

BUDDHISM AND HUMAN GENETIC RESEARCH

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What I am trying to do in this paper is to explore how Buddhism, especially Theravāda Buddhism as adopted in Thailand, responds to the advancements of human genetic research in the modern world. Buddhism has a certain number of doctrinal beliefs normally differing from those in the theistic tradition, making Buddhism respond to genetic research in a certain way. The way Buddhism responds to genetic research could be characterized as a kind of humanistic view. This kind of view is mainly based on human wisdom and rational investigation of the problem. Belief as normally understood in terms of religion plays a lesser role in Buddhist ethics. The following will show the positions of Buddhism on the problems raised by genetic research. As the concept of personhood plays the key role in the debates over human genetic research, we will start with this point. And as human genetic research raises many issues, it is impossible to explore all of them; the paper will focus on some of them – human cloning and the use of embryonic stem cells in medical practice – as the examples for discussion.

1. *The concept of personhood in Buddhism*

The concept of personhood plays a significant role in modern bioethical debate as a number of the biomedical problems are concerned with the question of what should be counted as a person. For example, the embryo explored by the scientist could be harmed in some cases. Normally such harm is meaningful if it occurs to a person. The problem then arises that if the embryo is a person, the work done by the scientist in such cases can be debated in terms of morality. Abortion seems to be an explicit case showing that the definition of personhood is the most basic task. To judge whether abortion is morally wrong or not, we must first decide whether the fetus is a person or not.

The question concerning personhood is problematic in that it is closely involved with human biological developments in the womb. Certainly, at some stage of development we could argue that the fetus is person because he or she can express some human basic qualities, such as the response to external objects, the reaction implying the feeling of pain, and so on. But at some stage of development, the very beginning state in which the fetus has no any biological properties indicating that it is different from a cluster of cells, the concept of personhood seems to be hardly attributable to the fetus. There has been some attempt by philosophers and scientists to establish a clear-cut definition of personhood through empirical measures such as medical data. For example, they use the appearance of the nervous system as a clear indication that the fetus is person, whereas before that it is not. Even though this method greatly benefits us, that does not mean it is unproblematic. It could be said that such a definition of personhood is more practical than philosophical. Something practical does not necessarily need strong justifications. So those who adopt the definition of personhood as stated above can be questioned as to why something without a nervous system should not be counted as a person.

It seems that ultimately the views concerning the problem of personhood can be grouped into two sets. The first set looks at the issue in terms of convention. For the philosopher of this set, personhood is merely a convention of society. We stipulate conventions for the purpose of social utility. For example, to protect good people from harm by bad people, we stipulate that people have the right to their life and

property; and we say that in such a case people are persons in the sense of those who can claim rights over their life and property when these things are violated. The murderer before committing murder is counted as a person also, but after that his personhood can be changed. In the case of the death sentence, it seems that we do not accept that the murderer is a person. If we accept him as a person we can never punish him that way. From the above, we find that one may be person at some time and not a person at another time. It is a convention of society to determine personhood through the process of law. Another set of philosophers does not agree with this theory of personhood. For them, the study of personhood should not be associated merely with legal convenience. On the contrary, legal reasoning must be based on metaphysical reasoning or something deeper than legality. It seems that for the philosophers of the second set ontological investigation must be inevitably applied to the study of personhood.

In general, Buddhism shares the idea of the second set. One of the major characteristics of Buddhist philosophy is its naturalistic feature. Being naturalistic in this context means that truths are out there in nature, not in human imagination. So, in exploring truth, Buddhism explores nature. In the case of personhood, what is explored by Buddhism is the nature of human beings. This leads to questions concerning the basic concepts of human life, such as: what is the meaning of personhood according to Buddhism; when does personhood occur; what should be counted as a violation of personhood. We will examine these questions below.

1.1 *The meaning of personhood*

Normally, Buddhism is viewed as a religion that rejects the existence of the self. This sometimes leads to the belief that there is no concept of personhood in Buddhist teaching. As understood by Buddhism, there are two meanings of personhood. One is the substantial meaning, and another is the non-substantial one. The Hindu theory of personhood can be cited as an example of the first meaning. For Hinduism, the self (*atman*) is the essence of human life. The definition of personhood in Hinduism is based on this self. The self as taught by Hinduism is rejected by Buddhism, as Buddhism states that human life is composed of the five aggregates – namely, materiality, feeling, perception, mental formation, and consciousness – and these aggregates are not substances. But the rejection of the self does not mean that there is no concept of personhood in Buddhist teaching. Personhood according to Buddhism is still possible even though there is no self in human life.

Buddhism defines personhood in terms of psychological facts. For example, somewhere in Buddhist texts the Buddha says that if someone tries to kill you and you feel that you dislike the action of that man, the same action done by you is also disliked by other people. Buddhism believes that all human beings share a set of psychological properties such as self-love, hatred of death, and desire for a good future. These psychological facts are something to be respected by other persons. Killing is wrong in Buddhist teaching because it violates self-love. Other moral tenets in Buddhism can be also understood in this light.

