

E. H. Gombrich, Illusions in Painting : a response to a letter in Discovery from Kenneth Adams, July, 1962. [Trapp no.1962F.1]

Sir:

In his recent article Realism in Painting (July 1962) Kenneth Adams is right in saying that his hypothesis is nearly, but not quite, implied in my book Art & Illusion and nearly right in saying that I refuse to formulate either a definition or an explanation of naturalism. I do not much believe in the use of definition which so often engender rather empty disputes about the essential meaning of words. I think it is quite easy to know what is meant when we call something like something else, even without definition. The forged pound note, alas, is very like the genuine one in all respects that matter to bank clerks. (It may be unlike in chemical composition or under the microscope, but we know what it means when we say that the two look alike or feel alike.) Mr Adams, of course, is right when he reminds us that the question is less simple as soon as we ask whether a two-dimensional object covered with pigments is like a three dimensional section of the visible world. I am pretty sure this question could never have been asked if painters had not demonstrated to us that we may sometimes take the one for the other. The most striking examples are provided not by easel paintings but by the creators of stage illusions the painters of backdrops. Though they may never deceive us into believing that the stage extends into infinite distances they mostly manage to unsettle our perception sufficiently to make it quite impossible to tell where the three-dimensional stage props end and the flat backdrop starts. The fact that this simple trick is performed by means of ordinary Albertian perspectives presents, I feel, a strong prima facie case for its validity.

But perhaps it is more useful to leave this much debated question of perspective for a moment and try to settle first whether we know what is meant when we say that a clear flat mirror presents an image that is like the object it reflects. I would agree with Mr Adams that we are satisfied that it does when the mirror gives us all the cues we habitually use in ordinary vision for the processing of information about the world around us. Watching myself I find that I do not take in the coloured patchwork on the surface of the mirror at all, because I cannot but assign each shape or shade to its place within the serial orders of the three-dimensional world. To put it less abstractly, I take in the visual impression together with the conviction that this form is in front of that other, this other one further away and the third right above the second. Indeed it needs an effort to realise that what I have in front of me is a two-dimensional order and that what is seen as behind another form is really located above it not to speak of the effort it needs to realise that above need not mean further away but may also mean nearer, when it comes to the ceiling.

I think one might learn something about the way we process information in pictures if one studied the gradual transition from the reading of clear and illusionist mirror images to that of reflection on curved surfaces. Where we have all the cues provided to us by movement in the visible world curvature presents few obstacles to correct reading. The car mirror or the magnifying shaving mirror are admirable instruments because we learn to take their distortions into account, just as we learn even to adjust to distorting glasses and goggles.

It is here that I have some slight difficulty with Mr Adams proposed formulation. He speaks of the normal manner in which we use our perceptual mechanism but as I have tried to show, the normal mechanism is attuned to the processing of a flow of information. There is nothing normal in stationary vision where we are deprived of the confirming or eliminating cues provided through the predictable melody of transformations undergone by three-dimensional shapes, or rather their projections on our retina as we move through the world. The keyhole view of the three-dimensional world provided by

naturalistic paintings could never be understood and sorted out without much previous knowledge and additional guesswork. Looking at Fig. 4 of Mr Adams article the reader need only decide to ignore the cues indicating the presence of water and he could read the same surface as a steep or curved mottled pavement. The correct reading depends on the knowledge that the expanse of water is horizontal. In the same way we cannot but recognise the checkerboard in all four versions and adjust our reading accordingly. But before we regard this fact as a disturbing element it is well to remember that without such knowledge (or assumptions) we could not assign any three-dimensional order to any two-dimensional distribution of stationary cues. As I have tried to argue, we are only rarely aware of this simple fact that unknown objects could be read in any number of ways (though not in everyway!) by the difficulty in communicating to each other what we see. We read such unfamiliar shapes (including trees, mountains, clouds or pebbles in the pictures) in some way that looks to us plausible and accept this reading as long as we do not come up against contradictory cues. (For detailed examples see my article in the Saturday Evening Post of 29th July 1961.)

Given knowledge of checkerboards, on the other hand, we would have little difficulty in reading correctly even a reflection in a curved mirror or, say, in a polished teapot on the chess table. I feel it is only when we have disposed of these preliminaries and assigned the proper role to what I have called the beholders share that we can try to tackle Mr Adams interesting question. I would propose the following formulation: Which of the four versions of the checkerboard presents the two-dimensional cues in such a way that we cannot assign to them a three-dimensional order compatible with a normal checkerboard? His Fig. 5a, which coincides with a tracing of a mirror image on a flat surface and with a tracing on a flat window pane is clearly not compatible. To me Fig. 5d is visibly incompatible. I admit that I see this incompatibility less in the two intermediate versions but they offer me less compelling reading of a normal checkerboard. By this I mean that I have less difficulty in reading the drawings as representations of warped boards; in fact, once I have adopted this reading I find it hard to get rid of. I can see Fig. 5a as tapering, but not easily as warped.

Naturalistic pictures are those which effortlessly fit a reading that happens to be the correct one. They cannot prevent a false one. This is necessarily a somewhat vague criterion but it may be the only one to be had where we cannot compare the object represented with the representation. As soon as we do restore the artificial peepshow conditions postulated by Alberti, Albertis method must apply.

I am sure that much can still be learned, however, from experiments and variations of the kind presented by Mr Adams, provided always that we watch our steps and remain clear in our minds exactly what are the problems we want to solve. And here discussions and exemplifications will always achieve more than formal definitions.

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(*Discovery*, July 1962, pp. 47-8)