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# Fritz Jahr's bioethics and the Stem Cell Research

## ABSTRACT

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The medicine of 21<sup>st</sup> century seems to give humankind a new hope for treating most diseases through the wonder of stem cells. Medical scientists have been working hard to find out how to apply these pluripotent stem cells to enhance our health. There however, ethical concern exists that the extraction of the primordial stem cell from the blastocyst will cause the withering of this potential life. There have been ethical debates about what life is and how we can ethically utilize this life-saving cell to save human life. This paper will consider what Fritz Jahr, the coiner of Bioethics, sees about life and then discuss what stem cell is and what is involved in this research. Since the definition of life has been diversified among bioethicists, this paper will seek theological interpretation as well as bioethical view toward do-no-harm and do-good. This paper will conclude saying that the further study of a new way to heal human diseases must continue, but also we need to proceed with the stem cell research with extreme caution.

## I. Jahr and His Bioethics

Fritz Jahr was born in 1895 and passed on in 1953. During his life time, there was no such things as genetic medicine let alone stem cell research and therapy. But we can fathom his thought through his writings to figure out his bioethics toward this most challenging biomedical technology in human history so far.

Jahr's most productive writing period was between 1927- 1947. He was already in his 30's but, his writings seemed to have come to a stop by the end of the World War II.

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His most important bioethics is his bioethical demand: “Respect every living being on principle as an end in itself and treat it, if possible, as such.” His thought goes beyond the earthly superficial phenomenon to the deeper layers of life. His bioethics is for all forms of life, (1) human, animal, plants even the unseen, something from within and the beyond. (2)

When Jahr discussed about the three stages in life, he said that “in the beginning life exists in the ‘earthly house’ of the body, in the terrestrial housing – in the very beginning even in the earthly housing of the mother’s body in flesh”. Very obviously, Jahr sees the potential life or fetus in mother’s womb as a life which is the first stage of life of all.

When the neonatal development comes to maturity, nature will force the new life, baby to be born and Jahr describes this passage as a “death”, leaving a familiar quarter even it is only a hut. That is a struggle because we feel comfortable to the accustomed surroundings and now the baby has to enter a strange new world. Going into a new world is always a challenge, therefore, Jahr said “baby at birth cries at leaving the mother’s protective womb. (3) Though taking a new cloth having a legal status as mortal form, there is an “inner body or “spirit-body” as Jahr described it. He firmly believed that the phenomenal life is not the only life human experience, there is something prior to this form that was created and there will be again a different form afterward too.

In his discussion of bio-ethics he said “that modern research in psychology covers all living beings in research... speaks of bio-psychik (science of the soul of all, what lives). From Bio-psychik it is only a step to Bio-ethics, i.e, the assumption of moral obligations not only toward humans but towards all forms of life. “(4)

Under the perspective of sanctity of life and life’s manifestations he said often “we do not consider that each person has moral duties towards oneself as well and that those duties are of immense important. Christian religion expressively mentions those moral duties of everyone towards oneself... in Christian perspective every life as such is morally sacred..... destruction and harm –again including one’s own life is a moral sin. ‘Don’t you not know that you are God’s temple and that God’s spirit dwells in you? You shall keep God’s temple sacred and not destroy it “(5)

In interpreting Jahr’s thought, Hans M. Sass says:

“The bioethical Imperative is a necessary result of moral reasoning in the Humanities, based on empirical physiology and psychology of humans, plants and animals. As such it needs to develop, to educate and to steward personal and collective cultural and moral attitudes and calls for new respect and responsibilities

towards all forms of life. The Sanctity of Life” is the foundation of Jahr’s 1927 Bioethical Imperative” (6)

## **II. Sanctity of Life**

To Christianity, Sanctity of life is a clear concept depicting that human is created in the Image of God. Therefore, man is not only an earthly being, he also possesses “Divine Breath” because God blows his divine breath into him to make him a full person different from other beings (Genesis 2:7).

Scientists and philosophers have been debating among themselves about what life is and when life begins in human procreation processes. This debate has become even more diversified since medical technology has been able to detect the movement of unborn baby in mother’s womb and discover how cell divides itself from a single fertilized egg to a full body. Jahr’s understanding is that even before the birth, life is already there.