The concept of personhood in Buddhism can be better understood if it is related to the contents of morality taught by Buddhism. The Five Precepts constitute the basic moral code of Buddhism. They state that killing, stealing, sexual misconduct, lying and taking intoxicants is wrong. The first four precepts involve other persons, while the last one involves oneself. In the first four precepts, two things are mentioned: the person's life and the person's belongings. Killing is concerned with a person's life, and we see from the above that killing is wrong because it violates the psychological reality of self-love. Stealing, sexual misconduct with another's beloved and lying are wrong

because they violate a person's belongings. It should be noted that when we say that killing is wrong, Buddhism does not think that it is wrong because it violates the self of another person. The transcendental self is something beyond our observation, but psychological facts are totally observable. So using these facts as the grounds of personhood is more reliable. The last statement of the Five Precepts is involved with oneself. Taking intoxicants is wrong because it violates self-love. The person who takes intoxicants does not love himself, Buddhism argues.

It should be noted that the concept of personhood in Buddhist teaching is in some sense closely connected with the concept of human life as the composition of the five aggregates. The connection between these two concepts can be illustrated as follows. First of all, the five aggregates function as the foundation of personhood. The dead man cannot be a person because he possesses only the body, which is just one component of the whole five parts. The man in a comatose state is regarded by Buddhism as a person because he possesses all five aggregates, even though he is not conscious. Buddhism believes that the five aggregates under some conditions may not function, but they exist. When we sleep and do not dream at all, it could be said that the mind and its components (mind and feeling, perception and mental formation) temporarily do not function. So killing a sleeping man is wrong because the man still has all five aggregates. This line of argument is applied to the case of person in a coma or in any deeply unconscious state. Euthanasia given to a person in such a state is viewed by Buddhism as no different from killing a conscious person.

It seems that such a definition of personhood in Buddhism may give rise to some epistemological problems. We know that a sleeping man has all five aggregates because he can awake from sleeping. With the patient in the comatose state, it may be very difficult to determine whether or not he or she will awake again. So the point is: we know that a person has all five aggregates after his or her return from sleeping or from a state of deep unconsciousness. If we have a comatose patient who finally dies in that state, the question is: in the view of Buddhism, does that person have all five aggregates, or does he not?

The answer to this question is partly based on a religious belief that cannot be justified by sense experience. Buddhism argues that the body of human beings cannot survive without the support of the mind. As long as the body of the patient still survives, we can assume that the mind still exists. As the five aggregates are equated to the body and the mind, so in such a case we can say that the person still possesses all five aggregates; and that makes him or her a person in Buddhist perspective.

1.2 *When personhood occurs*

Normally the theory of the soul claims that personhood occurs when the soul enters the body. In the Buddhist texts there are some passages indicating the same idea. The Buddha says that a person arises when three conditions appear: the mother and father have sexual intercourse, the mother possesses a good biological state, and the mind is present. This statement mentions two components of human life. The first is the biological (or material) process, and the second is the non-material one. What is called "mind" in Buddhism means something containing properties of energy rather than substance, like the soul. So the Buddhist image of "mind" could be likened to the image of electricity. According to Buddhism, mere biological fertilization is not enough to give rise to a new life. Modern Buddhist scholars seem to believe that when the egg and the sperm have united, if the mind does not enter as another condition the process of fertilization can never start. In the case of natural abortion, these scholars explain that it occurs because of the departure of the mind from the ongoing fertilization process.

The Buddha did not give an explicit statement about when personhood starts, but indirect sources seem to suggest that according to Buddhism personhood starts at the first moment of fertilization. It is recorded in the monastic rules that a monk once performed an abortion on a girl; the Buddha judged his action seriously wrong and that brought him a monastic crime of the highest sort. A monk committing this kind of wrongful deed must be expelled from the monastic community. The Buddha considered the embryo to be a person like an adult, so the monk who killed the embryo through abortion was judged by Buddhist monastic rules as having committed a crime equal in gravity to killing an adult. In the commentary on the rule stated above, it is stated clearly that killing a human being means destroying human life from the first moment of fertilization to human life outside the womb. So, even though the Buddha himself did not give a clear-cut pronouncement about when personhood occurs, the Buddhist tradition, especially the Theravāda tradition, clearly states that personhood starts when the process of fertilization takes place.

1.3 *The conditions under which personhood is violated*

Normally Buddhism views killing as a violation of personhood. The first precept in Buddhist morality prohibits killing on the grounds that it is a violation of personhood. It seems that killing in this context does not necessarily include suicide. In some religions suicide is prohibited as an evil. Buddhism regards suicide as something to be examined in detail before judging it in terms of morality. That is, Buddhism does not view all suicides as wrong. Taking one's own life for the benefit of other persons could be considered "suicide," but this kind of suicide is not wrong from the Buddhist perspective. In the Buddhist texts, there are a number of stories about the merit accumulation of the *Bodhisatta* (one with the intention to be a Buddha in the future). To be a Buddha in the future, the *Bodhisatta* must practice what are called "perfections" (*pāramī*). One of the major perfections is the donation (*dāna*). It should be noted that there are two kinds of donation in Buddhist thinking: donation of life and donation of property. Of these two, the latter is superior. The stories relate that in some circumstances the *Bodhisatta* donates his life. This seems to imply that the taking of one's own life under reasonable circumstances is not a violation of personhood and counts as a good deed from the Buddhist perspective.

