhere in cognitive research.

He goes on to remind us that any new variable introduced may nullify the effect observed in the interaction of others. But—and this was the burden of
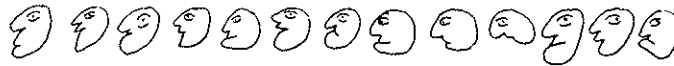
101. R. Töpffer: *The Permanent Traits*. From his *Essay de physiognomie*, 1845

his difficult methodological book—'the situation is the same for all high-complexity problems of life and behaviour.'[19]

In a sense, one might say, Brunswik encourages the innocent humanist to rush in where angels armed with the tools of factor analysis fear to tread. The mutual interaction of variables in the face has been handled, as we have seen, by portrait and mask makers alike. Brunswik refers his scientific readers to a book by a make-up expert. Indeed I would not be surprised if experience in these fields could throw light on unexpected places.[19a] Take the problem of headgear and the way it affects the apparent shape of the face. In widening the area around the face two conflicting psychological mechanisms might come into play. The effect of contrast exemplified in a well-known illusion (Fig. 103) might make the face look narrower. Alternatively we remember the Müller-Lyer illusion (Fig. 104) which suggests that an addition on either side must rather appear to broaden the face. Now if it is true that the slightest shift

	T 7	W 7	D 7	W 4	G 7
Sad	1st				
Old	1st				
Bad	6th	5th			
Unlikeable	3rd	1st	7th		
Ugly	6th	2nd	1st		
Unintelligent		3rd	7th	1st	
Unenergetic					1st

102. *Schematic heads*. After Brunswik and Reiter
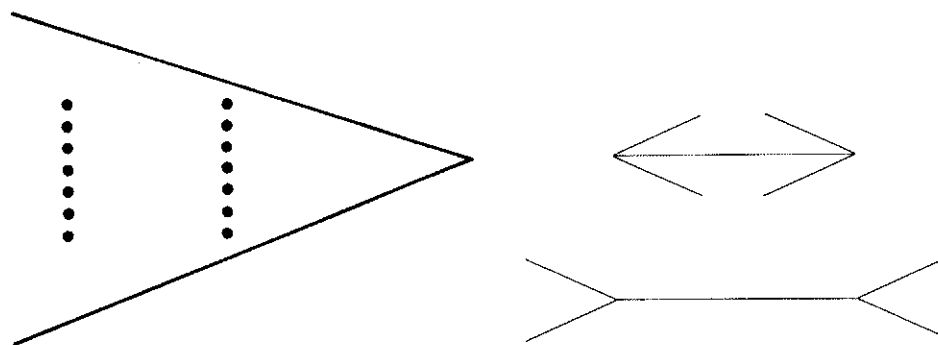
103. *Contrast illusion.* After M. D. Vernon   104. *Müller-Lyer illusion.* After M. D. Vernon

in the distance of the eyes results in a noticeable difference of expression and if Janet Robertson is right that eyes further apart give the face a vague expression, this observation might enable us to decide between these mutually exclusive alternatives. Let us try and screen off the monstrous coiffure of one of Velázquez's portraits of a Spanish princess, whose appearance usually strikes one as sadly pudding-faced (Fig. 105). Does not her gaze acquire more life, intensity and even intelligence when we remove the sideway extensions (Fig. 106)? The eyes, apparently, move together, which suggests that the effect conforms to the Müller-Lyer illusion.
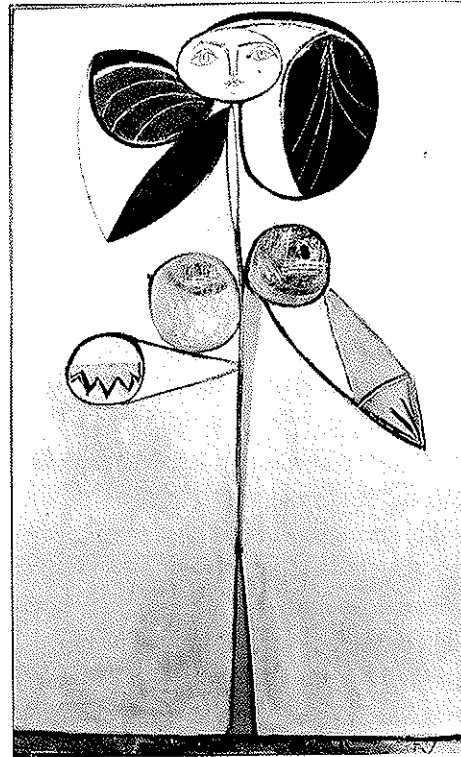
It is in this area of the interaction between the apparent shape and the apparent expression that we must look for the solution of our problem, the