Life can be understood from many angles. We can say there are biological life that includes all living things, biographical life that refers to human relationships, dreams and expectation. We can also see a rational life that is based on reason. We do not depend on instinct to survive but we use reason to distinguish the good from the evil, the right from the wrong, the just from the unjust.... (7). Humankind uses his reason to check his behavior and take care of his surroundings. In so doing he set forth some ethical guideline, for instance Ten Commandments to ensure man’s harmonious relationships to his creator and his fellowmen.

With the dawn of modern medical sciences, the biological definition of life becomes ambiguous. We can distinguish at least three different understandings of when life begins from biological perspective:

1. Genetic school: the formation of gene as the beginning of a person. Thus, life begins at the moment of fertilization.
2. Developmental school: conception as beginning of life, yet personality is developed and thus life has its vague state prior to the formation of all prenatal organs.
3. Social consequential school: a person is not a person unless the society says he or she is. In other words, birth is the beginning of life and moral personality is a process to be determined by social norms.

These different definitions of life will end up with different ethical positions. Genetic school will insist that we must take care of the potential life from the

moment life is formed at conception. The developmental school will say life may be formed at conception but its development takes few weeks till vital organs are formed to be confirmed as a potential person. The social consequential school will argue that unless a baby is born, it does not enjoy a human status thus is not protected by law.

When we talk about life, often people refer only to the physical being, the one that enjoys earthly living with a legal status. Since medical technology has already taken care of the fetus in mother's womb to the point that surgery is performed to correct any defect of the unborn life, any existence before the birth in fact has been recognized. Looking after the unborn baby is a routine pre-natal care now. The unborn baby in mother's womb undoubtedly is already a human being.

### **III. Stem cells research and therapy**

Cell therapy is the transplantation of human or animal cells to replace or repair damaged tissue. It has potential to treat a wide range of diseases and disorders but at potentially harmful risks. With stem cell therapy, cells are used to reproduce healthy cells by injecting them to the damaged tissues anticipating that it will do the repairing job and replenish the damaged cells. But there is a chance that these cells could rapidly and uncontrollably reproduce, causing a tumor to develop in the patient.

Beside this therapeutic function, new and young stem cells in replacing the old cells can also prolong life up to twice our expected life span. Replenishing stem cells so that a person can live longer, however, wouldn't stop people from aging. A child would still grow and mature into a young adult, and that adult would continue to mature. In other words, stem cell therapy can't reverse or stop the aging process.

Basically speaking, stem cells are the master cells in the body with ability to turn into many different types of specialized cells for an indefinite period of time. Other cells cannot do this. There are three types of stem cells:

Totipotent stem cell that can become an entire human being, e.g, stem cells extracted from a fertilized egg.

Pluripotent stem cell that can develop into any body cell but cannot become an entire human being, e.g. a seven-day-old embryo or blastocyst.

Multipotent stem cell that can only differentiate into same tissue type e.g. bone marrow stem cell that can differentiate into another bone marrow cell but cannot turn into kidney or eyes. This can be called as adult stem cells.

Using adult stem cells does not pose any concern because they will not destroy a potential life. If the stem cell therapy is to use adult stem cells for repairing the damaged body as long as it follows the bioethical principles, it is a good thing. But the experiment or therapy that is involved with extracting totipotent stem cell causing a potential life to wither and die is a concern. Those who argue that embryo is not a life, will continue to extract the stem cell from the blastosyst causing the death of this potential life. (8)(9)(10)

## **IV. Cases**

### 1. A Fascinating and controversial story:

“If it wasn’t for her, I wouldn’t be here,” says 27-year-old Anissa of her 9-year-old sister, Marrisa. “And if it wasn’t for me, she wouldn’t be here, either.” This happened in 1990. Both sisters are grown ladies now (Anissa is in her forties and Marrisa finished her college education) but this anecdote provoked much debate that still lingers on today.

### 2. An experiment on cell therapy

A neurosurgeon in Taiwan was approached by the parents of a girl who suffered a traumatic brain injury due to car accident. This girl has been in coma (E1V1M1) for 3 years. Four head surgical procedures had been done without any improvement. This doctor planned to use her autologous adipose stem cell to treat the condition. Since this medical procedure has never been attempted to the brain before, the doctor requested a human experiment to use stem cells to treat this unfortunate girl.

