

8. “The arts deal in the particular, the individual and the personal while the sciences deal in the general, the universal and the collective.” To what extent does this statement obscure the nature of both areas of knowledge?

“All men by nature desire knowledge”.¹ Metaphysics talks about the fact that the basis of knowledge comes from human manner to enjoy its senses. Feeling is the form of knowledge, which is given to us by nature, since it also exists in animals.² However, in animals it is linked to direct benefit, while in humans it can simply be related to pleasure, which can be named "aesthetic". Aesthetic delight, which is reached through sensation, is no longer animal instinct, but primal knowledge, which contains the roots of both art and science. Both artistic and scientific knowledge come from accumulation and generalization of experience, which result from memory, a collection of impressions. Aristotle was also able to show that any art as well as science much contain at least a small portion of knowledge obtained through experimentation. In the beginning art and science arouse out of the same group, but as the European culture began to give a special position to the artists, art and science began to separate and stated having very different social functions.

This shows that art and science have come from the same root, and even though they are very different and have characteristics of their own, often can be considered as one. I will first explain how the arts do dial in the p.... and how science is general, but connection between them shows that one works with the other.

Most art work represents the artist’s personal feelings and individual experience. This creates a particular world, which is an emotional reflection upon the existing world. The images produced, are not seen as simple objects, but rather as individual carrier of emotions. These creations therefore allow different interpretations and make the art not only personal to the artist, but also to the spectator. The way in which one interprets art depends on the environment and the experience of the individual.

Personal comprehension is a determining step in art. From the above, it is possible to state that art deals in the particular because it focuses on a particular period or event, the individual because it represents emotional state and is perceived differently and in the personal because it is observed on a personal level.

Science is the knowledge which deals with systematized observation about reality. In contrast to art, which is expressed through images, science is represented through concepts. These concepts give science the ability to describe, explain and predict. Scientific knowledge is a systematically proven and constantly verified knowledge. Science is therefore different from art because it is objective and impersonal. The influence of the individuals, the scientists, should be excluded as much as possible. In the process of its development, science often abandons previous phases and concentrates on further growth. Without doubt, the names of great scientists and their discoveries are not forgotten; however, for science in general they only contain historical value. One does not study the scientists on a personal level; instead one tends to focus on the theories that they developed.

¹ Aristotle, *Metaphysics*, BMM AO, 1975 Moscow

² Bryan Magee, *The Great Philosophers*, Oxford University Press, 1987 Oxford

There are many examples when artists were interested in science and technology, while scientists were inspired by arts. There have been remarkable parallels between the movements in art and the development in science. An example of such is the unity of space and time in relativity and the Cubist series of temporal views across space. At the same time, Albert Einstein was inspired by Fyodor Dostoevsky, claiming that “Dostoevsky gives [him] more than any scientist, more than Gauss”.³

In philosophy, the relationship between science and art is examined within the theory of knowledge called: gnosiology. In the past century, there was constant fight between the two theories: scientism and anti-scientism.⁴ From the scientism point of view, science has the highest cultural value. Anti-scientism points out that science limit us in the solution of human problems. It shows science as the antagonistic force that takes away from the freedom of will and creative individuality. One cannot observe the world merely through science, since the truth is also intuitive.

Thus, in the opinion of Italian philosopher B. Croce⁵, science and art are the two stages of knowledge. The First stage is intuitive knowledge, which is achieved through imagination. An example of this is art. The second stage is the knowledge achieved through logic; the initial tool for which is intellect.

One should not minimize the role art plays in the understanding of the world. Art can be characterized as a reflection, which reproduces reality through images filled with emotions. Different forms of art, such as painting, theater or architecture, show the world at different perspectives. However, they can be combined to show an entire culture. Art can only be truly understood when it is put in context of time and place. For example, during Middle Ages, human size was often painted disproportional because it represented their position in society rather than their real body size.⁶ For art to have real value, it needs to somehow be relevant to the observer.

For many centuries, science has approached differentiation and fragmentation in different areas of science, and only recently there has been an attempt to come up with general concepts. However, art always gave a collective perception of the universe; it kept personal and cultural experience and was able to form humanity.

While science consists of specialized knowledge, which requires special abilities and skills, art tries to create the world by using imagination. Art differs itself from science because it does not have rules and does not have to be based on facts. At the same time, scientists constantly need to evaluate and reformulate old concepts. It often involves an intuitive leap to come up with a new invention, which is just as creative as painting.

Biological science is general, yet biology is a particular area of study. The doctor does not treat his or her patient as something general. Instead each person is treated as an individual, with a name, identity and subtle difference in biology. A successful doctor, therefore, does not only have general biological knowledge of the human body, but also has experience. There is a difference between the way biology characterizes a human and a particular patient, between the general explanation of the illness and its individual treatment. This shows that science is also related to the individual, the particular and the personal.

It is true that art refers to the individual and the personal in the sense that art reflects the individual and the personal vision of an artist. However, when considering

³ Christian Stange, Dostoevsky Research Station, <<http://www.kiosek.com/dostoevsky/quotations.html>> 1999

⁴ Nasif Nahle, Institute of Biological Research, <<http://www.biocab.org/Antiscience.html>> 2000

⁵ Will Durant, *The Story of Philosophy*, Washington Square Press, 1926 New York

⁶ Burton F. Beers, *World History*, Prentice Hall, 1993 New Jersey

art as a whole, a universal picture of the world is created. The difference is merely between the methods in which we receive the knowledge. While observing art, one gains knowledge from emotional experience, while in science, logical is used to explain an occurrence. Even though art is often individually oriented, the creations of art have an enormous value for humanity as a whole. Art is universal and general, even though the aesthetical concept of beauty depends on time and place. Art is able to accumulating experience which was collected for centuries.

Scientific knowledge, on the other hand, is usually obtained through scientific methods, which are seen as authentic. However, science on its own is not able explain the world, since it often fails to consider human factors. Art represents the intuitive stage of knowledge, while science consists of logical thinking. The intuitive method can also be used in science, while an art masterpiece can be a result of scientific research, such as Leonardo Da Vinci's Human Proportions-Vitruvian Man.⁷ Knowledge which is obtained with the help of science, and knowledge, obtained with the help of art is fundamentally different and fulfills different tasks and goal, yet the combination of art and science provides complete human knowledge and can, therefore, be considered universal.

B. Croce, states that art and science are closely related and function together.

⁷ Serge Bramly, *Leonardo: The Artist and the Man*, Penguin, 1995 New York

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