

Bioethics: How Can Humanistic Buddhism Contribute?

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ABSTRACT

As a term, "Bioethics" had been in circulation for hardly five decades. The debate over its meaning, scope and application is being carried on in earnest in academic circles with little agreement. This is as it should be in a discipline so new and important. Tomes have been written to elucidate, illustrate and defend what biological and medical scientists, philosophers, theologians, lawyers, and international jurists regard as principles and rules of bioethics. A case has also been made to expand the term to "Biomedical ethics". Some argue, however, that medical ethics would only be a subsystem of bioethics.

Over the last decade a plethora of books have been published. That in itself is indicative of the compelling need to evolve a discipline which pertains to ethical, moral, and religious concerns on life and living. A working definition would be that bioethics is a subsystem of ethics pertaining to life and living and, therefore to the sciences dealing with them. What is desired in the name of bioethics are adequate and clear-cut conclusions on what values, norms, principles and rules should govern the burgeoning capacity of biological and medical sciences to affect life from its most initial stage as a sperm, ovum or zygote to the final termination in death.

Never before in history had the community of biological and medical scientists wielded such immense power through knowledge, skills and sophisticated tools to manipulate life in all its ramifications. All indications are that this power is bound to increase exponentially, as biological and medical scientists, encouraged and stimulated by proven success, forge ahead with increasing discoveries in the ever-expanding discipline of biotechnology. Already, reality has surpassed the wildest imaginations of science fiction.

The specter of misuse haunts humanity. The adage that war is too important to be left to generals may as well apply to scientists, as regards biotechnology. Should the exercise of this enormous power be left in the hands of scientists alone? The answer, if we listen attentively to the vocal champions of bioethics or biomedical ethics as well as national and international jurists, is an unambiguous "NO". If bioethics is the solution, in what form and manner and through what modalities should it operate?

A specific question to be examined is the role which religion, in general, or Buddhism or more specifically Humanistic Buddhism, in particular, can play in evolving a system of bioethics to meet current challenges.

Sanctity of Life and Human Dignity: Foundations in Religion

In all measures from the Hippocratic Oath of the fourth century BCE to codes of ethics and public laws of today, the basic motivation has been the desire and the intention of society to restrain the autonomy of the scientist. What Hippocrates deemed as ethically wrong were the administration of deadly drugs, procurement of abortion, seduction or, in more modern terms, the sexual harassment of men and women in the course of health care, and the violation of physician-patient

confidentiality. The first two concerns stem from his conviction of the sanctity of human life. That a physician's role is to save life and not to harm or endanger it has been the fundamental understanding on which medicine had been practiced in every civilization.

In South and Southeast Asian culture, this notion is reemphasized by the very designation of the art of healing as Ayurveda, the science of long Life. Christian Europe in the Middle Ages applied a blend of religious and virtue-based ethics to medical practice. The Buddha and Jesus Christ uttered identical sentiments when they equated the care of the sick as a personal service rendered directly to them. (Mahāvagga, VIII, 25, 3 and Matthew 25:39-40). Islam upholds the practice of medicine as a divine service.

Religions in general advocate the sanctity of life even if some do not go as far as to give equal primacy to animal and insect life as human life. Judaism interprets the statement "I will reside among them" (Exodus 25, 8-9) to mean that a human being is a tabernacle or a temple from which emanates the divine word. The respect for human life for the Jews, therefore, is absolute, sacred and inviolable. To them and the Christians, the belief that man was made by God in his own image and likeness is a further testimony to the sanctity of human life. (Genesis 1, 26ff)

The Buddha taught, "All beings fear violence. Life is dear to all. Compare your love to your own life and do not kill nor cause to kill," (Dhammapada 129) In defining the universality of living beings toward whom loving kindness and compassion are to be extended, the Buddha included "all forms of life without exception, moving or stable, tall, huge, middling or as tiny as an atom or fat, seen or unseen, living nearby or far away and born or seeking to be born" (Suttanipāta II, 1), As regards human life, the Buddhist view is that to be born a human being is a very rare fortune: It is the human who attains the highest spiritual sanctity of a Buddha. In the Mahāyāna Buddhist tradition of East Asia every human being is believed to be endowed with the "Awakening Mind" (*Bodhicitta*, popularly translated as Buddha Nature) and is a potential Buddha.