In modern genetic research, sometimes questions concerning a possible violation of personhood arise. The use of stem cells from the embryo for medical purposes can be cited as an example. The major objection to the use of embryonic stem cells is that such use is no different from killing one person and using the body of that person to cure the body of another person. This objection is very strong and makes any attempts to support the use of stem cells difficult. Even though the concept of life donation as described above could be employed to provide a rationale for the use of embryonic stem cells, the embryo whose stem cells are used is in no position to judge whether or not he or she is willing to donate his or her life, so the use of stem cells can be construed as either (if the embryo is not willing) killing or (if the embryo is willing) donating life, and between these two possibilities we can never know which one is true.

According to Buddhist ethics, the killing of even a willing person is to be regarded as killing and therefore wrong. There is only one case in which the taking of a willing person's life is not killing. It is the taking of life done by that life's owner and done for good reason, such as to protect a great number of people or to save the life of someone more valuable than the life donor. We find that this principle cannot be directly applied to the case of the embryo, as we cannot know how the embryo thinks. Actually, the embryo at the beginning stage, say within two weeks of fertilization, has

any thoughts. How should we deal with such a situation? Some people argue that this case is like the case of a person in a persistent vegetative state. A man in this state has no thoughts. So society must make a decision on behalf of such a person. Normally, when we have to judge on behalf of another person, we use ourselves as the frame of reference. Buddhism, Confucianism, and some other systems of belief share the ethical principle that the good thing is what we want other persons to do to us and what is bad is what we do not want other persons to do to us. In the case of the embryo, we could apply this principle thus: if the embryo were a member of society and shared our knowledge of the situation concerning the need for embryonic stem cells, how would he or she judge the matter? If the embryo in our imagination says that in such a case it would be unreasonable not to allow the use of the embryonic stem cells, what we can conclude is that the use of embryonic stem cells in such use is morally right.

Capital punishment by its very nature is a violation of personhood, but some of us think that society has to allow this practice on the grounds of social necessity. In terms of personal ethics, Buddhism views the killing of a criminal who has committed a very serious crime as wrong, as it is a violation of personhood. But in terms of social ethics, Buddhism states that if the death sentence has been proved to prevent serious crimes, this practice can be allowed in a Buddhist community. So we can say that the violation of personhood is possible in some cases within social dimensions with regard to society's needs. The use of embryonic stem cells is somewhat like the case of capital punishment, abortion and euthanasia. These practices can be either socially moral or immoral depending on the reasons behind the actions.

This does not mean that Buddhist ethics is relativist or situational. Buddhism believes that things in nature have some essential properties and these properties will determine the results of what we have done. Actions performed by human beings are one kind of natural phenomena. Human actions in themselves contain certain moral properties. Killing regardless of conditions is a violation of personhood, so killing is a bad thing in itself to some extent. However, Buddhism teaches that killing when judged as a situation related to certain conditions can vary in terms of moral justification because of those conditions. It may be possible that in some cases the weight of necessity determined by conditions seems to outweigh the badness of killing; in such cases Buddhism teaches us to use wisdom. This principle is readily applicable to research in human genetics.

2. *The Buddhist Approach to Genetic Research*

One of the most basic beliefs of Buddhism is that proper questions lead to proper answers. The ethics of Buddhism, looked at in light of this principle, could be viewed as an ethics of questioning, meaning that before answering any question of ethics we must first ask what is a proper approach to that subject. In this section we will consider the Buddhist way of viewing genetic research, with human cloning and embryonic stem cell research as two examples illustrating how difficult it is to judge research in human genetics in terms of ethics.

Human cloning and embryonic stem cell research are involved with the interpretation of human life and its values, such as personhood and human dignity. Normally, theistic religion seems to have more explicit religious grounds pointing to how human life should be respected by persons who are involved in research on human beings. God is the source of human dignity in theistic religion. Buddhism, as a non-theistic religion, is based on another ground in moral reasoning. The Buddha says that what he teaches are natural phenomena. The *dhamma*, which refers to the teaching of the Buddha, is understood by Buddhists as natural things and natural laws. For non-Buddhists, the best way to understand Buddhist teaching is to view it as they

view natural sciences such as physics, chemistry, and biology. Buddhism teaches that the universe is naturally given, and the Buddha himself clearly declares that he is not interested in exploring the origin and the end of the universe. What he wishes to explore is the universe as it appears. Great enlightenment brings him the insight that the universe is regulated by five kinds of natural law (*niyāma*): namely, the physical law (*utuniyāma*), the biological law (*bījaniyāma*), the law of action (*kammaniyāma*), the law of mind (*cittaniyāma*), and the law of dhamma (*dhammaniyāma*). Buddhist morality is based on belief in these natural laws. Goodness and badness in human actions are based on the laws of nature, especially the last three types.

