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ART AND ILLUSION

A STUDY IN THE PSYCHOLOGY OF PICTORIAL REPRESENTATION

BY

 $E \cdot H \cdot GOMBRICH$



WITH 320 ILLUSTRATIONS

PHAIDON PRESS · LONDON

1972 44 el

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53. The Symbol of St. Matthew. About 690. Illuminated page from the Echternach Gospels

The Northumbrian scribes were marvellously skilled in the weaving of patterns and the shaping of letters. Confronted with the task of copying the image of a man, the symbol of St. Matthew, from a very different tradition, they were quite satisfied to build it up from those units they could handle so well. The solution in the famous Echternach Gospels [53] is so ingenious as to arouse our admiration. It is creative, not because it differs from the presumed prototype—Bartlett's pussycat also differs from the owl—but because it copes with the challenge of the unfamiliar in a surprising and successful way. The artist handles the letter forms as he handles his medium, with complete assurance in creating from it the symbolic image of a man.

But did the designer of the Bayeux tapestry [37] act very differently? He was obviously trained in the intricate interlace work of eleventh-century ornament and adjusted these forms as far as he thought necessary to signify trees. Within his universe of form this procedure was both ingenious and consistent.

Could he have done otherwise? Could he have inserted naturalistic renderings of beeches or firs if only he had wanted to? The student of art is generally discouraged from asking this question. He is supposed to look for explanations of style in the artist's will rather than in his skill. Moreover, the historian has little use for questions of might-have-been. But is not this reluctance to ask about the degree of freedom that exists for artists to change and modify their idiom one of the reasons why we have made so little progress in the explanation of style?

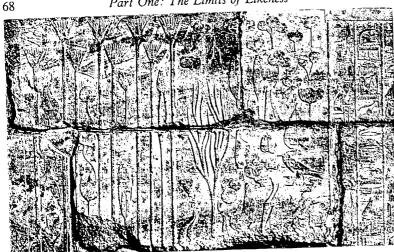
In the study of art no less than in the study of man, the mysteries of success are frequently best revealed through an investigation of failures. Only a pathology of representation will give us some insight into the mechanisms which enabled the masters to handle this instrument with such assurance.

Not only must we surprise the artist when he is confronted with an unfamiliar task that he cannot easily adjust to his means; we must also know that his aim was in fact portrayal. Given these conditions, we may do without the actual comparison between photograph and representation that was our starting point. For, after all, nature is sufficiently uniform to allow us to judge the information value of a picture even when we have never seen the specimen portrayed. The beginnings of illustrated reportage, therefore, provide another test case where we need have no doubt about the will and can, consequently, concentrate on the skill.

IV

PERHAPS the earliest instance of this kind dates back more than three thousand years, to the beginnings of the New Kingdom in Egypt, when the Pharaoh Thutmose included in his picture chronicle of the Syrian campaign a record of plants he had brought back to Egypt [54]. The inscription, though somewhat mutilated, tells us that Pharaoh pronounces these pictures to be 'the truth'. Yet botanists have found it hard to agree on what plants may have been meant by these renderings. The schematic shapes are not sufficiently differentiated to allow secure identification.

An even more famous example comes from the period when medieval art was at its height, from the volume of plans and drawings by the Gothic masterbuilder, Villard de Honnecourt, which tells us so much about the practice and outlook of the men who created the French cathedrals. Among the many architectural, religious, and symbolic drawings of striking skill and beauty to be found in this



54. Plants brought by Thutmose III from Syria. About 1450 B.C. Limestone relief



55. VILLARD DE HONNECOURT: Lion and Porcupine. About 1235. Pen and ink

volume, there is a curiously stiff picture of a lion, seen en face [55]. To us, it looks like an ornamental or heraldic image, but Villard's caption tells us that he regarded it in a different light: 'Et saves bien,' he says, 'qu'il fu contrefais al vif.' 'Know well that it is drawn from life.' These words obviously had a very different meaning for Villard than they have for us. He can have meant only that he had drawn his schema in the presence of a real lion. How much of his visual observation he allowed to enter into the formula is a different matter.