The Buddha's senior contemporary, Jina Mahāvīra, the founder of Jainism, practiced so stringent a code of nonviolence (*Ahimsā* = non-injury) that his followers, besides being strict vegetarians, take ample precautions to prevent the destruction of the tiniest creature even by accident (e.g. straining water before drinking, not eating after dusk, sweeping the ground before stepping on it).

The Islamic concept of the sanctity of life is founded on such texts in the Koran as "We have created man in the most perfect form" (Surah XCV, 4), "God breathed into man his soul" (Surah XXXII, 9) and "The human being is a noble creature in the eyes of God" (Surah XV, 70).

Hinduism in its sublimest form regards that every being, from man to an elephant or a gnat, is a morsel of the universal soul, and attributes to every living being a sanctity based on a common origin and shared divinity (Brhadaranyaka-upanishad I, 3, 22) So did Swami Vivekananda declare, "The greatest duty of man is to serve that

God whom the ignorant call man." Advocating vegetarianism, Hinduism upholds nonviolence as its basic doctrine.

All prevailing religions have commandments or precepts which prohibit killing. The Western Asian religions have it as "Thou shalt not kill" and it is generally interpreted to apply to homicide. The commandments pertaining to theft, adultery, false testimony and coveting seek to maintain the security and dignity of persons from being violated by others. The Eastern religions have more comprehensive precepts as exemplified by the first of the Five Precepts of Buddhists: "I take upon myself the discipline of not depriving any living being of its life." Right Livelihood in the Noble Eightfold Path of the Buddha embodies guidance for virtuous and harmless means of living by avoiding violations of human rights. Specifically forbidden are sale of human beings for various purposes and such commerce as sale of weapons and poison. The discipline enjoined in religions indigenous to China is founded on restraint in word, deed and thought in dealing with fellow human beings. Hinduism, too, upholds the sanctity of human life, even though its caste system grades humans according to birth and hereditary profession and animal sacrifice persists in the worship of Goddess Kālī.

If religions are somewhat ambiguous about the totality of life to which sanctity is attached, they are unequivocally unanimous as regards human life and dignity.

Violence: Nature or Nurture?

Despite the weight of religious advocacy of the sanctity of life and human dignity, there had been no time or place in human history without violence. One even wonders whether human beings are genetically programmed to be violent or whether violence is a vestige of the animal ancestry of humankind. A body of multidisciplinary scientists under the auspices of UNESCO considered this question and in a famous document referred to as the Seville Declaration of 1989 stated categorically that human beings were neither genetically violent nor did they inherit violence from an animal ancestry. If the humankind is not born violent, its tendencies toward inhumanity must be learned, acquired or forced behavior. Are scientists, by reason of their superior intellectual capacity, knowledge and skills immune to such external factors? They certainly have not proved to be immune.

In the Trial of the Doctors at Nuremberg in 1947, the world was shocked to hear how a host of doctors and scientists of related disciplines had participated in the most heinous crimes against humanity. Irreversible damage done through human experiments to persons whose consent had never been obtained brought to light the enormity of abuse which was perpetrated by men who were trained to save lives and alleviate suffering. Even as the scare of this gruesome disclosure of another aspect of the Holocaust was waning, there came the equally stunning revelations of human experiments done elsewhere in peace time in the free world. These too had been without the knowledge and the consent of the victims but with similar deleterious long-term consequences.