2.1 *Naturality and unnaturality*

The debate over human cloning and other human genetic research normally involves discussion about its unnaturality. Some of the arguments against human cloning state that such a practice is unnatural in the sense that it is not provided by nature. Some people who believe in God might think that anything unnatural means it is not permitted by God and for that reason is dangerous. Sexual reproduction is natural in this sense and thus it is established by God. Human cloning is an attempt to produce a human being through unnatural means, and thus it is against the work of God. In this line of argument, we will find that the concept of being moral is equated to the concept of being natural. By the same token, the concept of being immoral is equated to the concept of being unnatural.

This argument seems to be used by some people to argue against human genetic research. Some scientists who support human cloning state that human cloning should not be viewed as unnatural because there is a kind of human cloning permitted by nature: the case of identical twins. According to these scientists, human cloning performed by scientists can be viewed as the making of identical twins. What is different is merely that natural identical twins are of the same age, while artificial identical twins are of different ages. Looked at from this point, human cloning is not immoral because it is natural in the sense that it follows the law of nature as found in the case of natural identical twins.

In Buddhism, morality can be separated from the concept of being natural because according to Buddhist teaching it seems impossible to say that such and such a phenomenon is unnatural. Buddhism proposes that the moral goodness or badness attributable to any action depends solely on the moral properties. Actually, Buddhism does not think that there is anything unnatural. Buddhism believes in the Five Laws of Nature as we have observed previously, and thinks that there is nothing which is beyond these laws of nature. In Buddhist texts, for example, reproductive methods other than the sexual one we are acquainted with are mentioned. For those of us who never perceive such methods, they could be considered unnatural. But they are natural in the sense that they are permitted to appear in the universe through any of the five natural laws.

Man according to Buddhism is a natural thing. When man creates something, Buddhism regards that something as natural, too. So, natural things in the Buddhist perspective are of two kinds: those created by man and those not created by man. Between these two kinds of things, there is no difference in terms of ethics. That is, some natural things are good and some are bad. Likewise, some things created by man are good and some are bad. So, moral goodness or badness has nothing to do with *naturality or unnaturality*.

Moreover, Buddhism considers man and nature to be a single system. That is, Buddhism accepts that nature has its own long history and that man in his present form has a much shorter history compared with nature. However, there is some

potentiality in man which cannot be found in nature: namely, the potentiality of consciousness and intelligence (or wisdom, if that is the more preferred term). Through consciousness, man learns to solve certain problems which may take a very long time to solve by natural processes, or which may be impossible for nature to solve by itself. When we break our arm, surgery is done to heal the broken arm. This surgery is done by man, but it does not join the broken arm. Nature instead plays the role behind the process of joining the broken bone. So, it can be said that in the joining of the broken arm two things are equally needed – man and nature. Following this line of thought, Buddhism does not posit a separation between man and nature. The notion that we can trust only natural phenomena is viewed by Buddhism as extreme. Buddhism likewise views as extreme the idea that man can dominate nature or do anything unconditionally.

So Buddhist ethics does not consider the issue of human cloning through the concept of naturalness. In general, Buddhism admits that whatever happens in the world is natural. It does not matter whether or not something appears by virtue of human technology. Natural things in Buddhist perspective include both what is given by nature and what is created by human beings. The fact that Buddhist ethics does not utilize the concept of naturalness makes it harder for Buddhism to deal with modern bioethical problems. But this could be also considered a strong point as it provides more space for debate. That is, sometimes we might find that labeling something immoral because it is created by human beings is seemingly irrational. The world today has greatly benefited from *unnatural* products of science and technology.

It seems that the basic difference between Buddhist ethics and theistic religious ethics is that Buddhism holds a humanistic attitude while theistic religion does not. For theistic religion, human beings are just like innocent babies whose knowledge of the universe is very limited, while God is the father who knows everything. The scientist's attempt to reveal the secret facts hidden behind natural things is considered no different from the action of an innocent baby who puts her fingers into the unknown holes in the walls of a room. Inside some holes there could be some dangerous things; we cannot know. For the sake of safety, we should not go beyond what has already been prepared by God as found in nature. Human cloning is forever questionable in terms of safety regardless of the data gained from scientific research because there could be danger within it, as it has not been prepared by God. Buddhism partly agrees with such a warning. However, the best way, to decide whether such a thing contains danger or not is to undertake experiments. Buddhism supports attempts to gain new knowledge as long as such attempts are governed by wisdom. Wisdom in Buddhist teaching is a process of learning through doing, not imagination or speculation. The enlightenment of the Buddha is not a state of mind gained independently from a process of long-term learning. In short, wisdom in Buddhist teaching is a practical term.

2.2 *The harm principle*

The spirit of Buddhism is not-harming (*avihimsa*). Harm (*vihimsa*) is one of the major criteria used by Buddhism to determine the morality of an action. This principle says that any action which does harm is morally wrong; otherwise, it is not. Harm in Buddhist teaching can be divided into two main categories: harm to oneself, and harm to others. Harm to oneself means the action is intentionally performed by a person and that the action harms him in one of two ways. It harms him in terms of physicality, or it harms him in terms of dignity. Taking intoxicants is prohibited by the Fifth Precept in Buddhism on the grounds that taking such substances does physical harm to oneself. Selling body organs such as kidneys could be viewed as harm in terms of dignity. The

person who does such a thing, for whatever reason, could be viewed as not respecting his own status as a human being. He treats his life as if it were a nonhuman product that can be sold. This interpretation makes it possible to state that the sale of human organs constitutes a harm with regard to one's dignity.

