T.O.K. Essay:

The arts deal in the particular, the individual and the personal while the sciences deal in the general, the universal and the collective.

By Paanii Ansah-Kofi

Homeroom: **12A**
Subject: **Theory of Knowledge**
Candidate no.: **D 0114 006**
Session: **May 2004**

Paanii Ansah-Kofi 12A

January 2004

T.O.K. Essay:

The arts deal in the particular, the individual and the personal while the sciences deal in the general, the universal and the collective.

In human knowledge, many like to believe that art and science are both wholly different in their approach and in their comprehension of the ambiguities of the world we know. This seems to stem from the opinion that the arts and the sciences are completely different in what they intend to achieve and in the methods they use. Although the knowledge used to practice both may vary, can we go so far as to say that they deal with knowledge on entirely different levels? The statement above (heading) seems to be in accordance with a widely accepted view. To be able to show to what extent the statement may obscure the nature of both Areas of Knowledge this essay will attempt to demonstrate to what extent the descriptors used are defined in either art or science. It will also look at whether they do actually deal in similar things in either Areas of Knowledge, with references to several points of views from known historical figures in arts and science.

The statement creates an impression that the arts are concerned with the knowledge and self-fulfillment of the individual. Seeing it this way it would seem like art is only relevant on rather small scale in comparison to science. In the words *particular*, *individual* and *personal* one could easily undermine the evocative properties of the arts and take science for a subject that has a lot more. Apart from not acknowledging the controversies that occur through art, it implies that there is no breadth in the subjects it covers. Surely art is more than an interaction between the artist and his/her work.

If we think back on the Dada movement, which took place during and after World War I, the Dadaists intended to express their protest against all western culture, especially militarism, through some distinctly unconventional and sometimes disturbing art[1]. At the time, they touched on subjects that were relevant to much of the war-ridden Europe. Apart from using this method in painting, by which the world famous Max Ernst gained his reputation, the Dadaists also frequently used literary methods and theatrical performances and manifestos that were often designed to shock and bewilder. This was and has been a primary method of publicizing such opinions; the arts in this way have been a means of communication and even, as some perceive it, a universal language which is used to put through a point of view (which in this case became widespread among thinkers of Germany, France and Switzerland). This would be one way of showing how art can be more public and in the open than the statement would have you think. Although the approach can be personal, people like the Dadaists used art to deal with the general as well.

Some of the great philosophers the past such as Aristotle and Plato, who shared similar views, did believe that art was a powerful means of communication and that in fact it was so influential on the scale that they found it threatening. Apparently, the ideas that could be conveyed and exposed to the public by the artist were thought to be so powerful that it was necessary to censor the art itself, mainly because they touched on a variety of very sensitive issues at the time (like political ideology or sexuality). Plato, in what he thought to be his ideal republic, proposed to expel all poets and playwrights and otherwise censoring what they

[1] Dada Article, Encarta 2003

wrote in addition to severely censoring music and painting as well. Today, we also experience the censoring of music and film on a regular basis. People like Plato obviously saw the potential for art to be more collective[2].

The words used to describe science, like *general* and *universal*, would make the implication for example that more aspects of science are unanimously agreed upon so to speak. If I were to think of any Area of Knowledge at all to have this nature, science may not be the first to mind. Even if it had, it could be agreed on that Mathematics better suits this nature, because as a language of numbers it would be difficult to argue that its logic is disputed anywhere. Science on the other hand, has had its flaws amongst thinkers now and then. If we take the theory of the shape of the earth and that of the age of the Earth, Science has not always been conveniently certain or at least practiced in the same way.

Apart from the fact that art can be influential up to the point of being capable of changing ones behavior and even character, Plato also saw its role in science and so shared some ideologies that much of science was inspired by art. While he was very much impressed by the theories of Pythagoras and developed his own theory of Number Mysticism he acknowledged that the arts were the cause of the inspiration. Looking at physics, in early thinking about such geometric ratios it was asserted that the inspiration came from noticing a series of overtones connected in the vibrations of a string which, when plucked, vibrates along the whole length but also in halves (which give the octave) and in other divisions which giver overtone series. This would suggest that science and the arts cannot be set apart so precisely as it is in the statement.

Another way of arguing how the statement obscures the nature of both Areas of Knowledge is by looking at how the arts may share the attributes to science in that they can both be influenced by personal, and sometimes even subjective views or motives. The writer F. F. Chalmers believes that the typical inductivist (i.e. a scientist who is thought to solely induce information from what is seen, heard etc. from an objective point of view) belief that the basis of scientific knowledge is provided by observations made by an unprejudiced and unbiased observer is simply a most naïve one.

An example that can be drawn to support this is from 1888 in Hertz's electrical experiment[3]. The experiment, which allowed him to make and also detect radio waves for the first time, would be expected to have the recording of different readings or measurements, and follow a method of observation. However, if he was meant to be completely unbiased in his observations – as the ideal scientist strives to be, then he should not have hesitated to assess among a number of clearly irrelevant things the state of the weather, the dimensions of the laboratory and the materials of any apparel he was wearing. In any case it turned out that when Hertz measured the velocity of the radio waves he was making m he discovered that his velocities were marginally different to those of light and could never manage to solve the problem. Only after his death did we know what had caused the problem, and, ironically, what one would have thought irrelevant to take into account was interfering with measurements. Indeed the dimensions of the laboratory caused this. This gives us an example where a personal objective was decisive in the outcome of scientific investigation. Hertz based his experiment on a theory which, after his personal judgment, was to prove something and gain credit for it.

[2] Plato and Censorship, http://www.mala.bc.ca/~johnstoi/introser/republic.htm
[3] In-class handout

These traits in the production of art and science begin to show that the arts cannot be distinguished from science in saying they solely deal in the particular, the individual and the personal and science in the general, the universal and the collective. There seem to be ways in which art is also, in contrast to the statement, like science and vice versa. The statement does not provide an accurate and comprehensive way of determining the nature of these two Areas of Knowledge, seeing the similarities between arts and science in the characteristics which are described.

Bibliography:

- A.F. Chalmers, What is thing called science?
- Aristotle, Encarta Encyclopedia 2003
- Dada, Encarta Encyclodepdia 2003
- Ernst, Max, Encarta encyclopedia 2003
- Philosophy of Science, Britannica

- http://www.mala.bc.ca/~johnstoi/introser/republic.htm