Genetic engineering on babies.

WVNS 211 Assignment 5:

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This paper is about genetic engineering on babies and how different paradigms view the issue. It is first going to start with defining the world views, namely: modernism, post-modernism, evolution and young earth creationism and what each world view entails and then define genetic engineering and all it’s aspects and how each paradigm views genetic engineering on babies.

Ontology is the often defined as the philosophical study of existence as well as the classification of existence. It basically aimed at answering the following questions: what is real?; what exists?; and what is real? It is based on the beliefs of the nature of reality. Ontology is aimed at determining whether a particular aspect of reality exists or not, whether it can be considered real or not. It looks at their being, cause or identity.

Epistemology is often defined as the study of knowledge acquisition, which is the process in which knowledge is acquired. It looks at the relationship between the researcher and what can be known and how we know what we claim to know. It helps us distinguish between what is true and what is false by explaining how our minds relate to reality and whether what we consider a reality in our minds is valid or not valid. It also looks at the construction of concepts, the nature of the conditions and the validity of senses paying more attention to the four main sensory organs of humans in which those are what we mainly use to acquire information about our surroundings. Epistemology allows us to think about the way we think therefore it helps us evaluate our surrounding better. Without epistemology humans will have no reason to believe in their thoughts or actions . We need it to accept reality and live our lives in successful pursuit of the truth. It is also argued that knowledge comes from reason and that is why humans have the ability to reason and therefore they can acquire knowledge.

Methodology refers to the how we obtain knowledge using a system of methods. Methodology is more specific and practice based than epistemology. The appropriate choice of methodology is determined by ones ontological and epistemological beliefs because the methods used to gather and measure information differ in objectivity. Methodology aims to answer the following question: what procedure can we use to acquire knowledge.

Realism is an ontological perspective within the quantitative or modernism paradigm of research therefore it is important that I first explain what is realism and then move to modernism.Realism is the view or belief that reality in the form of a certain object exists independently of what we think or perceive. Realists have different beliefs in the realism spectrum. Realism is driven by laws of nature and therefore realists tend to believe in cause and effects laws. Realists believe in using experiments, experience, observations, and scientific reasoning and verification to find out the truth or facts about reality. Realists also believe in the so called truth that is not influenced by any theories and human beliefs or theory, fixed and also the truth can be measured and verified. Realist also believe in an environment in which something exists or happens in is free from generalization. Realist also believe in using the combination of reductionist and deterministic approaches. In which a reductionist approach looks at describing a complex phenomenon using other simpler and fundamental phenomena and deterministic approach looks at determining events based on previously existing causes not randomly.

Genetic engineering is the modification and manipulation of an organism’s genes using biotechnology. Genes are short sequences of DNA found in the nucleus of animal or plant cells. The process of genetic engineering includes infecting an animal or plant cell with a virus or bacteria with the new DNA, the word “infecting” is used because living organisms are made to resist any introduction of new DNA from any other organism. Genetic engineering carries a lot of risks because it not guaranteed that the transfer of a gene is going to be successful and that the reaction of the organism to the inserted gene is the one that the experiment is aiming for. Genetic engineering is associated with biomedical techniques that includes: artificial insemination, in vitro fertilization, cloning, and gene manipulation. Genetic engineering has also helped with the creation of bacteria that are able to synthesize useful substances such as human insulin. Gene editing has become more prevalent in this 21st century, which is based on CRISPR-Cas9 technology. It allows the customization of the genetic sequence of living organisms by changing their DNA. It has been used in genetic modification of plants, livestock and model organisms.

The recent use of CRISPR-Cas9 that has been on the spotlight is the genetic engineering of babies. A scientist in China, He Jiankui claimed that he removed genes in an embryo in order to make babies resistant to HIV. The embryo has since developed in to a set of healthy twins with the names Lulu and Nana. His claims have not been verified but scientist believe that such modification can have dire consequences on the organism. The removed genes have other functions that they have to perform other than supporting the infection of HIV. The removal of the gene also affects the overall functioning of the cell and its genotype or phenotype that will be visible when the babies are born or later on in their life. The removal of the gene can also result in the babies being prone to other diseases.

Modernism is the same as positivism so they tend to have the same traits. Modernism is based on generalized truths about reality whereas positivism searches for the truth or facts about reality.This world view emerged during the modern era and was based on rational thinking, logic, scientific processes and technology to increase the level of knowledge and well being of people using rationality. Modernist believe in universal truth. The ontological view on modernism is according to realism in which it relays that one reality exists and that reality can be objectively measured. The epistemological view under modernism is based mainly on being objective since one objective reality has been defined. This means that the researcher maintains distance from the research in order to prevent any influences on the results. The methodological view in this paradigm looks at the methods to acquire results, experiments or manipulation that take place. Quantitative methods are highly prioritized and also measures are taken to ensure that nothing can affect the research such as focusing on reliable and valid tools for the experiments.

