

The Moral Status of the Human Embryo in Chinese Stem Cell Research

Yanguang Wang*

Abstract: In January 2004, the long-expected “Ethical Guidelines for Research on Human Embryonic Stem Cells” was jointly released by the Ministry of Science and Technology and the Ministry of Health, Beijing, China. In “Ethical Guidelines for Research on Human Embryonic Stem Cells”, Article 5 says, “The human embryonic stem cells used for research can be derived from: (1) spare gametes or blastula remaining after *in vitro* fertilization (IVF); (2) fetal cells after natural or voluntarily selective abortion; (3) blastula or monosexual split blastula by somatic cell nucleus transfer technique; and (4) germ cells voluntarily donated. Article 6 says, any blastula obtained by IVF, somatic cell nucleus transfer technique, mono-sexual reproduction technique or genetic modification cannot be cultured in *ex vivo* for longer than 14 days, since fertilization or nucleus transfer.

The support given in the guidelines for embryo research using somatic cell nucleus transfer technique, and support for human embryonic stem cell research under the condition of the embryo researched within 14 days, are facing objections from both China and some foreign countries. Also the support for the embryo research using spare gametes or blastula remaining after IVF; as well as for use of fetal cells after natural or voluntarily selective abortion is a subject of similar concern.

In my paper, I discuss the moral status of an embryo around 14 days old. I argue that an embryo within 14 days is not a person, an embryo is only a human biological life. While a human embryo has a certain value and it deserves due respect, if there are sufficient reasons it can be used. In the case of the blastulas or mono-sexual split blastulas by somatic cell nucleus transfer technique, this is an ethical issue of creating embryos for research. I argue that because the researched Human Embryo is not a person, Kants’ theory is not applicable here.

Keywords: Ethical Guidelines, Human Embryonic Stem Cells, Chinese Stance.

Chinese Stance and Ethical Debates on Source of Stem Cell Research

In January 2004, the long-expected writing “Ethical Guidelines for Research on Human Embryonic Stem Cells” was jointly released by the

* MD, Professor, Center for Applied Ethics, Chinese Academy of Social Sciences.
Email: ameliawyg@sohu.com, ameliaw2002@hotmail.com

Ministry of Science and Technology and the Ministry of Health, Beijing, China. In 'Ethical Guidelines for Research on Human Embryonic Stem Cells', Article 5 states: The human embryonic stem cells used for research can be derived from (1) spare gametes or blastula remaining after *in vitro* fertilization (IVF); (2) fetal cells after natural or voluntarily selective abortion; (3) blastula or mono-sexual split blastula by somatic cell nucleus transfer technique; and (4) germ cells voluntarily donated. Article 6 says: any blastula obtained by IVF, somatic cell nucleus transfer technique, mono-sexual reproduction technique or genetic modification cannot be cultured in *ex vivo* for longer than 14 days, since fertilization or nucleus transfer.

The Guidelines certainly brings China even closer to the international community of life scientists, by providing clear standards for research; it also enables China to clarify its stance on human cloning in the international scientific and ethical fields. Since the Guidelines were reported in the mass media, these have played conceivable role in the international discussions, in the aftermath of clone reports from other countries, "Guidelines for research on human embryonic stem cells" codified the interpretation and reconfirmed some previous ethical and political statements, and shows that serious attention was paid to these issues in China as well. In my paper, I focus mainly on the Chinese stance on the source of human embryonic stem cell used for research, and present arguments regarding the moral status and respect for the human embryo within 14 days in the human embryo

The support given in the Guidelines for embryo research using somatic cell nucleus transfer technique, and for human embryonic stem cell (HES) research under the condition of the embryo researched within 14 days, are facing objections from both within China and some foreign countries. Also the support for the embryo research using spare gametes or blastula remaining after IVF; as well as for use of fetal cells after natural or voluntarily selective abortion are matters of similar concern. There are ethical arguments on the four sources of human embryonic stem cells.

Christians believe that life is sacred, and it is God's creation, and that creation begins at conception. Many believe that no scientist or person can define the official day when life begins on the basis of

physical progression. To separate a spirit from a physical body (in other words, to say that something is not “alive” yet) is something best left to God’s hands. They think that such research is touching upon a very controversial issue.