105. Diego Velázquez: *Portrait of the Infanta Maria Theresa. c.* 1651. Paris, Musée du Louvre.   106. Diego Velázquez: *The Infanta Maria Theresa,* without coiffure

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107. *Françoise Gilot.*
1951. Photograph

108. Pablo Picasso:
Françoise Gilot,
'Femme Fleur'. 1946.
Private Collection

problem of the artist's compensation for the absence of movement, his creation of an image which may be objectively unlike in shape and colour and is yet felt to be like in expression.

There is a telling account given by Mme Gilot of Picasso painting her portrait (Figs. 107 and 108) which supports this assertion to a striking degree. The artist, we hear, originally wanted to do a fairly realistic portrait, but after working a while he said: 'No, it is just not your style, a realistic portrait would not represent you at all.' She had been sitting down but now he said: 'I do not see you seated, you are not at all the passive type, I only see you standing.'

Suddenly he remembered that Matisse had spoken of doing my portrait with green hair and he fell in with the suggestion. 'Matisse isn't the only one who can paint you with green hair,' he said. From that point the hair developed into a leaf form, and once he had done that, the portrait resolved itself in a symbolic floral pattern. He worked in the breasts with the same curving rhythm. The face had remained quite realistic all during these phases. It seemed out of character with the rest. He studied it for a moment. 'I have to bring in that face on the basis of

another idea,' he said. 'Even though you have a fairly long oval face, what I need in order to show its light and its expression is to make it a wide oval. I'll compensate for the length by making it a cold colour— blue. It will be like a little blue moon.'

He painted a sheet of paper sky-blue and began to cut out oval shapes corresponding in varying degrees to this concept of my head: first, two that were perfectly round; then, three or four more based on his idea of doing it in width. When he had finished cutting them out, he drew in on each of them little signs for the eyes, nose, and mouth. Then he pinned them onto the canvas, one after another, moving each one a little to the left or right, up or down, as it suited him. None seemed really appropriate until he reached the last one. Having tried all the others in various spots, he knew where he wanted it, and when he applied it to the canvas, the form seemed exactly right in just the spot he put it on. It was completely convincing. He stuck it to the damp canvas, stood aside, and said, 'Now, it's your portrait.'[20]

This record gives us some hints about the lines along which the transposition from life into image may occur. It is a balancing of compensatory moves. To compensate for her face not being really round but oblong, Picasso paints it blue—maybe the pallor is here felt to be an equivalent to the impression of slimness. Not that even Picasso felt able to find the exact balance of compensations without trying them out: he tested a number of cardboard shapes. What he was searching for is precisely the equivalent, equivalent at least for him. This, as the saying goes, is how he saw her, or as we should rather say, how he felt her. He groped for the solution of an equation between life and image, and like the conventional portrait artist he tried to catch it by playing with the interaction between shape and expression.

The complexity of this interaction explains not only why women try on new hats in front of a mirror but also why likeness has to be caught rather than constructed; why it needs the method of trial and error, of match-mismatch to trap this elusive prey. Here as in other realms of art equivalence must be tested and criticized, it cannot be easily analysed step by step and therefore predicted.

We are far removed from what might be called a transformational grammar of forms, a set of rules which allows us to refer the different equivalent structures back to one common deep structure as has been proposed in the analysis of language.[21]

But though such a transformational grammar will always prove a will-of-the-wisp, maybe the problem of portrait equivalence allows us still to go one

or two small steps forward. If the problem of likeness is that of the equivalence of the dominant expression, this expression or air must remain the pivot around which all the transformations turn. The different sets of variables must combine to the same result, it is an equation in which we are confronted with the product of y and x. Increase y and you must decrease x, or vice versa, if you want the same result.