The second kind of harm, harm to others, can be of two meanings as well. Normally, in a free society, some personally harmful actions may be tolerated by the laws of that society. Drinking beer, for example, is harmful to one's own person; but this kind of action is tolerated by the law in Buddhist countries because it is accepted that only serious harmful actions should not be tolerated by the law. Using drugs is prohibited by law in Buddhist countries because it is believed that the harm resulting from drug use is much more serious than that which results from drinking beer. So, it can be said that according to Buddhist morality personal freedom does not cover personally serious harmful actions, in terms either of physical damage or of damage to one's human dignity. Harm to others is more obviously seen as wrong by nature, whether it relates to physical damage or to damage to human dignity. However, as the intention behind an action plays a significant role in the Buddhist system of moral judgment, investigating harm to others cannot be separated from consideration of the intention of the doer.

Then the problem arises: is there some kind of harm allowable in the Buddhist community, or is any kind of harm strictly prohibited? In utilitarianism, it seems that some kinds of harm are permitted. That is, for the benefit of the greater number of people, a violation of the rights of the minority may be permissible. But the violation of rights involved in such a case is understood in terms of the right to property, not the right to life. Government policy in any country in the world is more or less utilitarian. The expressways in Bangkok are at the cost of people whose lands have been chosen by the state for this purpose. But for the benefit of the majority, this kind of harm can be accepted. Moreover, this kind of harm can be compensated by the state because it is an economic harm. By contrast, a harm to life seems to be immoral in every respect because it is a harm that we cannot compensate.

Applying the harm principle to the issue of human cloning, it seems that the first question is: can human cloning be interpreted in terms of harm? It is clear that the cloning of human beings in some cases could be questioned whether or not it is personal issue. For example, a man clones himself to use the embryonic stem cells. In such a case, can we say that it is really a personal matter, implying that the harm principle to be used for this case is the harm to oneself only? According to Buddhism, a clone is a person from the first moment of fertilization, so it is very difficult, if not impossible to locate human cloning within the area of personal activity. It seems obvious that the harm in the case of human cloning is the harm to others. However, this does not mean that any case of human cloning is viewed by Buddhism as a harm to others. Buddhism merely says that any harm caused by human cloning must be regarded as harm to others. Simply speaking, Buddhism does not accept that human cloning can be understood in terms of personal activity. Therapeutic human cloning and the use of embryonic stem cells could be considered in terms of harm to the life of the embryo. Can we accept such harm for the benefit of us or not? The same question may be rationally posted apropos other areas of human genetic research as well.

According to Buddhist teaching, we must distinguish between life and property. The right to the former is considered the primary right, while the right to the latter is the secondary one. The great difference between the primary and the secondary right is that the former can never be transferred, while the secondary right can be. In the Buddhist texts, it is recorded that voluntary euthanasia constitutes a violation of one of

the Four Rules of Defeat (pārājika) for the monk who commits it. That is, in Buddhist monastic rules, a monk violates the Four Rules of Defeat if he engages in sexual intercourse, commits robbery, kills a human being, and denies the existence of a higher goodness. Killing a human being at his or her request is wrong on the grounds that the right to life cannot be transferred. Suicide is found in the Buddhist texts, and in some cases it could be argued that no guilt attaches to a monk who commits suicide. The difference between suicide and euthanasia according to Buddhist teaching is that, in committing suicide, a person is not violating the right to life because he is the owner of that right, while a person who commits euthanasia at the request of somebody else is violating that right. The request cannot justify euthanasia because the right to life can never be transferred. Only the owner of the right can forsake it.

Applying what we have considered above to the embryo, it could be the case that the embryo as a person must be accepted as the owner of a right to life. There are many sources in the Buddhist texts pointing out that killing an embryo is no different from killing an adult. So, the use of embryonic stem cells even for curing disease, according to Buddhism, is no different from sacrificing the life of one adult to save the life of another. If the use of an adult life for this purpose cannot be accepted, the question is: on what grounds can use of the embryo be justified?

As the Buddhist view on any subject is not absolute, in the sense that what the Buddha teaches is not dogma to be accepted unconditionally, Buddhism's view of the right to life could be discussed further. Actually, the sacrifice of one's life for the benefit of another can be found all over the world, including a Buddhist country like Thailand. We have the soldier acting as the guardian of the country. The death of a soldier for his country suggests that in some cases the sacrifice of one's life for the benefit of one's country or the majority of people in one's country may be necessary. In Buddhist literature, a life donation is sometimes found. As we have said previously a *Bodhisatta* sometimes donates his life for the benefit of another and such doing is deemed good. This seems to imply that the right to life in some cases could be transferred.