The Catholic Church and Right to Life organizations in Australia have taken an oppositional stance to the creation of embryos by the techniques for research. They hold that this is the same as dismembering embryos, embryo farming, and cannibalizing embryos for their spare parts while still alive. Marcia Riordan of the Catholic Archdiocese of Melbourne said, “There is no need to kill some people to cure others”.¹ In May 2002, at the Council of Australian Governments Conference, Prime Minister and State Premiers decided to legislate that Australia has adopted the most conservative of the defensible positions to only allow derivation of new ES cell from spare embryos but not from IVF or cloning, because there is no creation of embryos by IVF for research.

I have to mention the double standard used in Germany and USA in these years. The double standard is such that the US federal institutes observe one standard, but private institutes are permitted not to do so. German law prohibits embryo research and embryo cloning within the state, but permits importation of stem cells derived from human embryos outside the country. So some leading Chinese stem cell researchers were worried that if the embryo stem cell research is limited by government, the development of Chinese stem cell research will be severely restricted.

There are objections from a small group of scientists and scholars from China. They argue that HES cell research should be forbidden, because if human beings go against the natural law, human beings will be punished by nature. HES cell research violates human dignity and this is a big challenge to human life.

To the spared gametes or blastulas remaining after *in vitro* fertilization and the fetal cells after natural or voluntarily selective abortion, some western bioethicists said if artificial abortion is morally wrong, we are wrong to use the embryos, if we use them, the same as we support the artificial abortion, and it is wrong to research on the embryos and destroy them these after, because the embryos constitute a personhood.

To such sources of research, the ethical issue is not an issue of “destructive embryo research”, it is an issue that the fate of cells from embryos which are already destroyed and the embryo is not a person. Some embryos are destined to die because some spare embryos were going to be discarded in the first place. About the ethical issues on abortions, I need not discuss this more, because there are much more earlier abortion around the world, also there are some strong reasons for some earlier abortion. In China, some Chinese scholars who supported using embryos to do research within 14 days, even said that the object of embryo research is inconsistent with values implicit in society, because there are many abortions in the mainland of China². Also, if opposition to the use of spare embryos from IVF is the same as real opposition to IVF, because frozen embryos could be destroyed, infertile couples were permitted to destroy unwanted embryos rather than to donate them to other couples. A comparison of human stem cell research with IVF would show that spare embryos were destroyed to bring a new life into existence. So there is no difference when human stem cell technology uses spared embryos to produce embryonic stem cells to save an already existing life. Thus it is wrong to say that preventing human stem cell research places a greater value on the lives of potential human beings than existing ones.

One ethical intuition that seems to motivate the discarded-created distinction in the blastulas or mono-sexual split blastulas by somatic cell nucleus transfer technique, is that whereas the act of creating an embryo for reproduction is respectful in a way that is commensurate with the moral status of embryos, the act of creating an embryo for research is not. Because the first class of embryo was brought into being under moral circumstances—because the intentions of its makers were moral—research on them is deemed acceptable. Because the second class of embryo was not brought into being under equally moral circumstances—the intentions of its makers were not equally respectable—research on them is deemed unacceptable³.

To the blastulas or mono-sexual split blastulas by somatic cell nucleus transfer technique, this is an ethical issue of creating embryos for research. If the embryo is seen as a person as, according to Immanuel Kant’s deontological view that a person (rational beings) ought always and only to be treated as an end and not as a means, it is wrong since such research on embryos is treating them as means. However, I think

that very early embryos, which do not have even a rudimentary nervous system, have no sentience, cannot feel pain, be hurt, or made to suffer. Because an embryo is not a person, does not have regard for itself as an end, so it does not know others have treated it as a means, therefore, there is no harm perceived to the embryos. So that they have no claim to any moral consideration to them.