There are many areas in perception where this situation obtains. Take size and distance which together produce the retinal size of the image; if other cues are eliminated we cannot tell whether an object seen through a peephole is large and far or near and small, we have no values for x and y, only for the product. Similarly with colour perception, where the sensation is determined by both the so-called local colour and the illumination. It is impossible to tell whether the patch of colour seen through a reduction screen is a dark red seen in bright light or a bright red in dim light. Moreover, if we call y the colour and x the light we never have any of these variables neat as it were. We cannot see colour except in light, and therefore that 'local colour' which figures in books on painting as 'variously modified by light', is a construction of the mind. Yet, though it is logically a construction, we feel quite confident in our experience that we do and can separate the two factors and assign their relative shares to colour and illumination. It is on this separation that the so-called colour constancy is pivoted, just as size constancy is pivoted on our interpretation of the object's real size.

I think that a somewhat analogous situation exists in the perception of physiognomic constancies, even though, as Brunswik has told us, the number of variables there is infinitely larger. Granted that this is so, I propose as a first approximation to isolate the two sets which I have mentioned before, the mobile and the static ones. Remember the crude analysis of the face as a dial or instrument board in which the mobile features serve as pointers to changing emotions. Töpffer called these features the impermanent traits which he contrasted with the permanent traits, the form or structure of the board itself. In one sense, of course, this analysis is quite unreal. What we experience is the global impression of a face, but in responding to this resultant I would suggest we separate in our mind the permanent (p) from the mobile (m). In real life we are aided in this, as we are aided in the perception of space and of colour, by the effect of movement in time. We see the relatively permanent forms of the face standing out against the relatively mobile ones and thus form a provisional estimate of their interaction (pm). It is this dimension of time, above all, that we lack in the interpretation of a still. Like many pictorial problems, the problem of portrait likeness and expression is compounded here, as we have seen, by the
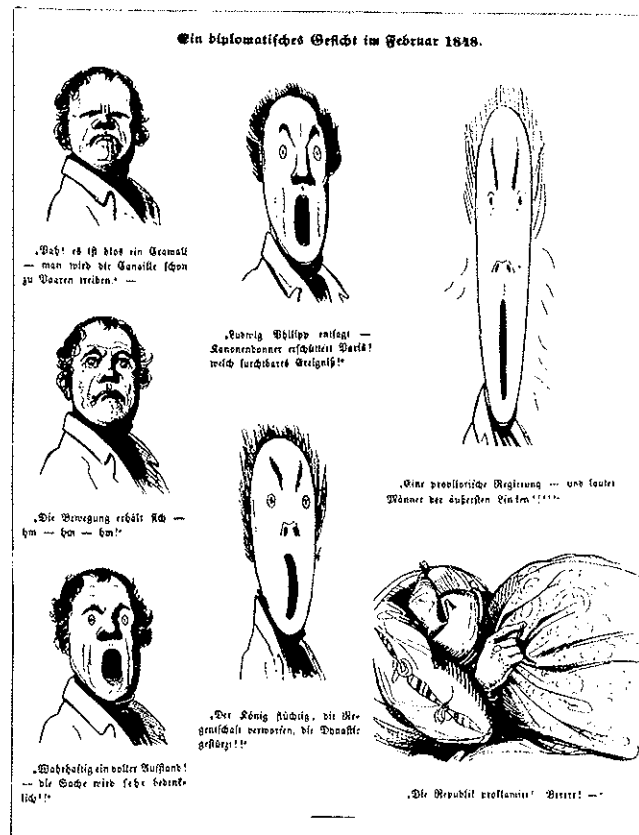
109. Kaspar Braun: *The News of 1848*. From *Fliegende Blätter*

artificial situation of arrested movement. Movement always assists in confirming or refuting our provisional interpretations or anticipations, and hence our reading of the static images of art is particularly prone to large variations and contradictory interpretations.

When somebody is disappointed we say 'he pulls a long face', an expression vividly illustrated in a German caricature of 1848 (Fig. 109). Naturally there are people who have a long face, and if they are comedians, they can even exploit this disappointed look to good effect. But if we really want to interpret their expression we must assign any feature to one of the two sets of unknown variables p or m, the permanent (p) or the mobile (m), and this separation may sometimes go wrong.