By distinguishing between life donation and euthanasia, it may be possible to perceive how Buddhism regards the issue. What is the difference between these two issues? In a donation of life, the donor is fully aware and understands what merits will accrue as a result of his action. In euthanasia, a man who requests death is understood by Buddhism as acting so from an unwholesome impulse, and a man who commits euthanasia is understood as doing so without moral authorization. That is, no one can take another's life without violating the other's right to life and personhood, regardless of conditions. But the case will change if the owner of life donates it. Therapeutic human cloning and embryonic stem cell research, if they can be justified, seem to obtain such justification within the category of life donation.

Taking one's life for the benefit of another is not necessarily evil in Buddhist perspective. At least, Buddhist doctrine permits the taking of life under certain circumstances. However, donation is a concept in personal ethics. Donation must come from consent and wisdom. We do not know whether embryo is willing or not. This is the most difficult problem to overcome. Maybe the idea of enforced donation could be a way out of this difficulty. Enforced donation is self-contradictory in Buddhist personal ethics, but it could be possible in the social ethics of Buddhism. In Buddhist Thailand, a girl who gets pregnant as a result of rape has the right to abort the child. The child in this case can be understood as being the "*enforced donor*" of his life for the benefit of the mother. Why do we think the mother deserves such protection? The answer is: because not giving her the right to abortion is socially immoral. If we can prove that in some cases not giving a person the right to benefit

from therapeutic human cloning or the use of embryonic stem cells is socially immoral, it means that we have found a way to justify these practices.

2.3 *The principle of analysis*

Sometimes the Buddha identifies Buddhism as “a religion that teaches analytical morality.” The term “*analytical morality*” is a rough translation of the Pāli word “*vibhajja*.” This term, as understood by Buddhist scholars, denotes a system of thought that does not look at the world through *a prism of black and white*. Actually, Buddhist logic, or the Buddhist epistemological outlook, has much criticized *the black and white logic* found in the work of great thinkers such as Aristotle. Applying the principle of analysis to the case of human cloning, the advice from Buddhism is that, first, to assume that all kinds of human cloning and other genetic research are solely right or wrong is not valid. Buddhism considers all that happens in the world as matters of varying complexity; some events may be less complicated, while some are much more complicated. Analysis will reveal the proper way to deal with specific events. The cloning of human beings or any kind of human genetic research has originated in the human mind, and the human mind must always have its reasons for thinking in a particular way. From this viewpoint, it could be that in some cases the human mind behind these activities has a good intention, while in some cases everything is directed by a bad intention. So, what we must do is to analyze the given case and find the details within.

As noted above, Buddhist ethics is analytical ethics. After the process of analysis, it may be found that in some cases the cloning of human beings or other kinds of human genetic research does not harm anyone, that all persons involved are happy, and thus that such research is tolerated by Buddhist ethics. The problem is: when we talk about the concept of harm from the Buddhist perspective, does such harm involve only the person, or can it be extended to society? This question is important because some arguments against cloning and other human genetic research suggest that though we possibly cannot find any obvious victim of harm in terms of individuals, it can be said that society is harmed by allowing such activities. *Legal moralism*, as presented by legal philosophers such as Patrick Devlin, is of the view that one of major structures that support the existence of society is the moral structure. Devlin argues that even though drinking intoxicants can be viewed as personal freedom, we should remark that if most members of society are those who persistently exercise such a habit, our society must be weak. In this case, intoxicants cannot be viewed in terms of freedom only. It can be related to the moral structure of society as well. Human cloning and other human genetic research considered in this light could be viewed as harmful to society, even in a case where we think that everyone involved is happy and no one is harmed at all.

One of the Five Laws of Nature taught in Buddhism, the Law of Dhamma (dhammaniyāma), seems to share the above view in part. For Buddhism, the moral tendencies found in society have an effect on the well-being (or otherwise) of people in that society. In short, Buddhism agrees that human society is not just a place where people gather and do only what benefits themselves; on the contrary, society has a spirit, and this is nothing but the common ideal to meet certain moral standards. We are not just living, but we are living a good life as noble humans. However, the moral structure that supports the existence of society in Buddhist perspective must be identifiable, not merely an abstract vision of our imagination. One process that helps us to reduce the degree of abstract imagination is to relate the moral structure of society to what individuals do. Cloning and other forms of human genetic research can be viewed as something that points out the level of morality in the minds of people.

So, we can say that allowing such research for any purpose other than that which promotes human welfare affects the moral structure of society. As the actions of individuals in society are related to law in the sense that the law must determine what actions are permissible and what are not, so the law practiced in society can be viewed in part as an indicator of the moral structure of that society as well.

Social necessity is a notion Buddhist ethics tolerates in some cases. Buddhism teaches that killing is an evil; but Buddhism never teaches against having an army. Reasonable capital punishment is sometimes interpreted by Buddhist thinkers as a social necessity, implying that it should be tolerated or deemed legal in a Buddhist community. If in some cases we can rationally prove that cloning or other human genetic research is a social necessity, Buddhist ethics would appear to deem it acceptable as shown in other cases mentioned above. Analysis of the context and surrounding data will help us to classify the various categories of human cloning, and other human genetic research, of which some categories may meet the conditions tolerated by Buddhist ethics. At this point, we will find that human cloning and related genetic research are an open-ended subject in the Buddhist community, meaning that some doors are open for the further exploration of these activities in Buddhist society. What is required are merely the reasons and explanations for why such should be allowed?