Because there are relationships, between human stem cell research and embryo research, to my view above, I have argued here that the embryo is not a person, and examine what is the embryo's moral status. So the main point here is to interpret the moral status of human embryos .if the embryo is a person, to destroy it after stem cell research is the same as to kill a person, which is immoral and should be forbidden. But if an embryo within 14 days is not a person, the limited (but appropriate) moral status for them is consistent with limited research on them.

Criterion Approaches for Analysing Moral Status of Human Embryo

The moral status of the embryo is a function of the intention of its maker. Two broad approaches have been taken in debates over the moral status of the human embryo. One approach begins by proposing some single criterion of moral personhood. Beings that meet this criterion are believed to merit full and equal moral respect; those that do not are either denied respect, or accorded a lesser status. A second approach is pluralistic. It sees moral respect and personhood as deriving not from one or even two criteria, but from a variety of different and interacting considerations⁴.

A single criterion approach to analysing the moral status of the human embryo can lead to widely different conclusions. One view holds that the embryo is a person, a being meriting full and equal moral respect, from the moment of conception or fertilization because at this moment a unique diploid genotype comes into being. For those who hold this view, humanness, in a moral sense, is the possession of a distinctive human genetic identity.

Others arrive at this same conclusion of proposing some single criterion of moral personhood by emphasizing the significant increase in potential for development that accompanies the transition

from gametes to embryo. Those who hold these views do not always specify what they mean by fertilization or conception, i.e., whether it is to be understood as egg penetration by the sperm, fusion of the membranes of the sperm and egg, pronuclei formation, syngamy (when chromosomes from the male and female gametes join), or the activation of zygotic genes, which in the human embryo occurs around the 4-to-8-cell stage. But all are agreed that the moment of fertilization/conception, however defined, is the crucial beginning of personhood.

Moral positions emphasizing the genetic identity or developmental potential offer a definitive standpoint on the status of the embryo but they create paradoxes in logic, and run counter to many widely-accepted practices, including the use of the intrauterine device and other contraceptive methods that work by preventing implantation. The equation of genetic diploid starting with personhood leads to a logical paradox because twinning and the aggregation of two or more morula-stage embryos can occur well after fertilization. The emphasis on potential for development raises, but does not answer, the question of how much potential is needed for moral respect. It also ignores the fact that even though developmental potential increases at conception, it remains relatively low at least until implantation. For example, it is estimated that approximately 60 per cent of conceptuses are spontaneously aborted in the first days and weeks of pregnancy. It is morally unconvincing to claim absolute inviolability for an organism with which nature itself is so prodigal.

Among other single-criterion approaches to personhood, several positions exist that come to a very different moral conclusion about the status of the preimplantation human embryo. One position bases full moral personhood on sentience—the ability to feel or to experience pain. A second view emphasizes the beginning of brain activity or brain function. A third position takes as a marker for the beginning of personhood certain well-developed cognitive features or abilities such as consciousness, reasoning ability, and the possession of the self-concept.

While these views can lead to different conclusions as to when personhood begins, all support the conclusion that the preimplantation embryo does not merit the same degree of moral protection given to

children or adult human beings. The absence of a nervous system until after gastrulation or neurulation makes it certain that the preimplantation embryo cannot experience pain, has no brain activity, and is not conscious or self-aware⁵.

Many philosophers have explained their standards of and compare their opinions about personhood. Philosopher Immanuel Kant's deontological views are that persons are rational beings, they ought always and only to be treated as ends and not as means. Comparing his opinions with embryo research, we find that an embryo is not a rational being. Philosopher Regan believes that most sentient human beings-including some who are not even potentially capable of rational moral agency-have full moral status, as do many nonhuman animals. Peter Singer maintains that "the comparable interests of all sentient beings be given equal weight in our moral deliberations." Comparing their opinions with embryo research, we know that an embryo around 14 days old has no sentience which a person possesses⁶.

Philosopher Duns Scotus used a word to explain his philosophy of individuation. The term is 'common nature'. Common nature is essentially the basis of the definition of an entity-what all members of a particular class share in is indifferent either to being a particular individual or referring to all members of that particular class. Thus, it requires something else-an individualizing principle-to make it a particular being of this class.⁷ I think the 'common nature' of persons should be a rational ability, so that comparing with persons, the embryos' common nature can be held to be 'a possibility to be rational'.