### 3. Using the leftover frozen embryos

A woman being unable to conceive got help from an infertility specialist who, using her eggs and her husband’s sperm to create many embryos and successfully implanted four. To ensure the pregnancy to come to a full term, two embryos were removed few weeks later. The unused fertilized eggs were frozen for later use if more children is desired. This lady is now a mother of two twin boys and did not want to have any more babies. The infertility specialist was interested in stem cell research and sought the consent from this woman who, without any reservation happily signed ICF. The woman was informed that once the stem cells are extracted from frozen embryo, life will cease to exist and there will be no more embryo to use later if she changes her mind.

These three cases represent the dilemmas we are confronted today in stem cell research and therapy.

The first case was successful. Thank to the medical technology that one life was saved and the other unexpected life that was brought into this world as a result of utilitarian consideration. Through undergoing bone marrow transplant, these two lives were given opportunities to grow. The bone marrow therapy is now a commonly used medical procedure.

The second case is still under consideration. The PI has been requested to do an animal trial first and also to provide more reliable evidence to support that his protocol will not yield more harm.

The third case is our biggest concern. We surely like to see medicine move forward to ease human pain and heal diseases but if the treatment needs to sacrifice someone in order to proceed, it cannot be justified as the research ethics insists that we cannot put a person in danger by trying to save another. Nor would Jahr agree on that.

## V. Bioethical reflection on these cases

Prior to any discussion on bioethical reasoning, we must ask what is the foundation of biomedical ethics and what does biomedical ethics intend to accomplish?

Firstly, biomedical ethics affirms the value of life. Without this conviction, biomedical ethics does not serve any purpose. Only when we value life, we can talk about bioethics.

But what is life? There are biological life that includes all living things, biographical life that refers to our relationships, dreams and expectation that makes us a historical being and separates us from other life forms and make us uniquely human. We can also see a rational life that is based on reason. We do not depend on instinct to survive but use human reason to distinguish the good from the evil, the right from the wrong, and the just from the unjust... Humankind uses his reason to check his behavior and take care of his surroundings. In so doing he set forth some ethical guideline, for instance Ten Commandments to ensure a harmonious human relationship in society.

These different definitions of life will end up with different ethical positions. Genetic school will insist that we must take care of the potential life from the moment life is formed at conception. The developmental school will say life may be formed at conception but its development takes few weeks till vital organs are formed to be confirmed as a potential person. The social consequential school will argue that unless a baby is born, it does not enjoy a human status thus is not protected by law.

Secondly, the bioethics we have so far seems to relate only to the physical beings, the breathing people who possess legal status. The new biomedical ethics must be extended to include all potential life. Our new medical technology has already taken care of the fetus in mother's womb to the point that surgery is performed to correct any defect of the unborn life. This has been done and become a routine prenatal care, therefore we can firmly claim that biomedical ethics has been extended to the unborn already while she/his is still in mother's womb.

Thirdly, the purpose of medicine is four dimensional, the alleviation of pain and suffering, the healing of disease, and the prevention of illness and the promotion of health. For fulfilling these purposes, biomedical ethics provides principles to help guide and implement the processes. Among many principles, the Georgetown's four principles have been regarded as the most basic denomination commonly accepted by the world.

The first two principles, non-maleficence (Do-no-harm) and beneficence (do good) are the two sides of a coin that are most essential in bioethics even from the time of Hippocrates. The first case we mentioned emphasized on doing good although it had been criticized that Marrisa was brought into this world only as a tool to save her sister. Indeed, the very reason she was born was for a special purpose. Therefore Anissa said: "If it wasn't for her (Marrisa), I wouldn't be here, and if it wasn't for me, she wouldn't be here, either." It is sheer utilitarian in prospect. The bone marrow transplant between these two sisters succeeded fortunately, otherwise, there would be a big storm striking upon this attempt and a bioethical debate would last for a long while.

The second case's concern is centered on do-no-harm though the PI might be motivated by the principle of beneficence to bring cure to the suffering patient. The stem cell therapy for such a condition has not been tried and the chief concern is that stem cells that are to be injected to the brain of the human subject may not stay where the doctor wants it to stay and work. The stem cells can move around everywhere in the body causing even more trouble for the patient. It is out of do-no-harm as well as do good that the protocol was brought forth. The ethical review committee requested the PI to provide more information for the sake of protecting the patient.