Once more the broadsheets of popular art show us to what extent this attitude survived the Renaissance. The letterpress of a German woodcut from the sixteenth century informs us that we here see 'the exact counterfeit' of a kind of locust that invaded Europe in

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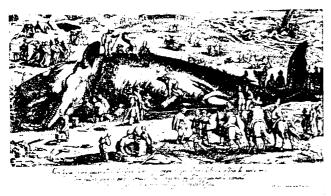
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56. ANONYMOUS: Locust. 1556. Woodcut

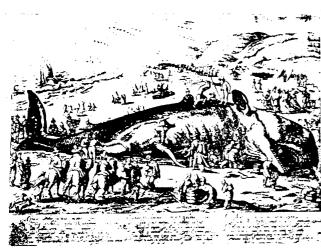
menacing swarms [56]. But the zoologist would be rash to infer from this inscription that there existed an entirely different species of creatures that has never been recorded since. The artist had again used a familiar schema, compounded of animals he had learned to portray, and the traditional formula for locusts that he knew from an Apocalypse where the locust plague was illustrated. Perhaps the fact that the German word for a locust is *Heupferd* (hay horse) tempted him to adopt a schema of a horse for the rendering of the insect's prance.

The creation of such a name and the creation of the image have, in fact, much in common. Both proceed by classifying the unfamiliar with the familiar, or more exactly, to remain in the zoological sphere, by creating a subspecies. Since the locust is a kind of horse it must therefore share some of its distinctive features.

The caption of a Roman print of 1601 [57] is as explicit as that of the German woodcut. It claims the engraving represents a giant whale that has been washed ashore near Ancona the same year and 'was drawn accurately from nature' ('Ritratto qui dal naturale appunto'). The claim would be more trustworthy if there did not exist an earlier print recording a similar 'scoop' from the Dutch coast in 1598 [58]. But surely the Dutch artists of the late sixteenth century, those masters of realism, would be able to portray a whale? Not quite, it seems, for the creature looks suspiciously as if it had ears, and whales with ears, I am assured on higher authority, do not exist. The draughtsman probably mistook one of the whale's hippers for an ear and therefore placed it far too close to the eye. He, too, was misled by a familiar schema, the schema of the typical head. To draw an



57. ANONYMOUS ITALIAN: Whale Washed Ashore at Ancona. 1601. Engraving



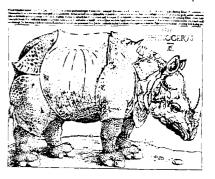
58. AFTER GOLTZIUS: Whale Washed Ashore in Holland. 1598. Engraving

unfamiliar sight presents greater difficulties than is usually realized. And this, I suppose, was also the reason why the Italian preferred to copy the whale from another print. We need not doubt the part of the caption that tells the news from Ancona, but to portray it again 'from the life' was not worth the trouble.

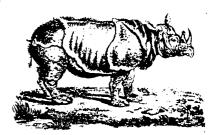
In this respect, the fate of exotic creatures in the illustrated books of the last few centuries before the advent of photography is as instructive as it is amusing. When Dürer published his famous woodcut of a rhinoceros [59], he had to rely on secondhand evidence which he filled in from his own imagination, coloured, no

doubt, by what he had learned of the most famous of exotic beasts, the dragon with its armoured body. Yet it has been shown that this half-invented creature served as a model for all renderings of the rhinoceros, even in natural-history books, up to the eighteenth century. When, in 1790, James Bruce published a drawing of the beast [60] in his Travels to Discover the Source of the Nile, he proudly showed that he was aware of this fact:

'The animal represented in this drawing is a native of Tcherkin, near Ras el Feel . . . and this is the first drawing of the rhinoceros with a double horn that has ever yet been presented to the public. The first figure of the Asiatic rhinoceros, the species having but one horn, was painted by Albert Durer, from the life. . . . It was wonderfully ill-executed in all its parts, and was the origin of all the monstrous forms under which that animal has been painted, ever since. . . . Several modern philosophers have made amends for this in our days; Mr. Parsons, Mr. Edwards, and the Count de Buffon, have given good figures of it from life; they have indeed some faults, owing chiefly to preconceived prejudices and inattention. . . . This . . . is the first that has been published with two horns, it is designed from the life, and is an African'.



