

RADIO 938 LIVE PANEL DISCUSSION ON HUMAN CLONING & EMBRYONIC STEM THERAPY, 17/1/2003(Dr.Gabriel OON Chong Jin) Q & As, eugenics, human cloning, IVF, stem cells.(and also East Coast Bioethics Seminars(27/2/2003). Life debate with Dr. Alan Coleman . Interviewer Mr. Augustine Anturan

1) SHOULD CLONING BE BANNED?

Ans: First of all, no one wants to do anything which is bad. Indeed we mustn't "muzzle" science, otherwise we would have not have had the many wonderful benefits of scientific innovations and discoveries over the last 200 years. Scientists must be given the freedom to be creative, and use their creativeness for the benefit of the human race. But now we have reached a critical stage in our discoveries, where we must all take one step back and ask: What are the implications of all these discoveries in human cloning? If we are to clone the perfect human clone, what will the outcome be and the implications?

Assuming we have the complete capability of making a super human being, with superb brains, superb physique, which does not need to take human instructions, but can reprogram itself or even by itself make even better clones than we can make ourselves, and they are far smarter than any human on earth, being indestructible to anything we can think of. Can we control them?

(1)We have human- created computers which "hang up" on us. They do not obey our instructions, and sometimes the printers go mad, and they print out a lot of rubbish nonsense which we do not want. When the key board does not work, we pull out the electrical plug. When we restart the computer, it sometimes goes back to normal, but it also sometimes does not. We get fed-up, or angry!

(2)When we drive a Human-made car, in slippery roads, we skid, and despite the foot on the breaks we can't stop it, or when we are riding a bicycle, and pull the hand breaks, but the bike doesn't stop, and we crash.

(3)In medicine we face " super bugs" which refuse to be killed, even when we use the most powerful antibiotics. Sometimes by boiling it, we kill these bugs, sometimes some microorganisms are heat resistant, and they can survive.

(4)Or human cells behave like cancers which are completely uncontrollable, relapsing after Human- made treatments, and no amount of human ingenuity can stop the growth of these clones. The person dies.

(5)The human DNA is the dynamo and the powerhouse for energy for cells to grow. If these clones control their own DNA, and won't allow us to destroy them, how do we control them?

What many of us who are scientists and doctors, see, these things, and they are very frightening, because the patient dies, sometimes very rapidly e.g. in the Man eating bacteria, the resistant infections, the resistant cancer or bacterial clones which rampages through the human body and is unstoppable, except when the person dies.

So the same situation can arise, if many human clones dominate the world, and take charge, will the human race die too ?

Should we not as humans, (whether we be scientists or doctors) not step back, and seriously consider,-- what would be the serious implications if humans allowed any Tom, Dick and Harry to clone humans?

What should we do with offenders? Why jail/remove grants/publish a register of banned scientists/doctors/ or remove know how knowledge?

Scientists, and doctors are the key. They can advice the public not to do it, but if their intention is to do human cloning regardless of the complications, they can convince:

(1)a grieving family that he/she can clone a replacement child, to be just like the one the parents have lost, without thinking of the serious implications.

(2) a pharmaceutical/biotech company on a futures market, selling a dream where there is no product, all for the purpose of deceiving investors and making a fortune.

(3) “fanatical drive for glory” to be the first to clone a human being, just like being the first in any discovery, or climbing Mount Everest. Sometimes even scientific fraudulent papers, ghost papers, and various misconducts are done to obtain research funding, and international status. In the last few years, leading world medical journals, e.g. Lancet, New England J of Medicine, The Royal College of Physicians have drawn attention to clever scientists who have committed scientific fraud, of publishing scientific works in which the results have been manipulated or research not done. The

Enron, Anderson and many US corporate failures highlight some of these serious cases, which are not uncovered except by brave whistle blowers.

(SCIENTIST AND DOCTORS WITHOUT CONSCIENCE ARE A MAJOR CAUSE OF HUMAN DISASTERS).i.e. In the hands of scientists is the ability to do enormous good or evil!