The parents of the patients hoped and even plea to have the protocol approved, thus there was no issue about autonomy but the ethics reviews committee wondered if the parents understood the consequence if the operation failed. On theory, the stem cell therapy promises a good outcome but in reality, we still do not know enough and therefore we must be scrupulous of what we try to attempt.

The third case has been most controversial. Different bioethical stand will have different argument and all seem to be legitimate as bioethics does not provide absolute answer to the problems we face. Therefore, we must return to the original goodness of human kind to find the answer that except theological reflection what else can we rely upon?

## **VI. Theological reflection toward the new technology.**

As we mentioned earlier, biomedical ethics must be based on the conviction of the value of life that is called and known as the sanctity of life from theological and Scriptural perspectives.

Sanctity of life is not only a Judeo-Christian understanding, the father of Chinese bioethics, Sun Su-miao wrote as early as sixth century that human life was as heavy as thousand pounds of gold therefore must be treated respectfully. Gold had been valued as the most precious thing among all in ancient China. Sun's words, "life is as heavy as thousand pounds of gold" intended to describe that life is sacred and precious and must be treated with owe and respect. It is similar to Christian understanding of Sanctity of Life.

The Sanctity of Life is based on the belief that human bears the likeness of God. The Bible says; " So God created man in his own image, in the image of God created he man; male and female created he them" (Genesis 1:27), " the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life and man became a living soul. (Genesis 2:7) Human receives his aliveness from the breath of God that signifies it is most sacred and should be treated with uttermost respect and carefulness. Albert Schweitzer, a humanitarian and also a theologian said: "I cannot but have reverence for all that is called life. This is the beginning and foundation of morality... it is good to maintain and cherish life, it is evil to destroy and check life"(11).

The image of God is not only an attribute of human nature but also about his capacity of possessing rationality, creativity and spirituality. In particular, the rationality of human beings has been emphasized by theologians from Augustine onward. It also means we are sustained by God rather than by ourselves. Besides, being created in the image of God implies a relationship of love. God created us out of his love and we, in response, must extend this love toward other human beings and all the earthly existence as responsible stewards. For this reason, Jahr appealed that we must treat all forms of life as end rather than as means. We are not the

master of our life nor do we own the world. Human must play his role as a steward responsibly.

The Bible also mentions that God created the Tree of Knowledge “the Lord commanded the man saying of every tree of the garden thou mayest freely eat but of the tree of the knowledge of good and evil thou shalt not eat it” (Genesis 2: 16-17). Why would God plant such a tree and forbid human to touch? There is an important teaching we must realize that human is but a limited being. We are entitled to do whatever we like to do, but there is a limit that human must not do. In this way, God set a barrier confining man’s insatiable pursuit of knowledge to only certain areas. As Van Potter said, in order for human to survive and have a future, bioethics must not be taken lightly. (12) Human must play his role as he is given.

With this Image of God in mind, stem cell therapy and research must be done in respect of God’s lordship over the world and life. There is a boundary that we must not go across.

2. There is an order of nature that we must comply.

In the universe God had created a physical order which extended to the physical structure of human being.

At the beginning God created all forms of life after their kinds (genesis 1:21-26). The Bible says repeatedly “... after his kind, after his kind....”. God’s way of creation is based on an important principle that each is created according to it’s own kind. In other words, nature has its order and when we follow it, it will run smoothly for the good of mankind and the universe, but when we try to intervene and change this order set by God, disaster will strike. We all know too well about the environmental problems we face today, for instance, the increase of carbon dioxide that we dissipate to our environment in the name of development either by burning too much coals or deforesting the entire forest ending up with the erosion of ozone layer that protects us. The climate change and the elevation of sea level ... all are consequences we suffer by our own doings.

In medical research, scientists are trying to change the physical order that God created, especially with the breakthrough of the cloning technology. We try to create new life by cheating natural process of procreation in cloning. The natural flow of universal circulation has been intercepted because we are diverting the order of the world. To Taoist philosophy that is the way to invite disaster -- when we follow with nature we will prosper, when we act against nature, disharmony and imbalance of Yin and Yang will abrupt causing global calamity.

