To what extent may the subjective nature o perception be regarded as an advantage for artists but an obstacle to be over for scientists?

Perception is one of the methods used by humans to acquire knowledge. With every human discovery whether it is in human sciences, natural sciences or art, perception is involved in the process. The involvement of perception in the discovery of knowledge is inevitable since perception is part of human nature. One's ideas, opinions, emotions will always play a role in one's creation, regardless what it may be. The subjective nature of perception is an advantage for artists yet maybe considered an obstacle to be overcome for scientist. Yet this statement is only partially true because the subjective nature of perception has an important influence on the development of both science and art.

Perception is subjective because a person's beliefs or cultural background shape their perception. Perception is what a person sees, feels, hears, smells, and tastes in a given situation (Ways of Knowing pg. 33). Naturally every person has a different perception on reality. An individual's perception depends on their cultural background, beliefs, morality, past experience or knowledge, personality etc. since all humans are different every person has a different perception. For example, if there is an art exhibition that is displaying paintings made by the female Mexican painter Frida Kahlo and there are two art critics looking at the Henry Ford Hospital painting their analysis on the painting will be different (www.1st-art-gallery.com). One of the critics is a man from Venezuela and the other critic is a Mexican woman. The man would describe the painting by going in depth on the colors used, the emotions it conveys and probably the theme it touches. The

woman on the other hand, having past knowledge on Mexican culture would explain the women oppression that Frida expresses through her painting, and she would explain the emotions it contains on a more personal level, considering she could relate to the painter. Their perception on the painting is different because of their history, because of who they are. That is why one analysis of something can be very different to another analysis of the same thing. This example is parallel to the impact perception has on art and science because it is just like the art critics use perception to analyze the painting, Art and science use perception to analyze aspects of reality.

Perception is viewed differently in the arts than it is in the sciences. On one hand, in art perception is a positive human characteristic that plays an important role in the final product created. The way a person perceives reality is valuable because it allows the development of new ideas. In art there are new ideas constantly arising. Variety is an artistic value that may be achieved through constant change in artistic fashion. Change is stimulated by the exposure of new perceptions. Art is always left open to interpretation allowing the creation of new artistic innovations. That is why perception is so essential to art. On the other hand, science is a more specific area of knowledge. Scientific knowledge is based on more than perception or opinion, there is a certain structure that needs to be followed in order for a theory to be proved as scientific knowledge. Because science is objective rather than subjective the subjective nature of perception is an obstacle for science. In science, perception is recognized as human error. For example during experimentation in a High School lab, students set up a lab and collect data in order to analyze it. Sometimes the data collected is incorrect (this is known by comparing

it to the correct data according to what has been proved by scientists). While the source of error may be the change in room temperature or other variables, the source of error could be human error. An example of human error would be if a girl was measuring a substance in a test tube and measured 10.7 ml rather than 10.4 ml because of the angle from which she was viewing the scale. this shows that perception in this case the way she saw the substance in the test tube may interfere in achieving an accurate result that could lead to the discovery of scientific knowledge.

The subjective nature of perception is to some extent considered a disadvantage to both art and science but more so to science. The disadvantage it has on art is that because perception is so varied from one person to another and artistic value is largely dependant on perspective the range of knowledge is infinite. In other words there is no concept of right or wrong. For example the existentialist novel The Stranger by Albert Camus and the *Bible* are two literary classics that propose two completely different opposing ideas. *The Stranger* portrays human life as useless, insignificant matter while the *Bible* proposes that life is created by a divine creature and therefore should be cherished, taken care of and appreciated. There are many other distinctions between these two literary works that state completely opposite “facts” yet both of them are considered to be knowledge. The disadvantage for science goes back to the idea of perception being human error. Often times scientific knowledge needs to be changed because the interference of perception. Because science is so precise and perception is flexible, the two do not work together. An example of human perception interfering with scientific knowledge would be the paradigm shift. Every paradigm shift has been a result of misleading knowledge due to

human perception. For example John Dalton proposed the structure of an atom. “He proposed that each element consists of atoms of a single, unique type, and that these atoms could join up to form compound chemicals.” (Answers.Com) Later on there were series of paradigm shifts debating on the structure of an atom until the final structure was concluded and kept to be true knowledge. Science is perceived differently through the pass of time mainly because of technology, and past knowledge. Naturally as time goes by technology goes improving allowing scientists to perceive things that could not be perceived in the past. Also as knowledge is accumulated there is a stronger base to derive more knowledge from, facilitating the process of scientific improvement. For this reason past perceptions of reality in science will be eradicated and considered invalid.