In the United States of America, the whistle was blown in 1966 by Henry Beecher who cited as many as twenty-two instances of unethical conduct on the part of

medical researchers. Their victims were drawn from the convicted and the mentally retarded inmates of state institutions, the handicapped, the poor and minorities. The fear of abuse was no longer a fancy; nor was it the product of paranoia. Scientists were on a trajectory of their own. Albert Guigui, the Grand Rabbi of Brussels, explains the causes and the consequences:

Technical progress, the compartmentalization of knowledge in sectors—separated, independent and entrusted to specialists who are increasingly isolated—and the excessive use of the analytical mind risk making [scientists] lose the *vision* of the whole and veer toward generalizations which are often arbitrary, unjust and inhuman, enabling them to abandon the essential moral laws. (Reseau europeen «Medicine et droits de l'homme» p. 74)

The 1978 Belmont Report on Ethical Principles and Guidelines for the Protection of Human Subjects of Research sought to prevent the misuse of biological and medical sciences. In the world scene in 1980s, the World Health Organization (WHO) provided guidelines and standards on drug trials and human experimentation. The United Nations Educational, Scientific and Cultural Organization (UNESCO) moved in 1991 to set up an International Commission on the Human Genome. This Commission has deliberated over four years and drawn a Declaration for Adoption by Member States. The Green Movement of Europe expanded the concept of bioethics to apply to the biosphere as a whole and expressed an increasing concern for the environment.

The irrefutable conclusion which all such actions embody is that biological and medical scientists, as everyone else in the world, have to be sensitized on the sanctity of life and human dignity and the joint socio-ethical responsibility to preserve them.

Issues Pertaining to Bioethics and Biological Sciences

Issues pertaining to bioethics and biological sciences can be grouped under five headings as each has its own moral and ethical implications:

Means of Mass Destruction: Chemical and Biological Weapons.

Manipulation of life itself: medically or therapeutically assisted (a) procreation, (b) termination of pregnancy and (c) death or euthanasia.

Human Eugenics, Genetic Engineering and Euphenics: prenatal diagnosis; genetic engineering for rectification of congenital malformations, hereditary diseases and genetic anomalies; germline gene therapy; and organ transplantation.

Genetic engineering in agriculture and animal husbandry to enhance quality and quantity of food production or extract new pharmaceutical products.

Manipulation of animals and violation of Animal Rights

Moral and ethical implications arise from the diametrically opposed positions which scientists, on the one hand, and some moralists, on the other, tend to take in respect of these issues, namely:

1. The persistent demand of some moralists that scientists desist from interfering with or manipulating nature and specially human life, purely on grounds of religious faith or conscience. The most conservative among them would say, "God made the world; so let nature be as it is."
2. The scientists' single-minded devotion to the pursuit of research and experimentation for an untrammelled advancement of knowledge as a matter of right or duty. They would argue, "If the humans had not interfered with nature, they would still be cave-dwelling hunters and food-gatherers."

The "hands off nature" argument of the theologically oriented moralists is not new. An earlier generation considered the experiments of Wright Brothers to develop a flying machine as blasphemous. "If God willed man to fly, wings would have been provided for the purpose," was the argument! It is from a similar standpoint that doctors and scientists are often admonished "Not to play God." This illustrates the enormous gulf which exists—and, according to some, is continually widening—between the autonomous search for knowledge by the scientists and the exclusively theological objections of some moralists.

All who advocate bioethics and the prevention of the misuse of biological and medical sciences are, however, not guided by a belief in God. The belief in a Creator-God and Creation is not universal. Even among the believers in God and Creation, interpretations vary widely. An eminent scientist of my acquaintance who, by religion and personal conviction, is a very devout believer in God would argue that the vision and skills of a scientist also emanate from God. He explains that the mission of the scientist so favored by God is to unravel the secrets of the universe. He calls it a divine mission for which God has given humankind a unique brain and a free will with infinite possibilities. One may also be reminded of Sigmund Freud's lament in his old age when he had reportedly asked why God, who had chosen him to unravel the working of the human mind, did not provide him with the audiences to listen to him until his health and faculties were failing!

