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THE MIND'S EYE OR THE EYE'S MIND

Pictures can establish the relation between thinking and immediate experience. They can connect perceptions with concepts and thereby, are partially involved in the empirical questions of science, which asks which of the possible conceptual (mathematical) systems corresponds to our immediate experience. Mathematics deals with logical structures that are defined by a particular axiomatic system. It is not the task of mathematics or any other formal constructive system to co-ordinate visual pictures to these concepts. This task would lead from theoretical to experimental physics or from theoretical to experimental psychology. In this regard Hans Reichenbach has said:

"The precision of mathematical reasoning lies specifically in the fact that it utilizes only the logically formulated properties of the visual structures. Visual structures are nothing but an aid to thinking and belong to the psychological apparatus which draws the conclusions, not to the content of the thoughts themselves. Thinking does not aim at the pictures but at the logical structure which they express. The psychological significance of an example rests on the fact that logical operations are facilitated when we think of concrete objects ... it is easier for the mathematician to reach conclusions from the axioms if he imagines them realized by physical objects. His visual geometric figures actually lead him into physics, not for physical purposes, however, but for the sake of the logical structure that is illustrated by the physical objects (pp. 97, 98) ... the representation of geometrical relations by systems of objects is more than a matter of convenience ... it rests on a basic necessity of human thinking. It is quite impossible to think abstractly about relations. We cannot understand them without some method of symbolic representation which supplies a concrete model of the abstract relations ... Thinking completely without symbols seems to be impossible. However, this fact should not lead to the mistaken impression that the chosen symbol is essential for the content of thought. (pp. 107, 108). The Philosophy of Space and Time, New York, 1957.

The condition that art theories have to fulfill to be relevant to the criticism and generation of actual works of art is similar to the conditions that must be fulfilled in physics. These constructs have to have an "empirically significant possibility", as it was termed by F. S. C. Northrop. The unhappy lessons of history have taught us that it is not the concern of visual art to consider constructions in language or in mathematics that cannot be corresponded with a thing. Without this reifying function, the thought or idea is not visualizable, hence not paintable. It then stands only within the formal concerns of philosophy or mathematics -- it is the prey of the symbolic mind. The physical and psychological aspects of seeing the reified thought are both necessary and advantageous to visual art. F. S. C. Northrop in discussing the connections between the "empirical component of any complete object of knowledge and its theoretic component", uses the very appropriate term "epistemic correlations" for these connections. These correlations allow for the interaction of the physical object and conceptual thought in a very unique way, less possible in completely mental (logically symbolic) operations. The picture can be constructed so as to allow for the shift in the form of the normative function of visualization (the idea) that is applied to the image function (the picture).

Obviously, there is a wide flexibility in the picturing of verbal or mental concepts, as long as pictures or models remain independent of any complete one-to-one correspondence of the actual thing pictured. It has been noted that practically anything can be construed pictorially -- dreams, fantasies and the most subjective states, as is evidenced in Surrealist paintings. Painting has traditionally served as a representational construction that would express, or at least "reflect" nature or natural law. It has been the task and problem of the painter since the division of art into "form and content" to find a way to justify his work as a reflection of some external values. Usually this content has had some correspondence to natural objects or processes. This was true even of the "non-objective" painters Mondrian, Kandinsky, and Klee, all of whom refer to some relation of natural or metaphysical orders to their painting. We have slowly begun to realize that what we have been calling nature and nature's laws or processes in painting (and in science) are only the highly conventionalized laws of our pictorial tradition. As in other fields, the realization of these consistencies in the 20th century has helped to provoke an interest in an examination of the assumptions and functions of these "pictorial laws".

Outside of a confused and uninformed attempt to outline some of the formal principles in art education experiments such as at the Bauhaus, there has been little good work on which the rigorous artist might feed. This has led a few contemporary painters to a superficial examination of the questions currently asked by the philosophers of science and the psychologists of perception and other related mental processes. This look at the philosophy of science and the psychology of perception obviously does not provide us with knowledge about the

world of painting directly, nor is it of much value in understanding the intentions of past painters. It does provide a new language that has provoked new questions to be asked about the assumptions and fallacies of studio, gallery, art book and art school jargon on which all artists are nourished in their early development.

In line with this interest in perception, Adelbert Ames, a psychologist, who became interested in perception after a short career in painting, has advanced a theory of perception. It presents our immediate sensory awareness as prognostic presumptions and not assumptions. That is, the perceptual "decision" of what we will see and where we will see it is highly dependent on perceptual and cognitive processes that occur prior to perception itself. His demonstrations show that our perceptions are prognoses and not disclosures: "All awareness and perceptions are patent or implicit prognostic directives for actions". If our perceptions give us structures of predictive reliability, and do not reveal, or stand for, or symbolize, or disclose experience, the role of visualization might be based on the need for an increase in the future reliability of our concepts. Visualization allows concepts to be held in thought (as objects or things) and reviewed in all directions without allowing the process of examination to intrude and change the conceptual structure and relationships. The function of picturing or visualizing is one of the most primitive and basic limiting agents of thought, whether it is done metaphorically, analogically, or graphically. Picturing is a kind of isolation and reification of an idea that is like naming or categorizing. It allows us to go beyond the descriptive structure and to posit and observe unpredictables emerging from, and in interaction with, the simpler primary system.