Feminist Nel Noddings holds that moral status is a function of the emotional relationship she calls *caring*. On this account, it is not necessary for a sentient being already to be part of any of our communities for us to have moral obligations toward it; it need only be possible for us to care for it, and for it to respond appropriately⁸. But we can see that an embryo before 14 days has no emotional relationship with others, and has no response to caring, so such caring ethics can not be used to interpret the moral status of human embryos.

From the biological science point of view, Professor Thomas A. Shannon states, "cells at zygote and blastomere stages are totipotent

or pluripotent. That is, they are not yet differentiated or committed to the particular cells they will become in the body, hence their obvious desirability for stem cell research. However, the very structure of these cells, while conferring some biologic unity on the developing organism, also strongly suggests absence of a more critical ontological level of organization".⁹

What properties suffice to make something a person? That certain clusters of properties are sufficient is almost universally accepted among philosophers. Consider, for example, a being that possesses consciousness, has preferences, has conscious desires, has feelings, can experience pleasure and pain, has thoughts, is self-conscious, is capable of rational thought, has a sense of time, can remember its own past actions and mental status, can envisage a future for itself, has non-momentary interests involving a unification of desires over time, is capable of rational deliberation, can take moral considerations into account in choosing between possible actions, has traits of character that undergo change in a reasonably non-chaotic fashion, can interact socially with others and can communicate with others. Few would disagree that such an entity is a person, and posses all of those properties relevant with respect to such an entity namely person.¹⁰

A second broad approach to understanding how personhood and moral protectability are established is pluralistic. It does not focus on a single criterion of personhood, but emphasizes a variety of distinct, intersecting, and mutually supporting considerations. According to this view, the commencement of protectability is not an all or nothing matter, but results from a being's increasing possession of qualities that make respecting it more compelling.

Among the qualities considered under a pluralistic approach are those mentioned in single-criterion views: genetic uniqueness, potentiality for full development, sentience, brain activity, and degree of cognitive development. Other qualities often mentioned are human form, capacity for survival outside the mother's womb, and degree of relational presence. Although none of these qualities is by itself sufficient to establish personhood, their developing presence in an entity increases its moral status until, as some point, full and equal protectability is required.¹¹

Time Limit for Human Embryo Research

An early embryo certainly is not a person after we make clear what we mean by personhood. But why do we use the embryo within 14 days, what are the reasons for this, is our concern. In the wide range of questions asked by western scholars who express disagreements in research on human embryonic stem cells, it is advisable to set a clear time limit which will address the concerns of those of us who fear a slippery slope and possible abuses, while permitting research that promises to be significant for medical and therapeutic progress, to answer the question why the embryo within 14 days can be researched. The choice of 14 days or the appearance of the primitive streak may appear arbitrary, but there is a significance to the primitive streak, since embryonic development is a gradual process. That the primitive streak appearance indicates that the embryo proper is beginning differentiation and development as an individual, has been widely discussed.

The consideration of this stage can go back to at least as far as the 1970 paper, "Fatal Development," by Andre Hellegers. Hellegers cited the anomalies in embryonic development, particularly the ability of early embryos to twin and of two or more morula-stage embryos to aggregate, to question whether the pre-primitive streak embryo has the status of an individual human being.

This question was explored in much greater detail a few years later by James J. Diamond. Diamond asserted that an individual human being couldn't exist before 14 days' gestation, when the primitive streak appears. Some of the discussion material and papers prepared for the USA Ethics Advisory Board presented a similar view, and persuaded members of that body to adopt a 14-day limit in their 1979 report.

Since that time, extensive discussion of the moral relevance of the primitive streak has appeared in both the scientific and the ethical literature. The Ethics Committee of the American Fertility Society recommends that human embryos be not maintained for research beyond 14 days. The Committee on Ethics of the American College of Obstetricians and Gynaecologists argues that the lesser moral status of the 'pre-primitive-streak embryo' permits research at that stage. The Canadian Royal Commission characterizes its choice of 14 days as a "morally acceptable compromise in a pluralistic society in which there

are various views about the relative importance of different stages of embryo development". The pre-primitive-streak embryo permits research at that stage and is similar to UK's standard, which allows the creation of embryos from IVF and cloning before 14 days for ES cell research.