2.WHAT IS CLONING?

Ans: This is the near perfect replica of an individual, by using cells or DNA of the individual. However, they are different from identical twins. Human identical twins, have physical and genetic identity, and gene information from both parents, yet can have totally different personalities.

Although they can develop a similar genetic disease, e.g. cancer, diabetes, mental disease, twins are also susceptible to environmental diseases, and can die at different times.

The cloned person today, if he/she follows the animal models, will suffer from many Human- made gene and protein damages, resulting from chemical, electrical, and freeze/thawing procedures, which will damage protein structures(e.g. enzymes, and cells). Of the 200 odd embryos which were used, there was only 1 Dolly, and many of the cloned embryos miscarry or show severe genetic damages. Dolly has shortened telomerase gene, and is aging very fast. Heart and lungs structural damages are seen in cloned newborn animals. Delayed genetic damaged effects can appear later...e.g. premature aging, cancer, endocrine, brain or blood cells. Some of these cells are very sensitive to subtle denaturation caused by chemical and physical manipulations.

WHO SHOULD WANT TO CLONE A HUMAN BEING?

These are the persons who would want to clone humans:

(1)An ordinary person, with the means & facilities(e.g. funds & laboratory),or a scientist(s) all out to seek “fame & glory”. To them the end (“glory”),justifies the means(“death of thousands of imprisoned babies”).

(2) commercial company selling a futures market where there is no product, and making a fortune from the gullible, who are also hoping also to make a fortune.

(3) parent(s) seeking a replacement of a dead loved one, not knowing that the cloned child could have even more same fatal defects as the dead child, such as the added disadvantage that other genetic or physical damages may occur. If this clone should die, there will be more grief, as such great hope, and money was spent. If the clone is perfect and turns out to be uncontrollable, their grief could turn from grief to sorrow!

(4) Unscrupulous humans would take any organ, whether from a living person, or a cloned human being for organ replacement.

(5) For Military purposes. To use cloned humans as disposable “cannon fodder”, or as expendable humans for control of populations.

4. SHOULD GOVERNMENTS ALLOW HUMAN REPRODUCTIVE CLONING? WHY HAS UN NOT BEEN ABLE TO DRAW AN INTERNATIONAL TREATY REGULATING HUMAN CLONING?

Ans:

1) We hear that 20 countries including UK and Singapore have banned reproductive cloning, but we are not given the other news that there are ALSO 50 nations, including the USA, Spain and other countries who want to ban both reproductive and therapeutic cloning(TC) simultaneously, had refused to sign the UN treaty which would permit human cloning. The use of the term TC is deceptive, as it means that it is OK to regulate human cloning(TC), the main purpose being to obtain embryonic stem cells from destroyed cloned human being. Unless there is a total ban on all forms of cloning, any scientist, using government-aided grants can go elsewhere, outside the country, outside its jurisdiction and clone humans without being effected by the law. With the intellectual know-how obtained by the research he/she can then teach any Tom, Dick and Harry to clone any number of human clones. All he needs to find are surrogate Mums..and these are not difficult to find...from religious extreme groups to even Hitler-like personalities, who want to achieve a super human race, and world conquest!

DRAW BACKS

2) A major drawback to the use of human embryonic stem cells is their uncontrollable activity. Indeed some of the physical characteristics of

these Human embryonic Stem cells resemble highly malignant cancers, e.g. anaplastic oat cell cancers (a very aggressive fatal human cancer), where there is more nucleus than cytoplasm in these clones.

Human embryonic stem cells have consistently produced **MALIGNANT TERATOMAS** (a very fast growing fatal cancer of the testes, or ovaries, and germinal cells). When such embryonic stem cells are transplanted into a recipient, the recipient is at high risk of developing these cancers.