Although the subjective nature of perception may be considered an obstacle in the arts and in the sciences, it is also essential to both. Art is based on perception. An individual’s perception on an aspect of life, that could be an element in society, nature, human interaction or anything else, is reflected in art. The subjective nature of perceptions allows a larger range of artistic knowledge to exist. The reason that is essential to art is that it fulfils the purpose of expressing. For example in literature, the Chilean poet Pablo Neruda had a very unique vision of the world that was exposed to the rest of the world through his poems (Confieso que he vivido pg. 25). One of his main theories was that all matter in the world was destroyed by time. Whether writing on love, poverty, or morality he incorporated and stressed this point in all his poems. Because Pablo Neruda perceived the world differently he created a positive impact on literature. Like wise the subjectivity of perception is essential in science, although it may be considered an obstacle because of

how specific science is. Because of the large range of perception amongst the world new scientific ideas are created. Individuals who are capable of having a different perception on the scientific world are those who come up with scientific breakthroughs. For example the European astronomer Nicolaus Copernicus, was the first man to state that the solar system was heliocentric, meaning that the planets revolved around the sun (http://scienceworld.wolfram.com/biography/Copernicus.html). The previous theory was that the galaxy was geocentric meaning that all the planets and the sun revolved around the earth. Later this theory was proved to be certain. Thanks to Copernicus' unique perception on the world a great scientific discovery was made. Also, even the basic tools of experimentation include the use of perception. When performing an experiment, all of the conclusions are derived from observation, and observation is a form of perception because observation is simply writing down what is perceived.

Another way that perception is seen to benefit both art and science is through emotion. Emotion and perception are closely tied together because perception is altered depending on emotions. For example, the quotation "you perceive only what you want to perceive," stresses the point that desire (an emotion) impacts perception (Ways of Knowing pg. 34). But another example of how emotion impacts perception would be through the intention of the artist or scientist. For example with music, the famous singer of the 20th century Billy Holiday was known for making controversy as well as for her beautiful voice. In 1939 Billy Holiday recorded a song called strange fruit loaded with controversial statements regarding the opposition to racism. Her perception on slavery and racism loaded with emotions like desire for change, and frustration gave her impulse

to make a statement with her song. A similar example can be used for science. The American physicist Theodore Maiman was the first person to invent the laser. There were several scientists researching on the topic but none made it possible. Theodore strongly believed that the ruby was not the indicated material that needed to be use in order to create the laser. Other scientists had proved this wrong therefore the proposal of using ruby in order to make a laser was denied. These scientists suffered the burden of proof. After much experimentation Maiman decided to test the ruby even though it had been proved wrong. When he experimented with it, he finally was able to create a laser beam, and thus the first laser was created. Theodore Maiman felt so strongly about this idea that he was persistent on testing the ruby. This shows that his perception or his belief of the ruby being the indicated material to create a laser was proved right thanks to his emotions. His eager to create the device and stubbornness caused him to prove his initial perception on the laser right.

Perception can be considered an obstacle as well as an essential element of knowledge in the two areas of knowledge of the sciences and the arts. While the arts are fully based on perspective and science considers it an obstacle, perception is essential to any area of knowledge. Through observation and analysis conclusions are made and thus knowledge is born. And because knowledge itself is created by human beings perspception will always play a role in obtaining knowledge.

Bibliography

"Theodore Harold Maiman." Wikipedia. 14 Mar. 2007. Wikimedia Foundation, Inc. 19 Mar. 2007 <http://en.wikipedia.org/wiki/Theodore_Maiman>.

Michael, Woolman. Ways of Knowing. Australia: IBID P., 2000. 33-41.

"THE TOK DIAGRAM." Theory of Knowledge: International Baccalaureate. IBO. 18 Mar. 2007 <http://www.amyscott.com/tok_diagram.htm>.

Krane, Kenneth S. Krane S. "Atom." Answers.Com. 18 Mar. 2007 <http://www.answers.com/topic/atom>.

Neruda, Pablo. Confieso Que He Vivido. Madrid, 1974. 24-30.

Weisstein, Eric W. "Copernicus, Nicholaus (1473-1543)." Wolfram Research. 1996. Mathematica. 18 Mar. 2007 <http://scienceworld.wolfram.com/biography/Copernicus.html>.