It is curious that visual experience is so often considered "mental", whereas tactile experience is "physical". We often think of the experience of space in painting as a conceptual structure insofar as any tactile confirmation is denied. When perceiving the monocular space, one must manipulate the categories of implication of the third-dimension (and time) that provide complex structures of spatial events. It is not there to touch. From the physical surface of a two-dimensional extension, cues are sighted and from them inferences are drawn as to what is seen and where it is relative to other things. Assent takes place through complexity. With each new functional distinction perceived, the complexity gathers itself into a new class and is -- through this conceptual operation -- released into a new simplicity. The emergent product whether a nude, a battleship, a cube or a bundle of drips, is the summing together of a new totality of elements. The perceptual process predicts, does not discover; constructs, does not abstract, in the formation of what is seen and where it is seen. The tradition of experiencing painting has not allowed for a simple acceptance of the "thing" presented for seeing. There is a compelling history that encourages the tendency to think of painting as an imitation or

re-presentation of other physical things or meanings that are outside of the thing shown. The point of much of the painting inadequately called "non-objective" is that it is not interested in expressing a similarity or a correspondence between the things perceived in the picture and other objects or ideological systems outside the painting. It is interested in accepting what is seen as the final act of intended structure and meaning. One then proceeds to unravel the web of spatial implications of these things that have been discriminated, and because discriminated, categorized.

The physical fact that the relations in a painting are constant and thus allow us to return to reaffirm or question our perceptions is an important justification for the "intellectual" or contemplative orientation in visual art. Music, the film and the other temporal modes of presentation clearly and powerfully satisfy the need for the building of tension needed in successfully evoked emotional experience. The static painting allows a careful, quiet pursuit of the relationships and related concepts. For instance, we can classify things as being the same "thing", e.g., a circle and an ellipse, and see the change in shape as indicating a change in the position of the thing and not a categorical shift to a different "thing". The contemporary concern in painting is not to "show" the relationships and orders as finally determined and resolved in the work, but rather to assert the necessity of an active pursuit on the part of the observer.

The seeing of the drawing or painting is not a passive registering of the presented relationships, but it demands that the observer ascribe objective categories (it is a circle, a square, an ellipse, a box, a light, etc.) and then proceed to ask where it is. This process of "seeing" the visual object as an undefined possibility of orders is antithetical to the classical proposition that paintings should present a resolved, single unified order that is shown to the observer. The definition of the nature of the orders in the painting awaits interaction with the experience of the perceiver. It depends for its conclusion on his willingness to posit the necessary categorical questions of its "whatness" and "whereness" for which there does not have to be a single simple answer.

The fact that perception advances in a series of divergent glances, none of which contain the final total visualization, forms the basis of the psychological justification for a different kind of painting. D. O. Hebb is pointing to this when he says: "... what seems a simple immediately given image of the whole is actually a serial reconstruction of the parts of the figure". In other words, to comprehend the image, we have to build our perception from a series of sectional or partial views. Cezanne was one of the first to realize in his work some of the phenomena that are the effects of long fixation. His "distortions" are only divergencies from the classical idea of the

unity of the single static image, which is the final result of the process of seeing. These distortions become co-incident with fact, if we take into account the act, and not the product of perception. The prevalent error is to compare the image of Cezanne and the later modern movements with the earlier conclusions in the history of painting, rather than with events in the visual process.

The Cubists, at least in their early analytical stage, also explored the perceptual process as an event of sequential seeing. Their aim was the dissolution of the constancy of things and when they succeeded, objects became subject to our normative and conceptual applications. The disintegration of the object opened the possibility for new perceptual experience -- a new attitude toward the older mistaken view of the finality of substance. It led to a subsequent reliance on the visual process. It smashed the grip of those who proclaimed the function of painting to be the preservation of an enduring object or scene that would be subject to leisurely and careful viewing and contemplation. Painting had once saved the object and the scene from the ravishing complexity of disinterested time by mummifying the object for immortality in the finest and most permanent methods and materials. Let us bequeath this concern to others. By accepting, in fact turning to advantage the complexity of time, contemporary painting has added new alternatives to the ways in which painting and vision might evolve.

By strictly limiting the scope of the visual form vocabulary, a more exact correspondence between the space described and the forms used to describe it could be realized. In other words, there is an attempt to raise the quantity of information content due to a more exact definition of each term. This move eliminates the old virtues of qualities, or those elements unrelated to the definition or evolution of the spatial order. This kind of "quality" centered art is our legacy from synthetic cubism, which simply rearranged the pictorial elements of its earlier phase into a nice "design". This concept of art is being churned out by the decorative arts and crafts as it always has been. These qualities should be recognized as distinctions that do not contribute to the hierarchy of categories or generalizations that are being applied to the sorting out of elements. Each new distinction, ideally should promote a new category (or categories) of experience that expand the complexity and the implication in a visual not a literary way. An even more restrictive moral directive might state that qualities that do not alter our purposes or behavior are irrelevant indulgencies and, unless they offer the possibility for alternative acts that are formally significant, they (qualities) are meaningless. With pleasure in art now so severely repressed, you are now free to consult Dr. Freud or better yet, your favorite New York Action Painter.