59. DÜRER: Rhinoceros. 1515. Woodcut



60. HEATH: Rhinoceros of Africa. 1789. Engraving



61. African rhinoceros

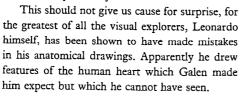
If proof were needed that the difference between the medieval draughtsman and his eighteenth-century descendant is only one of degree, it could be found here. For the illustration, presented with such flourishes of trumpets, is surely not free from 'preconceived prejudices' and the all-pervading memory of Dürer's woodcut. We do not know exactly what species of rhinoceros the artist saw at Ras

cl Feel, and the comparison of his picture with a photograph taken in Africa [61] may not, therefore, be quite fair. But I am told that none of the species known to zoologists corresponds to the engraving claimed to be drawn al vif!

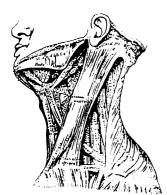
The story repeats itself whenever a rare specimen is introduced into Europe. Even the elephants that populate the paintings of the sixteenth and seventeenth centuries have been shown to stem from a very few archetypes and to embody all their curious features, despite the fact that information about elephants was not particularly hard to come by.

These examples demonstrate, in somewhat grotesque magnification, a tendency which the student of art has learned to reckon with. The familiar will always remain the likely starting point for the rendering of the unfamiliar; an existing representation will always exert its spell over the artist even while he strives to record the truth. Thus it was remarked by ancient critics that several famous artists of antiquity had made a strange mistake in the portrayal of horses: they had represented them with eyelashes on the lower lid, a feature which belongs to the human eye but not to that of the horse. A German ophthalmologist who studied the eyes of Dürer's portraits, which to the layman appear to be such triumphs of painstaking accuracy, reports somewhat similar mistakes. Apparently not even Dürer

knew what eyes 'really look like'.



The study of pathology is meant to increase our understanding of health: the sway of schemata did not prevent the emergence of an art of scientific illustration that sometimes succeeds in packing more correct visual information into the image than even a photograph contains. But the diagrammatic maps of mucles in our illustrated anatomies [62] are not 'transcripts' of things seen but the



62. Muscles of the neck. From Gray's 'Anatomy'

work of trained observers who build up the picture of a specimen that has been revealed to them in years of patient study.

Now in this sphere of scientific illustration it obviously makes sense to say that Thutmose's artists or Villard himself could not have done what the modern illustrator can do. They lacked the relevant schemata, their starting point was too far removed from their motif, and their style was too rigid to allow a sufficiently supple adjustment. For so much certainly emerges from a study of portrayal in

art: you cannot create a faithful image out of nothing. You must have learned the trick if only from other pictures you have seen.

V

IN OUR CULTURE, where pictures exist in such profusion, it is difficult to demonstrate this basic fact. There are freshmen in art schools who have facility in the objective rendering of motifs that would appear to belie this assumption. But those who have given art classes in other cultural settings tell a different story. James Cheng, who taught painting to a group of Chinese trained in different conventions, once told me of a sketching expedition he made with his students to a famous beauty spot, one of Peking's old city gates. The task baffled them. In the end, one of the students asked to be given at least a picture post card of the building so that they would have something to copy. It is stories such as these, stories of breakdowns, that explain why art has a history and artists need a style adapted to a task.

I cannot illustrate this revealing incident. But luck allows us to study the next stage, as it were—the adjustment of the traditional vocabulary of Chinese art to the unfamiliar task of topographical portrayal in the Western sense. For some decades Chiang Yee, a Chinese writer and painter of great gifts and charm, has delighted us with contemplative records of the Silent Traveller, books in which he tells of his encounters with scenes and people of the English and Irish countryside and elsewhere. I take an illustration [63] from the volume on the English Lakeland.

It is a view of Derwentwater. Here we have crossed the line that separates documentation from art. Mr. Chiang Yee certainly enjoys the adaptation of the Chinese idiom to a new purpose; he wants us to see the English scenery for once 'through Chinese eyes'. But it is precisely for this reason that it is so instructive to compare his view with a typical 'picturesque' rendering from the Romantic period [64]. We see how the relatively rigid vocabulary of the Chinese tradition acts as a selective screen which admits only the features for which schemata exist. The artist will be attracted by motifs which can be rendered in his idiom. As he scans the landscape, the sights which can be matched successfully with the schemata he has learned to handle will leap forward as centres of attention. The style, like the medium, creates a mental set which makes the artist look for certain espects in the scene around him that he can render. Painting is an activity, and the artist will therefore tend to see what he paints rather than to paint what he sees.