3) A second major drawback is the appearance of cellular transplant antigenic proteins in human embryonic stem cells of three to four days old. These embryonic SCs are no longer the blank and malleable cell, or master cell to make any tissue. Most of the follow up cases of such ES transplants have shown graft failure, which is a feature of rejection. If immunological suppression is applied to stop rejection, there is accelerated greater risk of developing the **TERATOMA** (cancer of the testes, or ovaries)

4) An International W.H.O. Regulatory Requirement for all biological preparations for human usage **MUST** provide convincing proof of **HUMAN SAFETY & EFFICACY**. To this date there are still no human embryonic stem cell products, and also no clinical trials, because of these cancer dangers.

5. SCIENTIST STILL DO NOT KNOW WHY APPARENTLY "NORMAL" ANIMALS DIE?

Ans:

(1) Animals are not humans, who can howl, complain, and sue for negligence, defective surgeries or illnesses induced. So if cloned humans are defective, manufacturers beware!! Drugs, e.g. Thalidomide which caused babies to be born without limbs, after the mothers (in the 1930s) had taken the drug during pregnancy, have sued the company to bankruptcy, but this does not ameliorate the life time disabilities, and sufferings these limbless children had to undergo. We do not know what a superclone will do to us...do you?

(2) Subtle protein and enzyme functions of cells, are damaged by manipulations, chemicals, or even the electrical charges which are used in somatic nuclear transfer, a method of embryo cloning. The human genome has 3 billion oligonucleotides and over 100,000 or more (DNA & RNA) genes. An Oligonucleotide is the smallest units of protein, which make up a gene. We do not know anything about the function of each nucleic acid which forms a gene, even though on a large scale, we can see deletions or mutations associated with human diseases. Human gene therapy has for this reason led to death, and many failures, and unknown complications. (see Straits Times, 16/1/2003 "Mystery illness stops gene trials, when apparent successive gene therapy recipients died of leukaemia")

6. SATISFYING PERFECT HAPPINESS IN INFERTILE COUPLE COUPLES, OR THE GRIEVOUS LOSS OF A DEAR ONE OR GRIEVOUS CRIPPLING DISEASE FROM FREAK ACCIDENTS, BY CLONING.

Ans:

I share with many grieving victims who suffer from all forms of disasters, be it freak accidents, unexplainable incurable diseases, fatal diseases, and every one desiring an instant "miraculous cure".

(1) Again what are the complications if we can't control the human clone. We can unplug the plug, or switch off the switch to stop a computer not obeying our commands, but if we cannot control the clone, how do we stop it? What will happen if we can't kill it, when it goes on a murderous rampage, especially as it has been programmed with superb defenses against biological, chemical, physical and microbial destruction?

(2) A child brought up and lovingly nurtured, acquires experiences which help it to be emotionally stable, and helps to develop our stable human society. To TEMPER with this LAW OF NATURE, AND TO DEFY THESE MORAL VALUES OF SOCIETY IS TO LEAD HUMANS TO DISASTER.

(3) But there is some hope, if we use ADULT SCs for therapy (without the risk of running into Cancers like ESCs).

It is possible to de-differentiate adult SCs, making them blank cells, and then reprogramming them into the tissues you want. Dr. Vescovi's team from the Milan Institute of Stem Cell Research, using neuronal cells, has been able to reprogram neuronal SCs to form any tissue in the body.

There are also various methods of removing immunological undesirable cells which cause rejection in adult blood, and use only the desirable ones for adult SC replacement therapy.

7.WHAT IS IVF?

Ans:

1)This is taking the sperm of a donor(usually the father) and mixing it with the ovum of the mother to produce many embryos. Many of these

embryos are re-implanted into the mother, as the miscarriage rate is high, and there is a high loss of babies. Different IVF clinics report different success rates,from 10-20%.The objection to artificial fertilization, it removes the love and intimacy of the sexual act, which bind two persons together to bring up their baby.

The serious objections are:

(a)Did you know that between 70-80% of the living human embryos, are given away to research and destroyed?

(Looking down a microscope showing a sheet of embryonic stem cells, each capable of forming a human being, I see instead, "THE FACE OF MANY WEeping BABIES WITH TEARS ROLLING DOWN THEIR FACES, ASKING " WHY HAVE YOU FORSAKEN ME? WHY ARE YOU TAKING MY ORGANS FROM ME?