The difficulty in solving this equation may in fact account for the astonishing diversity of interpretations we sometimes encounter in relation to works of art. A whole book was written in the nineteenth century collecting the varying readings of the facial expression of the Roman portraits of Antinous.[22] One of the reasons for this diversity may be the difficulty in

assigning a place to my two variables. Is Hadrian's favourite slightly pouting his lips (Fig. 110), or has he simply got such lips? Given our sensitivity to nuance in such matters, the interpretation here will in fact alter the expression.

A glance at the history of physiognomics may help to clarify this discussion a little further. Originally physiognomics was conceived as the art of reading character from the face, but the features to which it paid attention were exclusively the permanent traits. Ever since classical antiquity it had mainly relied on the comparison between a human type and an animal species, the aquiline nose showing its bearer to be noble like the eagle, the bovine face betraying his placid disposition. These comparisons, which were first illustrated in the sixteenth century in a book by della Porta,[23] certainly influenced the rising art of portrait caricature because they demonstrated the imperviousness of physiognomic character to a variation of elements. A recognizable human face can look strikingly 'like' a recognizable cow (Fig. 111).

There is no doubt that this pseudo-scientific tradition relies on a reaction which most of us have experienced. In one of Igor Stravinsky's less charitable conversations he talks of 'a worthy woman who naturally and unfortunately looked irate, like a hen, even when in good humour.'[24] One may question whether hens look irate, maybe peevish would be a better word here, but no one would easily deny that they have an 'expression' which an unfortunate woman may share. In terms of our first approximation we may say that the permanent shape of the head (p) is interpreted in terms of a mobile expression and that this is the psychological root of the physiognomic superstition.
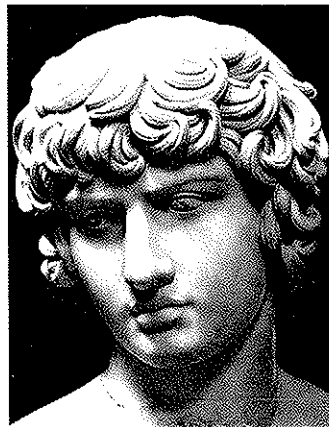
110. *Antinous*. Roman sculpture. Early 2nd century A.D. Naples, Museo Nazionale.
111. *Physiognomic comparison*. After G. B. della Porta, 1586

Humourists will always exploit this tendency of ours to project a human expression onto an animal's head. The camel is seen as supercilious, a bloodhound with its wrinkled forehead looks worried, because if we were supercilious or worried our features would arrange themselves in this way. But here as always it is dangerous to equate inference or interpretation with a deliberate intellectual analysis of clues.[25] It is precisely the point that we respond to such configurations more or less automatically and involuntarily though we know perfectly well that the poor camel cannot help its supercilious looks. So deep-seated and instinctual is this response that it pervades one's bodily reactions. Unless introspection deceives me, I believe that when I visit a zoo my muscular response changes as I move from the hippopotamus house to the cage of the weasels. Be that as it may, the human reaction to the permanent features of non-human physiognomies, which is so well documented in fables and children's books, in folklore and in art, suggests very strongly that our reaction to our fellow creatures is closely linked with our own body image. I am here led back to the old theory of empathy, which played such a part at the turn of the century not only in the aesthetics of Lipps and of Vernon Lee but also in the writings of Berenson, Wölfflin, and Worringer. This doctrine relies on the traces of muscular response in our reaction to forms; it is not only the perception of music which makes us dance inwardly, but also the perception of shapes.

Maybe the idea dropped out of fashion partly because people got tired of it, and partly because it was too vaguely and too widely applied. But as far as the perception of expression is concerned I personally have no doubt that our understanding of other people's facial movement comes to us partly from the experience of our own. Not that this formulation solves the mystery which lies in the fact that we can imitate an expression. How does the baby which responds to its mother's smile with a smile translate or transpose the visual impression sent to its brain through the eyes into the appropriate impulses from the brain to move its own facial muscles in a corresponding way? I suppose the hypothesis would hardly be gainsaid that the disposition to perform this translation from sight to movement is inborn. We do not have to learn smiling in front of a mirror, indeed I would not be surprised if the varying styles of facial expression we all can observe in different nations and traditions were transmitted from generation to generation or from leader to follower by unconscious imitation, by empathy. All this tends to corroborate the hypothesis that we interpret and code the perception of our fellow creatures not so much in visual as in muscular terms.