2.4 *Individual and social dimensions of ethical problems*

As noted previously, in the Buddhist community the ethics of Buddhism is considered in two dimensions: individual and social. The ethics taught by the Buddha is in the first place intended for personal use. Buddhist ethics in this respect considers human lives as individual units; each of them facing some common problems, and every individual bears responsibility for solving these problems by him- or herself. So, what is good and what is bad within this dimension of Buddhist ethics are personal matters in the sense that if something is considered good, its goodness is explained with reference solely to its effect on the individual. In the Buddhist community, when people request the Five Precepts, the request form states that these precepts are to be adopted by each person individually (*visuṃ visuṃ rakkhanatthāya*). So, it is understood among Buddhists that goodness or badness in one's life is a personal matter. Each person must monitor his or her own life.

Consider this example: It is very clear that abortion is wrong according to Buddhist ethics. But to say that abortion is an impermissible sin in Buddhist perspective could be misleading, as sometimes people understand this to mean that abortion must be illegal in Buddhist society. To say that abortion is a sin is to say it is so within a personal code of morality. That is, abortion is equated to killing a human being, so committing an abortion violates the first clause of the Five Precepts. The Buddha says that to attain *nibbāna*, one should avoid unwholesome actions. Abortion is an unwholesome action, meaning that committing it will lead to a path away from *nibbāna*. Following the advice of the Buddha, a Buddhist who is confronted with a dilemma concerning abortion should consider by herself how to handle the problem. The Buddha never claims that a woman confronting such a dilemma must not commit abortion. He just says that a woman should consider by herself what is the best thing within response to such a condition. Suppose finally she finds that the best way response is committing an abortion, Buddhist ethics has nothing to say. It is her choice and her responsibility. However, Buddhist ethics still continues to claim that as abortion is the killing of a human being, the woman who decides to choose abortion must be responsible for the choice in terms of the *kamma*. It is a bad *kamma*, and its result is already determined by the law of *kamma*.

The above remarks represent a consideration of abortion in terms of personal morality. As there is a child playing a role as the victim of a killing, so abortion cannot be considered solely with regard to the personal morality of the mother. The Buddhist Harm Principle should be brought in to deal with the issue. It is so evident that abortion is very harmful to a child, even in his/her earliest stages of development. So the state, as the authoritative power whose most basic function is to provide justice for the people involved in a conflict of interest, has the right to prohibit abortion if it is deemed that between a mother and a child the child's right to life is more deserving of protection.

Human cloning or any other kind of human genetic research can in one sense be considered in this light. That is, if the morality of these activities is raised in the Buddhist community, one possible approach to this problem is: let it be personally judged by each member of the community. Certainly, different persons can have different views of the same matter. But Buddhism believes that ultimately enlightened Buddhists will arrive at the same conclusion of the same ethical dilemma. Looked at from this perspective, the way to deal with ethical problems raised by human cloning and the like does not necessarily require the establishment of certain rules to be followed by all members of the community. On the contrary, these problems can be resolved through the moral education of each member. For Buddhism, solving ethical problems by changing people's minds is evidently more effective than passing laws to regulate external behavior.

However, if we accept that a community is composed of different members, of whom some are bad and some are good; an understanding of Buddhist ethics in terms of the personal dimension alone will leave some problems behind. How to judge human cloning and other kinds of human genetic research may not be a problem for the enlightened members of a community, but it may be greatly different for the unenlightened ones. Without rules or laws, the unenlightened members of a community may sometimes harm others, intentionally or unintentionally.

It is clear that Buddhist personal ethics is based on the law of *kamma* taught by the Buddha. To judge whether the response to a given moral question is wrong or not according to personal ethics is not difficult. Human cloning according to personal ethics is not immoral insofar as it is undertaken for reproductive purposes. Buddhism adheres to a moral principle that what conduces to the harm and suffering of oneself and others is unwholesome. By the same token, that which conduces to the benefit and happiness of oneself and others is wholesome. Destroying life or prohibiting birth can be considered as harmful, while prolonging life or giving birth is beneficial. Reproductive cloning could be judged as not immoral in this sense. By contrast, stem cell research could be interpreted as harmful, since the embryo is destroyed. This is not to suggest that according to Buddhist personal ethics reproductive human cloning is totally right and stem cell research totally wrong. It just means that we can interpret the issues in both directions.

According to Buddhist social ethics, on the other hand, stem cell research could be viewed differently from what we have seen in the Buddhist personal ethics. In reliable reproductive cloning no one is harmed, so it is not against either the personal or the social morality of Buddhism. It is only therapeutic cloning, the cloning for medical use in which the clone (including the clone generated solely from a woman's egg) is destroyed, that could be problematic.

Modern ethical dilemmas are usually concerned with the conflict of interest between two persons or two groups of persons. In the issue of abortion, the two parties involved are a mother and a child. The mother's interest is protected if an abortion is permitted, while the child's interest is protected if an abortion is prohibited.

