Art and Science: One Culture or Two, Difference and Similarity Essay

Introduction

Art and science are two broad concepts that reflect development of the society and its culture. There is a debate concerning the role and status of these disciplines in modern society and their impact on culture. Both disciplines are influenced by social-historical conditions and social development which has a great impact on their current state. Science and art belong to one culture representing one stage of the social, economic and cultural development of the society.

Main text

Science and art belong to one culture because they reflect discoveries and experiments of the modern era. in both of them, there is knowledge and academic disciplines. Both of them are based on scientific knowledge and principles, rules and procedures. Both science and art belong to one culture and 'driven' by one process, creativity. Creativity is applied to theories and knowledge, terms and concepts studies by artists and scientists. Both of them belong to one culture, because they represent practical application of knowledge and creative skills. The process of creativity can be seen as a sphere of research that investigates application of knowledge and practical application of theories (Essays of an Information (a), 4). One might attempt to distinguish as science the endeavor to prepare nitrogen mustard with superior properties as a chemotherapeutic agent and as basic science some general study of cell metabolism. Thus, art uses its own concepts and techniques which help artists to create a conceptually new approach. For instance, the works of Dali and Picasso vividly portray a new vision and representation of the world around them. Artists and scientists discover and analyze the natural world and reflect its changes. For instance, great discoveries in natural sciences during the 19th century coincided with naturalistic movement in literature and art in general, Artists and scientists believe that before any explanation is advanced, an exhaustive collection of instances of a phenomenon should be compiled, out of which axioms regarding that phenomenon will somehow emerge, their correctness being ensured by the infallibility of the data (Essays of an Information (a), 6).

Art and science belong to one culture because both of them are based on scientific discovery and desire for something new. In practice, artists and scientists must usually be satisfied if they discover just some of the sufficient and some of the necessary conditions for the effects under investigation. During every historical period, artists and scientists supposed to reveal an ideal; one, which must be approached gradually, as the conditions sufficient for the effect to be manifested are widened. The knowledge of such conditions has a practical advantage, for it "frees the direction", that is, it opens up new means for bringing about a desired effect. Both art and science champion experiment and observation against authority and tradition, as sources of knowledge. Although not new in its general outline, the extent and detail of arguments in favor

of an experimental method put art and science well ahead of most rivals for the attention and respect of those concerned with scientific method (Essays of an Information (b), 7).
The main difference between these disciplines is that in science, prediction once made, its confirmation depends often on events over which the scientist can exercise no vestige of control. The real world having been constituted a "something," the principle of intelligibility asserts man's capacity, perhaps even his obligation to understand that something. Non-science does not make predictions and does not test hypotheses. It does not multiply and diversifies the range of possibilities humanly attainable, among which researchers choose those they will make realities. Artists and scientists know that common sense is imperfect, and for this reason they usually permit the survival even of relations that yield frequent unaccountable failures in prediction. Science and art giving answer question "Why" and "How" which help them to create a new knowledge and methods.

Both art and science are based on evidence and explanations, testing and improvements, evaluation and replication. Scientists and artists work with theoretical norms which are not necessarily self-evident, and so gain power to work with a far greater range of possibilities than before. Both art and science belong to one culture because they deal primarily with what is experienced by all mankind; science encompasses, in addition, what is experienced, in the laboratory, by but a few. This distinction seems unimportant: the special experience of scientists is potentially available to all willing to enter the laboratory. As it begins science judges the acceptability of subject matter much as common sense does.

In sum, art and science represent and belong to one culture based on creativity, historical development of society, research and scientific methods of discoveries. The main characteristic of science and art is new knowledge creation, new application of existing knowledge while other academic disciplines use this ready-made knowledge for their purposes.

Reference

Essays of an Information Scientist: Creativity, Delayed Recognition, and other Essays, 12 (1989), 54. Current Contents, #43, p.3-7, 1989