There is the possible moral relevance of the appearance of the primitive streak in relation to embryo status, for the following reasons: Before the appearance of the primitive streak the embryo has the capacity of twinning or becoming more than one distinct individual. Two or more cleavage-stage embryos or morulae can also recombine and form a single chimera. Apart from the distinction between the cells of the trophoblast and the inner cell mass, the cells are totipotent and have not yet differentiated into specific kinds of tissue. There is no neural tissue whatsoever before the appearance of the primitive streak, hence no possibility of any kind of sentience. Soon after the primitive streak appears, the process of neurulation or the development of the nervous system begins. The development of the nervous system includes the development of the brain and the specific structures, which underlie sentience and the ability to experience pleasure and pain.¹²

At the appearance of the primitive streak, the embryo proper is determined to be a distinct developing individual. Twinning of embryos and aggregation of two or more cleavage stage embryos are no longer possible. With the appearance of the primitive streak, the cells of the inner cell mass begin to differentiate into various types of tissues. The embryonic disc becomes a unified, organized, differentiating entity, the embryo proper, which develops continuously into the fetus and infant. The existence of a distinct individual is important to arguments for embryo status based on personal identity. The absence of developmental individuation before the primitive streak supports the claim that the embryo could not be a person before that time, while leaving open the question of personhood after formation of the primitive streak. These facts led some Chinese bioethicists to conclude that no individuated human organism exists before about 14 days after fertilization, when the primitive streak that will become the spinal cord of the embryo begins to form.¹³

The embryo that is 14 days old seems to be similar to a gamete, a sperm or an ovum. Few would support the view that each sperm and

ovum should be accorded full human rights. Few persons would support the claim that a condom, or a tablet medicine to prevent conception, is a killer of sperm and ovum. The use of a spermicide kills millions of sperm; surely it would be absurd to speak of all of them as losing their lives or being deprived of their lives. This suggests that it is not biological life that matters, but rather conscious existence. Few persons would support that nature is a killer because she lets many sperms and ovum die instead of allowing conception. Evidence suggests that some deficiencies causing failure lie in the oocytes themselves (intrinsic defects), while others result from suboptimal culture conditions or uterine environment (extrinsic defects). In some cases, the oocytes may be defective because they have developed chromosomal abnormalities during their long resting period in the ovary. In others, the rapid terminal maturation induced by the hormonal hyper stimulation may cause the oocytes to be abnormal and to either fail to fertilize or to develop abnormally following fertilization. Comparing the above facts, we conclude that embryos can be used within 14 days in research with respect.

Moral Status of Human Embryo

Philosopher Mary Ann Warren alleges that those who claim human status for embryos confuse biological and moral humanity, failing to see that it is possible to be biologically human without being morally human, that is, a full-fledged member of the moral community. It is not genetic human beings who are members of the moral community, but persons. She then goes on to identify persons as beings who are conscious, self-conscious, thinking, possessed of the ability to use language, and so forth. Clearly, embryos do not have any of these characteristics, and therefore embryos are not people and do not have the moral status of persons.¹⁴

How can the embryo's moral status be established? Warren propounded seven interactive principles to be used as complementary criteria of moral status:

1. The respect for life principle: Living organisms are not to be killed or otherwise harmed without good reasons that do not violate principles 2-7.
2. The anticruelty principle: Sentient beings are not to be killed or subjected to pain or suffering unless there is no other feasible way

of furthering goals that are (a) consistent with principles 3-7; and (b) important to human beings or other entities that have a stronger moral status than could be based on sentience alone.