A Common Ground for Moralists and Scientists

What is most important is that bioethics should aim at a *via media*. A middle ground has to be explored for the benefit of science and for the good of the humanity. There are at least two major concerns shared by everyone including the scientist and the moralist:

1. The recognition of the overriding importance of maintaining and safeguarding biodiversity, subject, of course, to the proviso that viruses,

bacteria and protozoa, injurious to health, would continue to be tracked down and eradicated:

2. The fear of abuses of scientific knowledge and skills by politically or economically motivated irresponsible elements.

These two concerns constitute the ideal meeting ground for the scientist and the moralist. The admonition not to play God may apply to anything done directly or indirectly to the detriment of biodiversity. Whether one believes in God or not, one cannot overemphasize the importance of sustaining the equilibrium of life forms, in both flora and fauna. Every species endangered threatens the biosphere and eventually its most important beneficiary—the human being.

Equally disconcerting as endangering is the fear of abuse of scientific knowledge and skills for power or profit or both. Often the literature pinpoints dictators of the Third World as potential culprits. But an even far greater threat comes from the global proliferation of terrorists whose propensity for destruction, as tragically demonstrated on September 11, 2001, has no limits. One should not lose sight of an equally menacing interest that transnational corporations could have in the results of biomedical research. These corporations have the resources, the access to scientific research and technology and a primary motivation in profit.

Issue I: Means of Mass Destruction: Chemical and Biological Weapons

The most cherished dream of the humankind is perpetual war-free, conflict-free peace. But never in history has it been so. Nor is it today. Will the world ever be weapon-free?

Asoka the Righteous, the Mauryan Emperor of India of the third century BCE eschewed war forever. He did so after seeing for himself the havoc which a limited war brought in the form of the killed, the deported and the victims of famine and pestilence. In his vast empire, he replaced the war drums summoning soldiers to the battle front with sermons on righteousness. He had left for us some fascinating and impassioned records on stone. He extolled peace and upheld the sanctity of all life. His eloquent inscriptions—specially the Rock Edict XIII—elaborate the benefits of "Conquest by Righteousness" which had spread his influence as far as the Greek potentates four thousand miles from his capital. He appealed to his sons and grandsons to emulate him. Yet he was realistic, for he concluded the Edict with a second appeal: "Yet if you have to engage in a war of weapons, be considerate and forgiving and inflict minimum punishment." Over a thirty-seven-year regime, of which almost thirty years were after his conversion to Buddhism, he did not disband his army or, as the weight of evidence suggests, abolish capital punishment. The case in point is that war and conflict are inevitable, weapons would need to be used and hence produced and all that one can realistically hope for is a decent minimum-damage war.

It is but simple common sense to assume that nations will continue to arm themselves. Armament and even the arms race will continue to be defended as a

deterrent to war. Arms production, in that sense, will be held as an-effective means of securing and ensuring peace. The show of prowess in the battlefield had been for millennia the goal and outcome of war. It had been the celebrated subject of epics and songs which glorified bravery and chivalry. But war left the battlefield when weapons of hand-to-hand combat were replaced by the bow (specially the cross-bow), the sling and the cannon which could kill from far. Later on, as war was directed against all and sundry in enemy land, the propensity for destruction had a free play. War aimed not at victory but the long-term punishment of the enemy. The medical officer of the British army which invaded the hilly kingdom of central Sri Lanka at the beginning of the nineteenth century was appalled when fruit trees and means of economic production were destroyed willy-nilly by the advancing army with superior fire power. But that was only the beginning of a trend which had grown and continues to grow to frightening dimensions.

We live in an age when nations are poised against one another even as they declare friendship and talk peace. They parade armaments whose capacity to inflict mass destruction is mind-boggling. The world's richest nations are manufacturers and merchants of weapons. The largest single item of expenditure of the Third World as a whole is weapons which become increasingly sophisticated and rapidly obsolete. The pity is that these armaments are the direct result of the unprecedented progress that science and technology had made in recent years. In the process, the scientist in the quiet and peaceful surroundings in higher education—in laboratories and experimental workshops—has become a part of the war machine.