It may seem somewhat perverse to approach this far-reaching hypothesis by way of our freakish response to the imagined expression of animals, but

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this would not be the only case where a malfunction has helped to reveal a psychological mechanism. We obviously were not endowed with our capacity for empathy in order to read the souls of the beasts, but to understand our fellow humans. The more they resemble us the more likely will we be able to use our own muscular response as a clue to understanding their moods and emotions. Such a standard is necessary precisely because we will go wrong if we cannot separate our two variables. We must know from experience and perhaps from inborn knowledge what is a permanent trait and what an expressive alteration.

But would this hypothesis help us also to solve the main problem we are after, the detection of that physiognomic constancy which we called the characteristic expression of a person and which Petrarch described as the *aria*? I think it may, if we are ready to amend our first approximation which only recognized the two variables of the permanent and the mobile traits. Once more we may here hark back to the history of physiognomics to gain a leverage. When the crude superstition of animal physiognomics first came under fire in the eighteenth century, its critics, notably Hogarth and his commentator Lichtenberg, rightly stressed the second of my variables.[26] It is not the permanent traits which allow us to read a character but the expression of emotions. But these mobile expressions, so they argued, gradually mould a face. A person who is frequently worried will acquire a furrowed brow, whereas a cheerful person will acquire a smiling face, because the transient will pass into permanence. There is something, perhaps, in this common-sense view but it savours too much of eighteenth-century rationalism to be fully acceptable. Hogarth, in other words, regards the face in the same light as Locke regards the mind. Each is a *tabula rasa* before individual experiences write their story onto its surface. It would certainly never be possible to arrive from such a view at an explanation of physiognomic constancy. For what this account omits is precisely the object of our quest, whether we call it character, personality, or disposition. It is this all-pervasive disposition which makes one person more prone to worry and another more likely to smile—in other words, every one of these 'expressions' is embedded in an over-all mood or feeling tone. There is a difference between the smile of an optimist and that of a pessimist. Needless to say, these moods in their turn are subject to fluctuations, some are reactions to external events, some reflect inner pressures. But we now begin to see in what respect the two unknown variables of our first approximation were too crude. They failed to take account of the hierarchy that extends from the permanent frame of the body to the fleeting ripple of a mobile expression. Somewhere within this hierarchic sequence we must locate what we experience as the

more permanent expression or disposition that constitutes for us such an important element in the 'essence' of a personality. It is this, I believe, to which our muscular detector is so suited to respond, for in a sense these more permanent dispositions are probably muscular in their turn.

Once more we may remember that the link between 'character' and body build belongs to an age-old belief in human types and human 'complexions' or 'temperaments'. If these beliefs do so little justice to the variety and subtlety of human types, this is at least partly due to the poverty of linguistic categories and concepts for the description of the inner as opposed to the external world. We just have no vocabulary to describe the characteristics of a person's attitudinal framework, but that does not mean that we cannot code these experiences in any other way. What is so characteristic and distinctive of a personality is this general *tonus*, the melody of transition from given ranges of relaxation to forms of tenseness, and this in its turn will colour a person's speed of reaction, gait, rhythm of speech, and account for instance for that link between personality and handwriting we all feel to exist, whether or not we believe that it can be specified in words. If our own internal computer can somehow integrate these factors in a corresponding state we would know where to look for that invariant that normally survives the changes in a person's appearance. Here, in other words, we may have to look for that unwritten and unwritable formula which links for us Bertrand Russell at four and at ninety, for behind all these variations we sense a common signature tune. It is the same alertness, the same degree of tension and resilience we sense in both positions, and it is this which evokes in us the unique memory of that particular person. In a way, perhaps, the inability of many people to describe the colour of a person's eyes or the shape of a nose, however well they may know him, constitutes a negative confirmation of this role of empathy.

If this hypothesis could be established, the same unity of response might also account for the experience of likeness in portrait and caricature across the variations and distortions we have observed. Indeed we may now be in a position to return to that paradigm of the caricaturist's trick which I discussed but did not explain in *Art and Illusion*.[27] It is the famous pictorial defence by the caricaturist Philipon, who had been fined 6,000 francs for having lampooned Louis Philippe as a *poire* (Fig. 112), a fathead, and pretended to ask for which step in this inevitable transformation he was to be punished? Though reactions of this kind are not easily verbalized it may still be possible to describe the likeness that is felt to exist between these stages in muscular rather than in purely visual terms.

