



Nature - As a Source of Inspiration to Artists & Designers (In Comparison to Science)

KEYWORDS

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Kashyap Parikh

Department of Applied Arts, Faculty of Fine arts The M. S. University of Baroda

ABSTRACT *As we all know, one of the basic tenets of Indian perception is that all objects animate or inanimate, have come from one single source and everything is interrelated. Artists have always taken themes from that part of the natural environment most bound up in their continued existence. A later development is the appreciation of natural form for its own sake, an idea given special fulfillment in the art of the Orient. Thus our culture produces men and women trained to see a form with keen discrimination, and since artists too must learn to see, they can be helped by the study of the natural entity or its image. We define art as man-made, natural form is not the form of art. But our environment does produce visual material which embodies some of the structural principles artists use in their work. This is valuable. Some of the forms we find can be introduced directly into the design process. This is valuable. And of course a curiosity about the structure of our environment is an enriching resource in life.*

As the nomadic lifestyle of the early Aryans changed and as they gradually settled down and fixed localities came into being, they delved into the complexity of the phenomenon that is nature. The seers among them saw, behind the different elements of nature, the presence of the aspect of an Omniscient Power. There were deities of fire, air, water, earth and the sky. The omnipresence that linked them all was supreme Brahman, which again is present in every human being as Atman or the soul. Our culture is devoid of an appreciation of natural form. Our artistic tradition has, however, taken a different approach from that of the Japanese-Chinese in special appreciation of the natural environment. Our culture is different, to be sure, but younger artists may have their childhood curiosity in living objects. An occasional field trip, preferably as a member of a group, will turn up a rich source of visual material for comparison. Careful observation is the groundwork for great art. The artist thus learns for himself that while some organisms have an apparently endless need for reproduction, the condition may be summarized. Thus the artist learns to edit, to shape material to his own needs and that of his visual heritage. It may even be that one or two individuals, in becoming interested in plant or animal forms, will find a career in their visual interpretation.

The man of science is usually devoted to the study of structure in the universe. He is interested in the relationships of parts to the whole, in discovering the meaningful order in seeming chaos. In this broad sense the artist and scientist are traveling parallel roads. The scientists have come new and ever more reliable information on the structure of the universe, both macrocosm and microcosm. This information often upsets old concepts, including artistic ones. An apparent spot of light in the heavens actually consists of billions of stars in a patterned though ever-changing relationship, the image of which is out of date by factors ranging into the billions of years. Such truths about the structure of the universe make an artist think carefully about its pictorial organization. If at times the conservative artist allows himself somewhat reluctantly to be dragged down the road of truth, giving up with difficulty static conceptions of matter and space, he finds points where the views of artist and scientist almost coincide. Both can appreciate the subtle part-whole relationships. The skeleton may have different meanings for the artist and the scientist. The former may see a chance to use the form in a visual study, while the latter may be interested in the way in which a particular substructure differs from that existing in a related form. His final study may therefore be executed in verbal, chemical, or mathematical symbols.

In matters of description and communication, however, the scientist often finds that pictorial matter works better than words. It is not surprising, therefore, to find that most scien-

tists have a rather high appreciation of visual form. It is not their first order of business, but many find pleasure in the visual aspect of their work.

While artists and scientists of the present do have common interests in structure, in some eras art and science were much closer together. Erwin H. Ackerknecht, M.D., an eminent authority in the history of medicine, writing in the Bulletin of the Medical Library Association, states: "In early periods when medicine, like many other practical activities such as agriculture or husbandry, is profoundly pervaded by magic, and when art serves magic and is a part of it, the relations between medicine and art are particularly close." The anatomical studies by Andreas Vesalius, the great 16th-century Flemish pioneer in this field, with their echoes of morbidity on the subject of death, communicate considerable emotion. Anatomical study demonstrating the alliance between science and art. Here have clearly drawn analogies between human, architectural, botanical, and geological principles of support. In each of these features we find parallel development of detail, with subtle variations in the value relationships. Although shot through with philosophical content, the pillar alone is an elegant study in subtle value contrasts.

Medical libraries contain visual studies of all the major systems within the human body and much pictorial work on details of tissues, operations, diseases, and so on. Some anatomical studies of animals will also be found. Works going back to pre-Renaissance times have certain terrifying aspects often relieved by humor, the practices of the times having been so outrageous. An abundance of interesting work will also be found in zoology libraries, where the several. Sub disciplines of ornithology (birds), ichthyology (fish), entomology (insects), malacology (mollusks), and other fields are found to depend in part on a visual tradition. Botany, with a similar proliferation in specialization, has, as previously noted, a long and impressive visual heritage in herbals. Some of these pictorial works on plant life have considerable stature as works of art. Geology, too, provides fascinating visual studies on the inanimate structure of our environment.

One of the striking concepts occurring in both art and the natural environment is that of symmetry. We are aware of the symmetrical nature of our own physical structure, imperfect though it is. Symmetry takes on the idea of completeness, of unity, of perfection. It is simple to gather a good collection of symmetrical material. Many plants and animals have symmetry as a major feature of the structure. Another feature to be found in many design fields and in the living environment is the repetition of elements. On some levels of natural structure, units are repeated exactly. It is sometimes desir-

able in design to do the same. If we are concerned with the contour, or perfection in shape, our environment provides examples in abundance. The shapes of leaves would provide an exhibition to the point. On texture the supply of examples is better than good. Here we are speaking of differences in surface appearance—a phenomenon which adds richness to our visual environment and life to a work of art. In discussions on esthetics a good deal of thought centers on the theme of variety within unity. This means that within the framework of a work of art, parts are bent but may not burst the framework and so destroy the central motivating idea.

In the area of the visually fantastic we again find that natural form has a good head start on the artist. Perhaps it is a good thing that this organism is very small. When we speak of harmony, of the family relationships of shape elements, of articulation or connections between elements, of flow of form, of asymmetrical form, of sharp variation—we can bring the example of the natural image to bear on the question.

"There is nothing common or unclean in what god has made, but we can only make life beautiful for ourselves by the power of the spirit that is within us. Therefore it is, as the sage Shukracharya says, that, in making images of gods, the artist

should depend upon spiritual vision only, and not upon the appearance of objects perceived by human senses."

-E.B. Havell (The Ideals of Indian Art)

Conclusions: The artist expresses the concept in his individual way and builds up his own world. Man's insatiable quest for knowledge has taken him to and fro on the earth, up above it, and down in it. It has caused him to drag the bottom of the sea and examine the contents. It is not to our interest here to speculate on the nature of this drive, but it is pertinent to state that an artist's compulsion to examine the structure of form and matter is often weak in comparison to that possessed by certain others of human kind. We have seen the result of the cave artist's reaction to his environment, which produced a visual form based largely on various superficial or external aspects of appearances of animals. And in spite of a Leonardo DA Vinci and a few others picked by a special curiosity about the inner workings of things, the artist usually remains, although certainly more knowing than his ancestor, in a definitely conservative position on possible forms. This is true as well for those artists who include themselves in the avant-garde.

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