In the industrialized countries alone, an estimated half a million of the world's best scientists are engaged in developing and perfecting weapons, whether they be conventional, nuclear, chemical or biological. It is often with disbelief and utter frustration that the world receives news of their latest "achievements" such as anti-personnel devices which would destroy human beings but save buildings and installations or germs and biotechnological processes which would wipe out whole populations with excruciating pain and suffering. One is at a loss to cry or laugh when these scientists or their sponsors try to assuage their conscience by gloating over relatively minimal "spin-off" gains in peaceful applications of military research.

Arms development without exception is a domain in which the application of bioethics has an unequivocal position. It is unpardonable to develop weapons of mass destruction and to use them under whatever provocation. The social responsibility of the scientist is indisputable. The degree or manner of destruction is incidental. It makes little difference as far as this responsibility is concerned whether the weapons are conventional, nuclear, chemical or biological. The escalation of efficiency and effectiveness of weapons systems has opened the proverbial "Pandora's Box." The world's events of the last few decades are reminders of the dangers facing humankind. All that is needed is just one man with blatant disregard for human life to unleash indiscriminate destruction. But he could never have been capable of such a dastardly cruel pursuit without the unsuspecting support and complicity of the scientist who devised the weapons, on the one hand, and the transnational corporations which profited by exporting the technology and the materials, on the other.

It has to be admitted that, next to nuclear armaments, chemical and biological weapons inflict irreversible damage to people and the environment far removed from the scene of war. Salvinia introduced to Sri Lanka during World War II and defoliation chemicals used in Indochina during the Vietnam War illustrate what long term harm could be done to the environment with biological and chemical intervention of the least sophisticated form. What deleterious effects would advanced chemical and biological weapons of today have on the entire human race in the form of permanent genetic damage, mutation and extinction of species and the on-set of uncontrollable diseases and epidemics?

The international community has taken note of the need for collective action. Legal instruments have been drawn up and nations are being canvassed to accede to them. Agencies and procedures to implement them, though grossly inadequate and ineffective, are in place. What is still to be accomplished from the bioethical point of view is a commitment from the scientists and their sponsors, the national governments, to divert their attention from destruction to construction, from warfare among nations to welfare of humanity. Fortunately the theological or philosophical differences which hinder the deliberation of the advocates of bioethics do not apply to this issue. Yet, the recent anthrax crisis engineered most likely by terrorists in New York, Florida and Washington DC has convinced everyone of the inadequacy of the protective and preventive measures available even to a technologically advanced nation of super-power scale.

Issue II: Manipulation of Life

A. Medically Assisted Procreation or Asexual Reproduction

Medically assisted procreation is a reality and the scope is unlimited. At the present state of development of related biological and medical sciences, couples or even single persons who would never have dreamt of experiencing the joy of parenthood are beneficiaries of techniques ranging from *in vitro* fertilization and frozen embryos to surrogate mothers. Moralists and legislators reacted to the perfection of each technique. The result is a body of legislation in such countries as Australia, Britain, France, Germany and U. S. A. (to name a few). These laws lay down the parameters within which it would be lawful to assist procreation medically and biologically.

In a Bill under the title "Human Reproductive and Genetic Technologies Act," the Canadian legislature sought to prohibit (i) cloning or splitting a zygote, embryo or fetus; (ii) fertilization of human ovum with animal sperm or vice versa for purposes of producing a viable zygote; (iii) fusing human and animal zygotes; (iv) implanting a human embryo in an animal or vice versa; (v) germline gene therapy on ova, sperm, zygote or embryo; (vi) retrieving a sperm or ova from a cadaver to create an embryo; (vii) sperm separation of X and Y bearing sperm for selecting sex of the child; (viii) prenatal diagnosis (including ultrasound) for determining fetal sex; (ix) maintaining an embryo outside the human body for purpose of research; (x) fertilizing an ovum outside the human body solely for purposes of research; (xi) commercialization of the procurement and use of surrogate mothers; (xii) purchase or sale of ova, sperm,

zygote, embryo or fetus; and (xiii) use of ova, sperm, zygote or embryo for research, fertilization or implantation in another woman without the donor's consent.