THEY PLEAD...WEREN'T YOU ONCE LIKE ME TOO? WHY ME?

AND THEN I SEE WITH GREAT SADNESS THEIR LIVES FADING AWAY AND DEATH IN THEIR SAD TEAR STAINED FACES"

(b)the rest of the embryos die after storage

© some are donated to other infertile mothers.

The solution is to accept our own disabilities humbly, and adopt an unloved child, and bring it up as one's own beloved child, nurture it and not go into IVF, with hopes probably destroyed, by so many failed attempts at conceiving. Again the means do not justify the ends.

MANY IMPRISONED BABIES SHOULD NOT DIE BECAUSE OF THE VANITY, OR DESIRES OF SOME COUPLES. It is just like men growing old(above 50yrs) who cannot accept impotence, but associate it as a loss in maleness or macho!

8. WHAT IS MY REACTION TO OK TO USE EMBRYOS UNDER 14 DAYS OLD?

Ans:

THE NATURAL PROCESS OF BIRTH OF A HUMAN LIFE IS THE LAW OF NATURE. TO TEMPER WITH IT; TO KILL IT, INSTEAD OF NURTURING IT, IS TO LEAD THE WHOLE OF THE HUMAN RACE TO DISASTER. THE DANGER LIES WHEN THESE MORAL LAWS ARE PUT ASIDE, AND THE YOUNG HUMAN LIFE IS NOT ALLOWED TO BE NURTURED, AND BLOSSOM TO BECOME A GREAT OR HUMBLE HUMAN PERSON.

The Human Anatomy, and Embryology text books which every medical student is taught all over the world, shows and describes the human genome in every cell from the time of conception of the sperm and the ovum. From that time rapid reproduction of the cells are taking place, from one to 2, to 4, to 8, 16, until a whole ball of cells is formed. At this very early age specialized organs are formed, including surface proteins, and transplant antigens, which can cause rejection of the transplanted ES, or a graft vs host rejection of a host recipient.

However those who want to use these cells and to exploit its commercial potential, expediently claim that it is expendable, because it is a preembryo, or prehuman, a term not found in any of the up-to-date Human Embryology text books. So this term is deceptive and mischievous.

Errors and mistakes are made by humans. Some are minor, and no serious harm occurs. When more serious mistakes occur, there are usually two things humans do:

(a)First,the person can accept responsibility for the mistake, analyze it, make amends, refrain from doing it again, and then move on.

9.

(b)The second, the person denies any wrong doing, or mistake, puts the blame on others, covers up, misleads the investigation by slick talking, and continue with the mistake. These persons are dangerous, because if the harm is serious, more innocent people will be hurt. eg There are many drugs withdrawn from the market. They were brought in because they were good safe drugs, e.g. Slim 10. It led to death of a woman here.

Why 14 days? Why not 5, or 20 days? The reasoning was based upon the knowledge that without a nervous reaction, a person is dead. This perception is completely wrong, because if the embryo is allowed to grow beyond 14 days it would have an intact nervous system.

WE MUST NOT FORGET THAT WE WERE ONCE AN EMBRYO TOO,AND UNDER 14 DAYS. HAD SOMEONE THEN DECIDED TO UNPLUG OUR LIFE-LINE & REMOVED US WHEN WE WERE LESS THAN 14 DAYS OLD, WOULD WE, TODAY HAVE SUCH GREAT POLITICIANS, CABINET MEMBERS,SCIENTISTS, MUSICIANS, OR EVEN HUMBLE PEOPLE LIKE THE PERSON WHO SWEEPS AND CLEAN OUR STREETS,AND KEEP THEM CLEAN?

Jerome Lejune, the discoverer of Down's Syndrome(Mongolism), and a world famous geneticist, stated that from the time the sperm meets the egg, the baby is already growing.