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112. Charles Philipon: *Les Poires*. From *Charivari*, 1834

from the first picture to the last. Clearly by moving them together and increasing their steepness they are made to take over also the indication of the frowning forehead which increases in the third picture, only to be omitted as redundant in the last where we are made to feel the frown in the evil eyes of the *poire*. Regarding them as pointers for muscular movements, we can imagine ourselves achieving this expression of the last phase only by knitting our brows and dropping our cheeks which corresponds to the feel of sluggish malice that belongs to the face from the first. The same is true of the corners of the mouth. In the first picture the mouth still smiles, but the heavy flesh pulls the sides down and creates a response in us—or at least in me—which is perfectly evoked by the scrawled features of the last picture, from which all traces of a false bonhomie have disappeared.

This role of our own bodily reaction in the experience of equivalence may also help to account for the outstanding feature of caricature, its tendency to

113. *Oskar Kokoschka*. Photograph
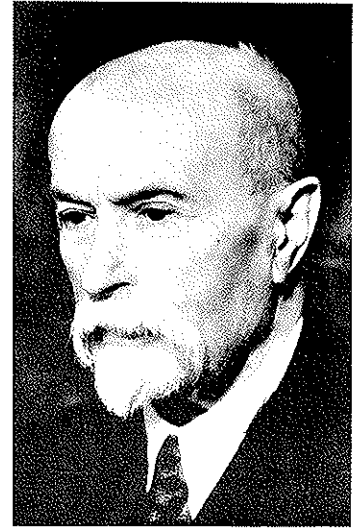
114. *Thomas G. Masaryk.*
1935. Photograph

distortion and exaggeration: for our inner sense of dimensions differs radically from our visual perception of proportion. The inner sense always exaggerates. Try to move the tip of your nose downward and you will feel you have acquired a very different nose while the actual movement you achieved was probably no more than a fraction of an inch. How much the scale of our internal map differs from that of the eye is best (and most painfully) experienced at the dentist's when the tooth he belabours assumes well-nigh gigantic proportions. No wonder the caricaturist or expressionist who relies on his inner sense will tend to alter the scales; he can do so without impairing the sense of identity if we can share his reactions in front of the same image.

Such a theory of empathy or sympathetic response does not preclude the misunderstanding of expressions. On the contrary, it helps to explain it. If Louis Philippe had been a Chinese, the slant of his eyes would have meant something different, but empathy might also have let us down in interpreting its exact nuance.

No doubt empathy does not offer a total explanation of our physiognomic reactions. It may not account for the impression of a narrow forehead as a sign of stupidity, nor is it clear whether it is acquired or is inborn, as Konrad Lorenz has postulated other physiognomic reactions to be (see Fig. 119). [28]
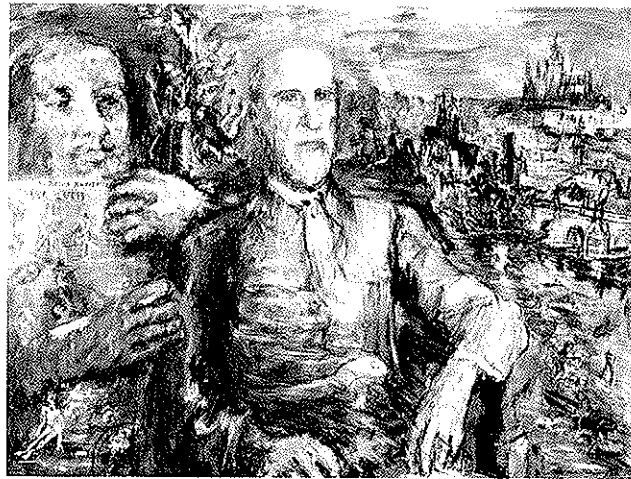
But whatever the limitations of the hypothesis here put forward, the student of art can at least contribute one observation from the history of portrait painting which strongly suggests that empathy does play a considerable part in the artist's response—it is the puzzling obtrusion of the