Modernists will be for the genetic engineering on babies, this is because modernist believe in science and technology in improving lives of people. Genetic engineering babies involves using biotechnology to create babies which have better chances of surviving in earth, the babies have better characteristics and are made to be resistant from diseases. The process is regarded as a reality and since it falls under science and technology it can be objectively researched and that is what happened according to the scientist who made the first genetic engineered babies although other scientists have not verified it yet. The genetic-editing is considered a technique, therefore it means that there was procedure and steps taken to perform the experiment which is what methodological modernist will pay attention to when evaluating this topic. Modernist will not agree with the view that genetic engineering is unethical because they have no sense of faith or religious belief. Therefore they believe genetic engineering is just a way of people exercising their freedom of thinking without the limitations of religions or beliefs.

Post-modernism refers to the movement away from the traditional school of thoughts, with the belief that there is no universal truth and it cannot be defined. Post-modernist says that the social phenomenon cannot be defined because defining it would be contradicting what post-modernism actually stands for. Post-modernist distance themselves from any theories that attempt to or explain reality and they also used unscientific approaches to life and believed in chances. Post-modernists were very active in politics. The post-modernism basically means not to conform to any standard.

A post-modernist would choose not to have an opinion on genetic engineering because they believe there is no truth so them having an opinion on the issue is them actually taking sides or deciding what the truth is. A post-modernist believes in anything goes meaning that whatever happens today happens and and the following day what happened on that day might not even matter. A post-modernist will argue that it is not only science and technology can be used to judge but also a person’s perspective and culture plays a role in it and therefore should not be ignored. Post-modernists will not agree with the opinion that genetic engineering on babies is unethical because they believe that should not have that much power to decide what is wrong and what is right and there actually is no right. The view of post-modernism about genetic engineering is simple, genetic engineering has the right to take place.

Evolution is a world view which looks at every aspect of the world and the belief in the evolution of living things. A evolutionist believes that all living things evolve and that science can explain the process of evolving. The evolution of living things means that living things adapt to their respective environment so that they can survive and therefore living things with more advanced characteristics survive longer than the one with inferior characteristics and then pass them on to their offspring. This is referred to the process of natural selection. Natural selection is Darwin’s theory of evolution, it is vastly used in the debate of evolution. There are two different evolutionist: naturalistic and theistic evolutionist. The main difference between the two is that a theistic evolutionist believes that evolution was guided God or God was involved in some way and that He is the one who created living things. Naturalistic evolutionists believe that living things came to existence as a result of natural causes.

Genetic engineering involves the use of technology to modify and manipulate an organism’s genes in order to have specific traits that will favor its existence. It is therefore not natural or controlled by God, the evolution or change of the organism is forced. An evolutionist will not be in favour of genetic engineering of babies because it goes against what they believe in. They believe that whatever way living organism were created should be the way that determines how they live and how long they live. Humans are basically forcing the adaptation of living organism to take place in their own specified time and pace.

Young earth creationism is a form of creationism, which looks at all aspects of the earth and universe as the creation of a supernatural being. Young earth creationism is religious based in which it looks at the book of Genesis from the bible and relays that the earth was created in 6 days made up of 24 hours each. In contrast, old earth creationism looks at what in the book of Genesis is compatible with what can be used to scientifically prove the age of the earth and universe. Young earth creationist believe that some rock layers and fossils came about after the flood that happened during the Noah era from the all the living organism that did not enter Noah’s ark.

Young earth creationist believe that God is the creator of the universe and everything within it and when He created them, it was in His divine glory. God would not create anything that He did not believe was great in its own essence and needs any external force to make it greater. Genetic engineering on babies therefore undermines the work of God and therefore goes against what young earth creationists believe in.

I am against the genetic engineering on babies mainly because I am a christian and I believe that God is the creator and that He created us in His image and there is nothing greater than that. God has a plan for our lives, when he created us he made sure that every feature, every trait that we have helps us in fulfilling our purpose. Genetic engineering on babies also can be used for non medical reasons, it can be used to make babies that are much smarter for instance which can create a very hostile environment for people who live in it. People who do not have the features of genetically engineered babies may experience discrimination in its highest degree. The fact that also genetic engineering could have an impact on those babies in the long run or when they are born also adds on to the reasons why I am against it. I believe that we are going through enough as people and we do not need more things that will increase the uncertainty we already have about this world.

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