3. The agent's right principle: Moral agents have full and equal basic moral rights, including the rights to life and liberty.
4. The human rights principle: Within the limits of their own capacities and of principle 3, human beings who are capable of sentience but not of moral agency have the same moral rights as do moral agents.
5. The ecologic principle: Living things that are not moral agents, but that are important to the ecosystems of which they are part, have, within the limits of principles 1-4, a stronger moral status than could be based on their intrinsic properties alone; ecologically important entities that are not themselves alive, such as species and habitats, may legitimately be accorded a stronger moral status than their intrinsic properties would indicate.
6. The inter-specific principle: Within the limits of principles 1-5, non human members of mixed social communities have a stronger moral status than could be based on their intrinsic properties alone.
7. The transitivity of respect principle: Within limits of principles 1-6, and to the extent that is feasible and morally permissible, moral agents should respect one another's attributions of moral status.¹⁵

It seems to me, the anticruelty principle was made for sentient beings, such as animals. The agent's right principle was made for moral agents, such as reasonable persons. The human rights principle was made for human beings who are capable of sentience but not of moral agency, such as patients in a persistent vegetative state. The ecologic principle was made for living things that are not moral agents, but that are important to the ecosystems, such as insects. The respect for life principle suits within-14-days-old embryos, they are living organisms, and they have no consciousness, no sentience, no autonomy. A within-14-days-old embryo is only a biological human being, it is a cluster of cells without bones, organs or other traits. The moral status of the embryo/fetus is just as the respect for life principle says: Living organisms are not to be killed or otherwise harmed without good reasons that do not violate principles 2-7.

After weighing both pluralistic and single-criterion approaches to understanding how personhood and moral protectability are established, we can conclude that although the embryo within 14 days warrants serious moral consideration as a developing form of human life, it does not have the same moral status as infants or children. This is because of the absence of developmental individuation, the lack of even the possibility of sentience and most other qualities considered relevant to the moral status of persons, personhood, and the very high rate of nature mortality at this stage. The important human benefits research might achieve counsels for allowing embryo research to be conducted under stringent guidelines. Thus, some research on the human embryo within 14 days should proceed.

What are our good reasons for getting stem cells from the embryos before 14 days old and to destroy them after? We are aware of the benefit and value of ES cell research. Human embryonic stem cell research has great potential value in effectively treating various human diseases, maintaining and promoting human health, it is good for hundreds and thousands of patients, families and society. Therapeutic cloning is a potentially important area of research, particularly with regard to circumventing the problem of rejection of cell or tissue grafts. To the public in China, they thought a sufficient reason was that human embryonic stem cell research has potential value in treating various human diseases and relieving millions of people's sufferings. In balance, priority should be given to millions of patients' health and life, so this research using embryo within 14 days should be permitted and supported. Also the Confucianist ethical explanations of 'Ren' means loving people, caring for others, caring for the patient. 'Ren' is an extension of the natural compassion that everyone feels in view of the hardship and misfortune of others.

Respect for Embryos in Stem Cell Research

Even though we balance important issues regarding the health and safety of women, children, and men against the moral respect due the human embryo within-14-days, given the conclusions about the moral status of the human embryo within-14-days, we can conclude that the health needs of women, children, and men must be given priority. However, the embryo merits respect as a developing form of human life and should be used in research only for the most serious and compelling

reasons. Research involving human embryos should be limited to the shortest time period and should not be permitted beyond the time of the usual appearance of the primitive streak (14 days) *in vivo*. The number of embryos required for the research must be kept to the minimum consistent with scientific criteria for validity.

The selection of sources of embryos for the research must show respect for the special qualities of the human gamete and embryo. Because the embryo within 14 days possesses qualities requiring moral respect, research involving the *ex utero* human embryo within 14 days must be carefully regulated and consistently monitored. What made our Chinese bioethicists thinking valuable and worthy of respect are the embryos. Even though the moral status of an embryo before about 14 days after fertilization is limited and smaller, it still worthy of respect.

We regard it as an important duty in the field of stem cell research. We worry that immoral attitudes and actions will prevail when scientists do stem cell research. According to the accepted Confucian view, the Chinese believe that personhood begins with birth. A person is an entity that has a body or shape and psyche, and has rational, emotional and social-relational capacities. So a human embryo is not a person, a personal life. Destroying an embryo as well as an abortion should not be taken as killing a person. However, a human embryo is a human biological life, not merely stuff like placenta. So it deserves due respect.