115. Oskar Kokoschka: *Thomas G. Masaryk*. 1934–6.
Pittsburgh, Museum of Art, Carnegie Institute

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artist's own likeness into the portrait. When the Prussian ambassador to England, Wilhelm von Humboldt, was painted by Sir Thomas Lawrence in 1828, his daughter reported after a visit to the master's studio that the upper half of the face, forehead, eyes and nose were much better than the lower half which was much too rosy and which, by the way, resembled Lawrence, as (she found) did all his portraits.[29] It may not be easy at this distance of time to test this interesting observation, but the situation is different with a great contemporary master of portraiture, Oskar Kokoschka (Fig. 113). Kokoschka's self-portraits testify to his grasp of his essential features, the face with its long distance between nose and chin. Many of Kokoschka's heads have these proportions, including his impressive portrait of Thomas Masaryk (Fig. 115), whose photographs show a different relation between the upper and the lower half of the face (Fig. 114). Objectively, therefore, the likeness may be faulted, but it may still be true that the same power of empathy and projection which is here at work also gives the artist special insights which are denied to artists who are less involved.

It is not frequent for an art historian to be in the position of offering supporting evidence for such a general hypothesis, but it so happens that I had the privilege of listening to Kokoschka when he spoke of a particularly difficult portrait commission he had received some time past. As he spoke of the sitter whose face he found so hard to unriddle he automatically pulled a corresponding grimace of impenetrable rigidity. Clearly for him the understanding of another person's physiognomy took the way over his own muscular experience.

Paradoxically this involvement and identification here exert the opposite

116. Rembrandt: *Self-Portrait. c.* 1650.
Washington, The National Gallery of Art,
Widener Collection

117. Rembrandt: *The Philosopher. c.* 1656.
Washington, The National Gallery of Art,
Widener Collection

pull from that we observed in the recognition and creation of types. Here it was the deviation from the norm, the degree of distance from the self that was found decisive. The extreme, the abnormal, sticks in the mind and marks the type for us. Maybe the same mechanism operates in those portrait painters who are quick in seizing a characteristic trait without seeking much empathy. These would not be self-projectors like Kokoschka, but rather self-detachers or distancers (if there is such a word), but both could pivot their art on their self.

The very greatest of portrait painters probably must have access to the mechanisms of both projection and differentiation and have learnt to master them equally. It surely is no accident that a Rembrandt never ceased throughout his life to study his own face in all its changes and all its moods (Fig. 116). But this intense involvement with his own features clarified rather than clouded his visual awareness of his sitters' appearance. There is an outstanding variety of physiognomies in Rembrandt's portrait œuvre, each of his portraits capturing a different character (Fig. 117).

Should we here speak of character? One of the leading portrait painters of our own day once remarked to me that he never knew what people meant when they talked about the painter revealing the character of the sitter. He could not paint a character, he could only paint a face. I have more respect for this astringent opinion of a real master than I have for the sentimental talk

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118. Diego Velázquez: *Pope Innocent X. c.* 1650. Rome, Galleria Doria Pamphili

about artists painting souls, but when all is said and done a great portrait—
including some by that painter—does give us the illusion of seeing the face
behind the mask.

It is quite true that we know next to nothing of the character of most of
Rembrandt's sitters. But what has captivated art lovers who have stood in
front of the greatest portraits of our artistic heritage is the impression of life
that emanates from them. A surpassing masterpiece, such as Velázquez's

great portrait of Pope Innocent X (Fig. 118), never looks arrested in one pose, it seems to change in front of our eyes as if it offered a variety of readings, each of them coherent and convincing. And yet this refusal to freeze into a mask and settle into one rigid reading is not purchased at the expense of definition. We are not aware of ambiguities, of undefined elements leading to incompatible interpretations, we have the illusion of a face assuming different expressions all consistent with what might be called the dominant expression, the air of the face. Our projection, if one may use this chilling term, is guided by the artist's understanding of the deep structure of the face, which allows us to generate and test the various oscillations of the living physiognomy. At the same time we have the feeling that we really perceive what is constant behind the changing appearance, the unseen solution of the equation, the true colour of the man.[30] All these are inadequate metaphors, but they suggest that there may be something, after all, in the old Platonic claim, so succinctly expressed in Max Liebermann's retort to a dissatisfied sitter—'this painting, my dear Sir, resembles you more than you do yourself.'