Artists, Viewers, and Works

Toward a Psychology of Art. Collected Essays. RUDOLF ARNHEIM. University of California Press, Berkeley, 1966. 375 pp., illus. $10.

A book on the psychology of art is likely to arouse varied expectations. In keeping with a recent trend in literary and artistic criticism, now fortunately on the wane, some will look for a psychoanalysis of the artist, a probing into the hidden conflicts which emerge in subtly symbolic form on the canvas. The psychology of art from this point of view is in essence the psychology of the painter. Others, more concerned with the viewer than with the artist, may expect an analysis of the emotional responses of people as they look at pictures. Some pictures are pleasing, or exciting, or satisfying, and others are not; and to explain why, one must correlate the response with social conventions, bodily feelings, and even electroencephalograph recordings. Still others, who are closer to the classical psychology of perception, will expect an extension of the experimental studies of color, size, shape, and movement to the less stable and less readily measured phenomena of organization and expression.

All these expectations are in fact justified. A balanced psychological treatment of art should include the human characteristics of the artist and of the viewer as well as the formal characteristics of the artistic product. But it is important that the first two of these concerns not be allowed to obscure the third. There is a lazy kind of relativism that explains away artistic creation as merely frustrated sex or the esthetic judgment as merely a learned response. Neither explanation tells us anything interesting about the work of art itself. Statements about the meaning of a painting may not be quite as independently testable as are statements about the truth or falsity of a proposition, but the fact is that the painting, once created, is something there, a part of the visible world which when studied tells us something more about the complexity of nature's laws. The world of art should not be divorced from the world the scientist studies. Its phenomena are real, observable, and describable. Its laws, though not always readily discernible, are coordinate with the other laws of nature.

There is no psychologist better qualified than Rudolf Arnheim to drive this lesson home. Trained as an experimental psychologist in the Gestalt tradition he has spent the better part of a lifetime in the study of art and the artist. His earlier book *Art and Visual Perception* (1954) has established itself as a modern classic, and his searching analysis of the creative process in *Picasso's Guernica: The Genesis of a Painting* (1962) is receiving deserved attention. The present volume is a collection of his essays dating from 1946 to 1964, many of which appeared in inconspicuous publications. Some of the best of these, for example a thoughtful discussion of "emotion and feeling in psychology and art" (1958), might easily have been lost. Others have been available only to the selected publics served by the *Journal of Aesthetics and Art Criticism* and the *Psychological Review*. The essays cover a wide range of topics—perception, expression, symbolism, creativity, with illustrations drawn both from psychological experiment and from artistic work—and in his discussion Arnheim takes issue with some of the leading art critics. Together the essays offer a psychologist's answer to two questions: What can the arts contribute to psychology? What can psychology contribute to the arts? Arnheim's answers to both questions are encouraging. The artist has a great deal to say to the psychologist, and the psychologist, in spite of his lamentable neglect of the arts, has more than a few challenging things to say to the artist. The book will be of interest to both types of reader, but it will also provide stimulation to the general scientist who has given little thought to the problems of either field.

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Lebesgue and Pedagogy

Measure and the Integral. HENRI LEBESGUE. Kenneth O. May, Ed. Holden-Day, San Francisco, 1966. 206 pp., illus. $7.95.

Every graduate student of mathematics knows the name Lebesgue, for the invention of a new kind of integral by the distinguished French mathematician Henri Lebesgue in the first years of this century constituted the decisive step in the modern theory of measure and integration. Indeed, nowadays there is hardly an undergraduate major in mathematics who has not encountered the Lebesgue integral by his junior or senior year. It will, however, come as a surprise to most of these students, and to many research mathematicians as well, to learn of the keen and active interest Lebesgue took in problems of mathematical pedagogy at every level from primary school on up.

The major portion, some 165 pages, of the present book consists of an English translation, by Scripta Technica, of Lebesgue's *Sur la Mesure des Grandeurs*, a collection of articles on the pedagogical presentation of ideas involving number, length, area, and volume, beginning very simply and leading up through multidimensional differentiation and integration. These articles first appeared serially in the magazine *Enseignement Mathématique* during the period 1933–1936 and were subsequently brought out in monograph form. In these essays Lebesgue characteristically discusses the pros and cons of several alternative presentations of a given idea, in an effort to give teachers a fuller understanding of the idea and to stimulate them to think actively about alternatives and make reasoned choices for their own classroom use. Inevitably some of Lebesgue's own convictions about teaching emerge: he has little use for pedantic distinctions of terminology, for presentations involving generalizations or abstractions too far divorced from the physical world, or for false "discovery" techniques of teaching that channel the student's thought and responses into rigidly prearranged patterns instead of encouraging genuine originality.

The volume also contains a translation, by the editor, of a 16-page expository essay tracing the evolution of the integral concept from the work of Cauchy in the early 19th century up through the invention of the Lebesgue integral and the developments that immediately followed. This lucid and interesting essay of Lebesgue's was based on an address which he delivered before the Mathematical Society of Copenhagen. The essay was first published in *Matematisk Tidsskrift* in 1926. By way of introduction to the whole volume the editor has provided a portrait of Lebesgue and an informative five-page biographical essay.

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