On Representing and Knowing

by Meyer Schapiro (1960)

Wittgenstein (Ludwig Joseph Johan, 1889–1951, Austrian-born British philosopher) has said that one can only draw what one knows. This seems true enough if one thinks of drawing as an example of representing, which includes language. Our words represent concepts, already known; learning to draw means learning to represent what we know, what we recognize.

Painters will hesitate to accept Wittgenstein's statement or will reject it emphatically. They have said often enough that drawing is a means of knowledge. One learns the precise form and color of an object through the disciplined attention and controlled tracing of its outlines and surface in drawing. Through drawing one develops one's power of seeing.

This is also the view of scientific observers who, for centuries, have drawn their objects as a way towards knowledge. Botany, anatomy, histology, and even astronomy employ drawing as a method of research into unknown or incompletely known objects. The scientific work of Leonardo da Vinci (1452–1519, painter, sculptor, architect, and engineer) owes much to his skill as a draftsman. When he wished to learn whether the irregularities on the surface of the moon are solid or atmospheric, he drew them night after night in order to note their constant and variable features. The same method was used by Peiresc (Nicolas-Claude Fabri de, 1580–1637, French archaeologist, naturalist, scholar, and promoter of learning) a hundred years later, and today photography performs the same function for the

astronomer. It was in representing the human body and trees that Leonardo discovered new facts of organic structure.

The development of painting as an art has often been described as a progressive exploration of nature. With the growth of mathematical physics, with the replacement of descriptions by algebraic formulas, the descriptive aspect of science has become less respected, as if description is a preliminary, not yet fully significant, stage of science. And the loss of interest in representation in painting, with the recent emergence of what is called abstract art, has been explained as a counterpart of the increasingly mathematical and abstract character of science, which concerns itself with a world of imagined structures presented through arbitrarily constituted mathematical language. The objects of science are no longer directly seen objects of the draftsman. Yet the most remarkable achievement of contemporary science has been the discovery of the shape and components of the molecules of the living cell, a discovery that provides a visual model of the unseen arrangement and thereby permits certain inferences about the process of replication in living matter. It is true that one can draw this model only because ingenious and patient scientists have made extensive observations and deductions; but the diffraction patterns formed on a screen had first to be drawn, before the determining molecular structure could be known. One knew what a diffraction pattern was, but the system that produced this particular pattern could only be discovered through the precise tracing and study of the newly disclosed pattern. The relation between the diffraction pattern and the object it represented will help us understand the relation between drawing and learning in the more directly experienced world of objects.

The relation between drawing and knowing is illuminated by another conception of artists, one that had arisen in the course of the 19th century. Courbet was quoted as saying that he wished to paint an object as if he did not know what it was. The same idea is attributed to Ruskin and the Impressionists, and earlier to Constable. This ideal of art—and it is an ideal rather than a consistent practice—has led to much shaking of wise heads in recent years over the naiveté of artists who believed, in complete innocence of the facts of life, that one could recapture the first state of experience of the world, when—it is supposed—the child apprehended colors and shapes as pure appearances, without knowledge of their connections, constancies, determinations. But this was hardly the belief of artists, who knew very well the radical difference between the sparse and schematic drawing of the child and their own sophisticated representation of sunlight and atmosphere. What they were affirming rather was a program for observing and expressing the fabric of color in appearances by abstracting from those conditions of perception that divert the eye from color and fix attention on the few cues that help identify the object as a familiar enduring element in the visual field. But the highly unstable features of apparent color one must learn to grasp through a retraining of perception, a break with the habitual mode of seeing.

What does it mean to learn to see in drawing? In order to draw an object one must possess graphic devices for representing various types of features: the contours, the surface, the volume, the position in space (if the object is to be localized), the color, the texture. Now these are features found in many objects, perhaps in all. Outline is a means with a universal significance; it can be applied to a great many things, to almost all—only light and atmosphere are not susceptible to this means. For representing surface and volume, light and shadow are effective devices; for positions in space, for space itself, perspective provides a fairly flexible system. Learning to draw is the process of acquisition of devices which enable one to represent all objects, known and unknown. In order to draw them it is not necessary to know what they are but rather how to reproduce the appearance of their form, their surface, their volume, their texture, their position in space and relation to other objects in the same space. Thus to indicate the size of a huge beast, one must know the cues for size in ordinary experience. Learning to draw is the learning of the cues in common perception and applying them on a plane surface.

To draw the much discussed duck-rabbit correctly in order to elicit the ambiguous effect one must know how to draw. The experimenter's drawing is correct in an absolute sense, and not at all ambiguous. This applies to all illusion-producing forms; one can spoil the experiments with geometrical figures if they are not drawn correctly. The equality of lines and intervals in these figures is a fact that contradicts the idea that all perception is illusion.

Experience in drawing is not only of individual objects, but of features common to all visible objects. Wittgenstein's mistake was to ignore the universals in representation, which are also the universals in perception.

Color as Expressive

by Meyer Schapiro

(This excerpt is from a lecture given in 1969: Lecture XIII in the course on "Theory and Methods of Art" at Columbia University.)

I want to summarize further the topic of expression through colors and shapes. I have already gone into the question of the extent to which one can confidently speak of colors and shapes as having a specific rather than vague expressive content. For centuries artists, philosophers, and psychologists have tried to match specific colors and forms with particular feelings or what are called affects in general, and have developed theories with regard to them. I tried to show by analysis of a number of them that insofar as a single element of color (or form) is identified with a single emotion or feeling, there is an error of the dictionary type, the likening of the elements to elements of language in which, for each unit of the vocabulary, there is one meaning. That does not even hold adequately for language; if you look at any good dictionary, you will see that for many words there are three or four possible meanings and even where there is one meaning the context will change a nuance, a connotation.

But when we come to colors and lines, because of the multiplicity of interpretations that have been made, there arise two views: one, that all such relationships are purely conventional and associative, rather than inherent, rather than unconditioned; or the view that they are really inherent but because of older associations or conventions the inherent meanings are somewhat disturbed or lost, and have to be restored through an effort