9. WILL PEOPLE GO UNDERGROUND TO ACHIEVE CLONING?

Ans:

NOTHING WILL ELIMINATE ANYONE WISHING TO CLONE A HUMAN. SOME OF THE WAYS IS TO ELIMINATE KNOW-HOW, BECAUSE WITH THE KNOW-HOW, ANYONE CAN GO ANYWHERE IN THE WORLD TO CLONE A HUMAN. For this reason therapeutic cloning will give the know-how to clone humans.

(1) But if they realize the serious implications of what they aim to do, they will not go ahead and clone a human, and then have a nightmare in not being able to control it, then they could refrain.

10.

(2) If they realize that by using Human embryonic stem cells for therapy, or from cloned embryos and run the serious risk of getting, and dying from a high grade cancer of the testes or ovary, (teratoma) they too may refrain.

10. What is therapeutic cloning and how does it differ from IVF embryos?

Answer: In IVF, the human embryo is living and is created by artificially fertilizing the female ovum with sperms. Usually several living embryos are produced, and when placed inside the womb of a surrogate mother, it will form not just one, but several human babies. These are natural products. Unfortunately, between 89-90% of these living human embryos will die, either destroyed by human experimentations, or by decay through storage with time.

In Therapeutic human cloning, the nucleus of the human egg is removed, and this is replaced by other foreign DNA, which can be derived from any part of the body. This know-how method is called somatic nuclear transfer. During the treatment of this SNT experiment, the cell is starved off nutrients, rendering the active genes to shut down. This shut down of gene activity leads to reprogramming of genetic material to make the donor cell, revert to its embryonic, totipotential and unspecialized state. When an electrical current is passed through the cells, fusion takes place, and a cloned embryo is formed. When this cloned embryo is transferred into the womb of a surrogate mother, a cloned human will be born. The human ova has specialize properties. So no human DNA alone, without the female ovum, can form a cloned human embryo.

The know-how to do therapeutic cloning can lead to reproductive human cloning, since all that is needed is to implant the cloned human embryo into any human female womb. This know-how, can also lead to manipulation of the human genome to insert a fish gene with the human genome, and give rise to a mermaid. This crossing of species have already been achieved between the goat and the lamma, and many other

animal species. Who knows what other “heinous” manipulations can be conjured up to lead to a human clone which would be indestructible, self reprogrammable, and uncontrollable?

11.

However in IVF and in cloned embryos, genetic damages occur, due to manipulations, chemicals, and electrical charges, leading to imprint disease in IVFs born babies, and to multiple deaths, miscarriages, in cloned embryos. Even Dolly, a cloned sheep, suffered telomerase gene damage, resulting in accelerated aging, and cell death. The telomerase gene can cause premature aging or cancer. Other gene damages have been seen in the aborted fetuses, and Dolly has just died prematurely from lung complications(Sunday Times, 16/2/2003).

Both cloned and human embryos produce a very aggressive cancer, called malignant teratoma, which is a rapidly fatal cancer in human adults. For these reasons such cell lines cannot be used for therapy. Secondly, human embryos of a few days old, possess transplants antigens, which cause these cells to reject the recipients or itself to be rejected. One of the purpose of wanting to clone a human embryo, is take a genetically identical person (like a twin), and to use it for replacement body parts.

Is it not morally repugnant to clone a person, then kill it to obtain body parts?

11. Dr.OON , DO YOU NOT THINK THAT RELIGION & SCIENCE SHOULD NOT MIX?

REPLY.

Take the ten Commandments. One of them says “Thou shall not kill” These are not religious laws but laws of society . Once we start by saying by killing one person, for the benefit of other people, would it not open more claims to kill more people for the benefit of others? Isn’t this approved murder ?

12. ONE LINER

“IF HUMANS CONTINUE TO CLONE, USING WHATEVER MEANS & PURSUE EMBRYONIC STEM CELLS THERAPY

DESPITE WHAT I HAVE SAID AT THIS PANEL DISCUSSION
WOULD THIS NOT BE OPENING THE DOOR TO THE
DESTRUCTION OF OUR WHOLE HUMAN RACE?
17/1/2003.

Dr.Gabriel Oon.