The ethical issues on the source of human embryonic stem cells in China are, how to respect the embryos and to protect the donors, and how to execute the principle of informed consent in the Chinese clinics. We have no exact statistical figures about abortion rates, but for sure there were many abortion cases in mainland China. The physicians could get the cadaver fetal tissue without the mother's informed consent in some places, and the physicians could also use the frozen embryos or gametes remaining after IVF without the mother's informed consent in some places during past years. Such a situation should be forbidden and we should respect to biological human life and early embryos or embryonic tissue, even though we think they can be researched on.

An embryo within-14-days is only a human biological life, but a human embryo has a certain value, it deserves respect. Destructive embryo research should only be approved in exceptional circumstances. Giving

a moral status to embryos involves not whether we think we should do research with embryos, but how we think we should respect them, which is a function of what we think they are. For example, we think we can consistently accord cadavers the due respect and allow medical students under carefully circumscribed conditions to dismember them. Even though the embryo before development of the primitive streak, around 14 days after fertilization, it does not count as a person, but it is entitled to respect. What criteria are offered? The criteria are their possession of qualities that have value and potential good for research. Respect for an embryo does not mean that it can never be destroyed.

Is it meaningful to speak of respecting embryos? Philosophers Downie and Telfer maintain that respect for persons includes both an attitude and a moral norm. As an attitude, it implies thinking that something is valuable or estimable. Having respect implies that the thing should be cherished. As a moral norm, it means treating a person as an end and not merely as a means.¹⁶ For Kant, self-determination was also coupled with ability to govern our conduct by rules, and it is this rule-giving and rule-governed behaviour that most clearly distinguished those deserving of respect. The embryo can be considered to have value, it can be cherished but it is not a person, so Kant's words that a person must be treated not simply as a means to someone else's end appears not to fit the case of the early embryo. But that the early embryo is a thing that should be cherished is right.

How do we respect non-persons? Philosopher Karen Lebacqz looked up Webster's New Dictionary 1979, The term 'respect' comes from the Latin '*re-specere*', to look back at or to look again. To have respect is to take a second look, seeing below the surface to find the hidden value.¹⁷ A review of this meaning of respect might apply to embryos, for embryos have hidden value, they can show honour and esteem.

How do we respect sentient beings? Philosopher Telfer and Downie appear to base their argument not on rights but on duties. When it comes to animals, the duty to avoid unnecessary suffering arises out of respect for them not as persons, but as sentient beings, because sentience is the basis for the development of distinctive aspects of personhood such as self-determination and thus it may provide the basis of respect for those who are not fully persons.¹⁸ The embryos may not be fully

persons, but they have the basis for the development of distinctive aspects of personhood, so they deserve due respect.

How do we have respect for plants? Barbara McClintock got an insight from her work with plants. She attended to the individual nature of every corn plant, never trying to force them into a mold. She expected the unexpected: she was open to the possibility that plants operated out of rules that were not known and understood by humans.¹⁹ So respect for life (whether plant or embryo) more generally might require respect for the ways of other beings.

When dealing with the environment, nature, or creation, Karen Lebacqz thought two fundamental tenets appear to be at stake within ecological ethics. First, is the affirmation of the independent value of other creatures and of the ecosystem itself. Second, is to understand the interconnection and mutual interdependence of creation, including humans. Such respect implies seeing the intrinsic value of the other, a value on a larger perspective or on the role of that creature in the entire system.²⁰ What are the implications of these conclusions for respect for early embryos? Seeing its life as intrinsically intertwined with our own lives honours the value of the embryo.