Exceptions, of course, were to be allowed on health grounds, for forensic purposes and on reimbursement of incurred expenses. As regards the fertilization of animal ova with human sperm, the Bill allowed the continuance of the standard procedure for testing male fertility, namely the insertion of human sperm into ova of hamsters.

The list of banned procedures and the exceptions is indicative of the advances made by biological sciences in asexual reproduction. All its provisions stem from assigning priority to the demands of bioethics rather than to the imperatives of scientific research.

B. The Growing Controversy on Cloning

Heading the above mentioned list are procedures which occupy the centerpiece in the controversy intensified by the cloning of a sheep through the technique of nuclear transfer in February 1997 at the Roslin Institute in Edinburgh, Scotland. This significant biological breakthrough has also led to a spate of hastily drafted laws, decrees and policy-decisions, especially in countries where personnel and facilities exist for the replication of the Scottish experiment. "Hands off humans" is the crux of such legislation. In their wake the entire issue of medically assisted procreation has come up for comment and discussion.

Interestingly, a major bioethical offensive has also been launched from Scotland itself. The Church of Scotland General Assembly meeting on the twenty-second of May 1997 adopted two resolutions urging Her Majesty's Government in Britain (1) "to take necessary steps to prevent the application of cloning as a routine procedure in meat and milk production, as an unacceptable commodification of animals;" and (2) "to press for a comprehensive international treaty to ban (human cloning) worldwide." By commodification is meant the reduction of an animal to a mere economic commodity.

Let us first examine how this differentiation is maintained as regards animal and human cloning. The first resolution commends the production of proteins of therapeutic value in the genetically modified sheep and other farm animals. These animals had already yielded products bringing relief to emphysema and cystic fibrosis sufferers. On that basis, the advantages of biotechnology, in general, and genetic engineering, in particular, are declared "ethically acceptable." Dr. Donald Bruce, the Director of the Church of Scotland's Society, Religion and Technology Project goes further to say that "the *ethical* question (*is*) on how far we should apply technology to animals." (emphasis mine) The bottom line of his argument *is* that on a very limited scale cloning animals "would not seem ethically unacceptable." For urging the limitation of scale in animal cloning, the Church of England advances the Christian argument that the world around us is God's creation and variety *is* one of its characteristic features:

The overall picture in the Bible, in commandments, stories and poetry is of a creation whose sheer diversity is itself a cause of praise to its creator. (SRT Website on 1997 General Assembly Report -Cloning of Animals and Humans)

The resulting bioethical conclusion is that cloning of animals by itself is not ethically wrong but "scale and intention play a part." So, as far as this issue is concerned, we are in the field of not absolute but relative ethics. Biological scientists would have no difficulty in agreeing with the Church of Scotland. It is an irrefutable biological argument that biodiversity should be sustained at all cost. If that is assured, animal cloning would have the moralist's qualified approval.

C. Human Cloning

It is a different proposition when it comes to human cloning. The lapsed Canadian legislation bans the cloning or splitting a zygote, embryo or fetus and no exceptions are considered. The Church of Scotland declares that the cloning of human beings is ethically unacceptable as a matter of principle. It explains its position further:

On principle, to replicate any human technologically is a violation of the basic dignity and uniqueness of each human being made in the image of God, of what God has given to that individual and no one else. It is not the same as twinning. There is a world of difference ethically between choosing to clone from a known existing individual and the unpredictable occurrence of twins of unknown nature in the womb. *The nature of cloning is that of an instrumental use of both the clone and the one cloned as means to an end, for someone else's benefit. This represents unacceptable human abuse, and a potential for exploitation which should be banned worldwide.* (ibid., Emphasis mine)

The concession of scale and intention given to animal cloning is denied to human cloning. The only reason discernible for this ambiguity is that the rational bioethical consideration which went into the decision about animals is replaced by a faith-based theological dogma in the case of the humans. It is certainly within the competence of the Church to put forward its dogma on the creation of man in the image and likeness of God in expressing its objection to human cloning. But to demand worldwide banning on the basis of that dogma alone would be to disregard contrary views which might find support in other religions.