Likewise, in therapeutic human cloning and embryonic stem cell research, there are two persons or two groups of persons involved. In terms of rights, the patient's right to health is protected if therapeutic cloning and stem cell research are allowed. But in carrying out such practices, the clone's or embryo's right to life is violated. The hard task to be undertaken by any ethical school or ethical theory, including Buddhist ethics, is to decide, between the two sides in the conflict of right or interest, whose right or interest should be protected and on what grounds.

At this point, we find that the ethics at the heart of the issue is social ethics, and socially ethical dilemmas are more difficult to solve compared with personally ethical dilemmas because in personal ethics only a single person is involved. It is much easier to find a solution to a conflict affecting solely one's own life. When a man is deciding whether or not he should clone himself to have a clone for purposes of medical healing, the principles of wholesome and unwholesome deeds given by Buddhism seem sufficient to provide him with a solution. Religious ethics normally endorses the altruistic way in moral decisions. So, the devout Buddhists are those who prefer not to clone themselves, for the reason that death is not dreadful compared with the sin committed in cloning an embryo for medical use. But when society tries to judge the claim of some of its members that they have the ultimate right over their own bodies, and thus the right to clone themselves for medical use, finding a solution is not easy. Whose rights should be protected between the patient and the clone? Between the benefit of the greater number of people and the violation of the embryo's rights, which should be chosen? How Buddhist social ethics deals with such a dilemma is not easy to answer even for those who are well-versed in Buddhist doctrines.

2.5 Principle of freedom

One of the basic features of Buddhism is that freedom is highly valued. The principle of freedom in Buddhism is closely related to the humanistic tendencies generally found in Buddhist texts. There are two meanings of freedom: positive and negative. Positive freedom means freedom to do something. Negative freedom is freedom from that which does not allow us to do something. Ultimately these two meanings are undividedly related to each other. Buddhism does not think that all forms of freedom are right. It is merely some kinds of freedom that are valuable. Freedom in Buddhist perspective can be both a means and an end. An enlightened person in Buddhist view is one who is free. He is free in two senses. First, he is free in the sense that he is not under the influence of anything, especially the desires which Buddhism considers to be the blind forces that push sentient beings into the struggle for desirable things. Secondly, he is free in the sense that his actions are totally pure. This kind of person can never harm anything. We will see that freedom as the highest quality of life is the end. In Buddhist perspective, the end and the means must share some basic nature. Freedom as the means will support freedom as the end. This is why in Buddhism religious dogmas are less influential. The Buddha gives his disciples the freedom even to argue against what he has stated. It could be said that the first kind of freedom (methodological freedom) is required to attain the second kind of freedom (ultimate freedom).

In the Buddhist community, the personal freedom of believers is accepted through social tolerance of some kinds of evil. For example, even though the Fifth Precept says that taking intoxicants is wrong, intoxicants can still be sold in the Buddhist community. This does not mean that Buddhist ethics accepts that Buddhists are free to take these substances. It just means that the freedom to learn about moral lessons in one's life is needed to be a free person in the future. Taking intoxicants is always

wrong, but it might be more wrong if society did not give its members the freedom to learn this lesson by themselves.

Applying the principle of freedom to the cloning of human beings or any kind of human genetic research, two things should be considered. Cloning and other genetic research can be viewed both as an activity and as an object. Cloning as an activity means that it reflects an attempt by scientists to search for something relevant to the advancement of scientific research. Cloning as an object means that it produces something and introduces that something into society. The debate over human cloning appears to stress the second meaning of the term. We look at the product resulting from the process (the clone) and ask: should we tolerate this kind of thing? It may be that the most important meaning of the term is the first one. The serious question then arises: should we tolerate an attempt to search for something valuable in terms of scientific advancement?

The history of science is filled with results that we had feared at the beginning but that was proved not wrong over time. The technique of fertilization called IVF at first was expected to produce a monster without a human soul. Nowadays, such a fear has been proved not true. The process of learning something does not necessarily yield pleasurable results. But if we are not free to learn, how shall we know what is right and what is wrong?

Buddhism believes in human wisdom and considers the history of humankind in terms of a learning process. Wisdom includes knowing to stop at the point when the inner moral whisper advises us to stop. However, the inner moral whisper about something never occurs without serious study of that subject. The serious study of any subject can never occur without freedom to study. Today we have many conceptions of the activities conducted by scientists, some of them negative and some positive. So long as actual study has not yet started, conceptions will forever remain conceptions. The problem is: should some conceptions be the dominant idea, under which the real study of the subject must be aborted? There can be different answers to this question. But the answer from Buddhism appears to be: to abort the study of something on the grounds of negative conceptions is unreasonable and unjustifiable.

[This paper is mainly based on the interpretation of the Theravāda Buddhist Pāli Canon used in Thailand and other Theravāda Buddhist countries such as Burma and Sri Lanka. For English translation, see *The English Tipitaka* by the Pali Text Society. There are a very few scholarly books on Buddhism and genetic research. For further reading, the works of Damien Keown, such as *The Nature of Buddhist Ethics* (1992) and *Buddhism and Bioethics* (1995), are recommended.]