Respect for the dead is a moral value in virtually every culture. It is called an intrinsic value. That is the value of respecting the dead is independent of what people happen to enjoy or want or need or of what is good for them. Philosopher Ronald Dworkin suggests that great paintings, wilderness areas, human cultures, languages, some species, traditional crafts, and human life itself all have intrinsic value. Respect for the dead also seems to fall into this category. If a culture lacked respect for its dead (had no death rituals, for example) we would probably regard it as considerably less evolved, even not quite human. During or after the research, embryos, as much as dead bodies, are a “potent symbol of human life and for that reason have moral value and deserve respect, even though they lack interests, rights”.²¹

How do we respect embryos within-14-days in stem cell research? What does respect for embryos require? Respect sees a value in embryos

beyond usefulness. The embryos should not be used cavalierly. The embryos are treated as an entity with incredible value; as something precious that cannot be replaced by any other blastocyst, whose existence is to be celebrated, and whose loss is to be grieved. Embryos can be used and can even be killed, to do so is not in itself disrespectful. The fact it can be used and killed does not mean that moral duties no longer hold. It may be permissible to do harm in order to do good, but the harms must be minimized. The fact that an embryo will be used in research does not mean that it is being devalued and disrespected, just as some Chinese medical students show respect by blessing of the spirits before dismembering the animal or human cadavers. In research practice, we can show respect toward embryos by carefully weighing the necessity of using them. We should undertake our daily routines in prayerful, respectful, grateful mode toward embryos in the developing Chinese Society.²²

Conclusions

There are a few Chinese government administrative documents related to human stem cell, cloning or human embryo research in general namely “Procedures on Safety of Gene Engineering” issued by the Ministry of Science & Technology, China, 1993; “Procedures of the Administration on IVF Technology” issued by Ministry of Health, China, 2001; “Procedures of the Administration on Sperm Bank” issued by Ministry of Health, China, 2001. In order to protect the donor sources of human embryonic stem cells, surveys should be done to the units engaged in human stem cell research and the current practice of IVF in China. We have to know where did these researchers and others get the biomaterial from? Were they taken from IVF clinics, from early abortions, or donated by women with informed consent? Who was in charge of obtaining the material (researchers themselves, IVF clinicians, other parties)? Are they deliberately causing pregnancy for deriving stem cells? Controlling of abortion of donors or methods, and timing of artificial abortion by any means should be prohibited. The voluntary donation of reproductive cells should be done without economic compensation.

We hope the Ethical Guidelines issued by Chinese Ministries can be operational and meaningful for controlling stem cell research in China. Because the Ethical Guidelines are not a law, they have no legal force, but as a regulation, they could have the power to force scientists

to follow them. But if there is no punishment, and there are no bioethicists within the Ethical Committee, the guidelines and requirements can only create a moral pressure on scientists. In the face of the rapid development of stem cell research in China, we bioethicists call for the researchers to follow the 'Ethical Guideline'. We hope the Ministry of Science and Technology, and the Ministry of Health of China could work out quickly how to revise the guideline, how to plan setting up the central and unit IRB, and how to train IRB members ethically. The most important thing is how this 'Ethical Guidelines for Research on Human Embryonic Stem Cells' is implemented in detail.

Endnotes

- ¹ Herald Sun, 4 December, 2001, p.17.
- ² Min Jiayin (2004).
- ³ Erik Parens (2002).
- ⁴ NIH (1994).
- ⁵ *ibid*
- ⁶ Ernle, W. D. Young (2002).
- ⁷ Shannon, Thomas A. (2002).
- ⁸ Ernle W. D. Young (2002).
- ⁹ Shannon, Thomas A. (2002).
- ¹⁰ Tooley, Michael (1998).
- ¹¹ NIH (1994), pp. 46.
- ¹² NIH (1994), pp. 59-60.
- ¹³ Ernle W. D. Young (2002), pp. 171.
- ¹⁴ Steinbock, Bonnie (2001).
- ¹⁵ Ernle W. D. Young (2002).
- ¹⁶ Lebacqz, Karen (2002), pp. 157
- ¹⁷ Lebacqz, Karen (2002), pp.153.
- ¹⁸ Lebacqz, Karen (2002), pp.153.
- ¹⁹ Lebacqz, Karen (2002), pp.155.
- ²⁰ Lebacqz, Karen (2002), pp.156-157.
- ²¹ Steinbock, Bonnie (2001), pp. 29.
- ²² Lebacqz, Karen (2002), pp.160.

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