One of the human attempts to discover the mystery of life is stem cell research. Indeed, stem cell therapy may be able to provide a new healing for humankind but we must bear in mind that the natural order that has been created must not be broken. Fortunately, many nations have regulated to ban the creation of chimera and also set the rules, for instance, in United States there are 25 states regulate and 10 states ban embryo or fetal research. Maine, Michigan and Massachusetts impose up to five years of imprisonment for harmful research on live embryos or fetuses, 38 states recognize that life begins at conception, New Mexico prohibits all human embryo research and requires that all embryos created be implanted. Louisiana designates embryos created through in vitro fertilization as “judicial persons.” Five states restrict the sale of embryos. Five more restrict the sale of embryos for research. Eight states prohibit the sale of embryos for any reason...

The progress of medical technology must be done in respect of natural order as what God did in the beginning when the world was created.

3. “All is lawful but not all can be beneficial” is the teaching given by St. Paul when the church in Corinth faced with a challenge about whether or not to take the food that had been offered to pagan gods. Paul’s teaching though not pointing to medical technology bears theological meaning that is worth our pondering at today’s medical situation. He says: “All things are lawful for me, but all things are not expedient, all things are lawful for me but all things edify not” (II Corinthians 10:23). We may endorse the new medical technology but in the meantime we must not neglect human responsibility to be a good steward without overstepping on the territory that belongs only to God. We should not try to build a new Babel Tower.

## VII. Continuous challenges

Secular voice has been very strong in terms of beckoning for further research. These are their arguments:

“It’s just like abortion. Fetuses/embryos don’t have rights. We must pursue embryonic stem cell research to find cures.”

“We can sacrifice a few embryos to save millions of lives. They’re going to be destroyed anyway.”

“Let’s allow both since we don’t know which one will be successful.”

“These embryos don’t have a brain or brain waves. Therefore they can’t be considered human life.”

“If an embryo can’t feel pain, then it should not be considered a person.” (13)

Obviously, these arguments come from the utilitarian ethics that emphasizes the end justifies the means.

We believe destroying human life in the name of science will eventually contaminate science. If the utilitarian approach is taken, the world will fall to the hand of those who try to lead human future away from God towards a wrong direction by diverting our moral and ethical principles. Human person is not only of the ability to feel pain, to breathe or having brain wave, human dignity depends on our willingness to recognize the value of life. Science as well as medical technology must work toward enhancing human dignity and empathizing with one another to extend practical caring to those who need remedy.

## **VIII. Concluding words**

Any research on stem cells must bear in mind four considerations -- is the attempt scientifically sound, safety minded, socially just and philosophically and theologically based? Jahr asserted that the complete moral personality was formed at birth yet reverence for life should be extended to all stages, independent or dependent, that reverence of life is to provide a pain-free environment as much as possible and that stem cell as a moral person, possesses status of right. Therefore

1. The research should not involve any cloning for purposes of human reproduction, any transfer to an uterus, or an creation of chimeras.
2. Acquisition and development must not violate accepted norms for human or animal research.
3. All such research must be done in a context of concern for global justice.
4. All such research should be approved by an independent Medical Ethics Review Board. (10) (14)

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## Bioetika Fritza Jahra i istraživanje matičnih stanica

### SAŽETAK

Medicina 21. stoljeća daje čovječanstvu novu nadu za izlječenje većine bolesti matičnih stanica. Medicinski znanstvenici naporno su radili kako bi saznali kako primijeniti pluripotentne matične stanice za unaprjeđenje našeg zdravlja. No, postoji etički problem koji stoji na putu ekstrakcije iskonskih matičnih stanica iz blastociste te bi mogao uzrokovati smrt tog potencijalnog života. Etičke rasprave ispituju što je život i kako se etički mogu iskoristiti stanice koje mogu spasiti ljudski život. U ovom radu najprije će se saznati što Fritz Jahr, osnivač bioetike, poima životom, a potom će se raspraviti o tome što su matične stanice i kako istraživanja o njima utječu na pitanje života. S obzirom na to da bioetičari različito definiraju život, ovaj rad nastojat će ponuditi teološko tumačenje i bioetički pogled prema principu ne-čini-zlo i čini-dobro. Zaključno, potrebno je stremiti novim načinima liječenja ljudskih bolesti, ali istraživanje matičnih stanica mora se nastaviti s velikim oprezom.