I see no reason why the sound bioethical principle of scale and intention, which had been so rationally developed in favor of limited and well-intended animal cloning cannot be extended to human cloning. Based on the progress made in other branches of genetic engineering, there could be scientists who would wish to investigate whether human cloning has its own set of benefits to humanity: e.g. yet another option open to desperate people who have no other way of having a child of their own; an assured means of supplying custom-made organs for transplanting to save lives; increasing the sum-total and distribution of supremely endowed persons, whether they be savants and saints or luminaries in arts and sciences.

In our present state of knowledge we do not even know whether these constitute reasonable expectations. Nor do we know whether the fears of the prophets

of doom are based on fact or fiction. We do not know enough to make an informed decision. We need information and that has to come from experimentation. In this case, such experimentation is not likely to have any ill-effects on the donor. Is there any other way in which we could have answers to the following questions?

Is human cloning feasible or is the humankind biologically otherwise beyond the scope of manipulation?

What exactly will be the result of human cloning: A new person—a *tabula rasa*? Or, an unaltered and unalterable identical replica of the donor of the tissue with his or her own pre-existing personality, memory, habits, inclinations and so forth?

Are the speculations on the benefits accruing to humanity from human cloning within a reasonable limit of accuracy?

What are the real dangers against which safeguards should be taken?

Unless we have scientifically established answers to these questions we are in the domain of wild speculation in no way different from the days when people wondered whether the earth was flat or global.

I am not questioning the sincerity and the serious concern of individuals and organizations which urge the banning of human cloning. My position is that their campaign is premature and to a very great extent counter-productive for the following reasons:

First, no effective ban can be imposed and supervised for the vast resources necessary for it could never be raised.

Second, if cloning humans is found to be lucrative business, industry is bound to do it any way.

Third, bans may be effective in countries where rule of law is the standard. The scientists who would be prevented from doing the experiments will be the very ones who will be objective, disciplined and responsible, on the one hand, and who have the resources to deal with any untoward consequences, on the other. The scene of human cloning could move to places where similar standards might not be enforced and deleterious results could go undetected and unattended.

Fourth, the only result achieved by banning will be a delay by a few years or decades. We have only to recall the campaigns of yesteryears and observe how the things that were dreaded a few years ago are now commonplace.

My recommendation would be for limited experimentation in human cloning overseen by theologians and moralists, biological and medical scientists and national and international jurists. Let the long term decision be on the principles of bioethics which would emerge from these very experiments.

D. Other restrictions

Though cloning heads the list of procedures proposed for prohibition in the Canadian Bill, several of its other provisions also merit comment.

The involvement of animals in the asexual process of human reproduction is one of them. The moralists object to it on the ground that it could lower the dignity of the human race. As a value judgement it is debatable from different cultural standpoints. A more reasonable argument is that the fusion of human and animal reproductive material might set in motion a chain reaction the results of which none could visualize in the present state of our knowledge. Science fiction consists of ample horror stories of monsters to scare most people. Should we still experiment? The answer depends on whether there are any compelling anticipated benefits such as in combating disease or hereditary genetic disorders? In such an eventuality, the bioethical principles of scale and intention should guide the scientist.

Commodification or commercialization of the intrinsic elements of human procreation (e.g. through sale of ova, sperms, zygotes and embryos; wombs for hire; sperm, ova and frozen embryo banks; and middle men to transact deals) is certainly degrading to human dignity and the measures envisaged in the Bill would receive wider approval. There could even be persons who in the name of bioethics declare that the legal provisions do not go far enough.

On the other hand, the prohibitions relating to retrieving an ovum or sperm from a fetus or cadaver and maintaining an ovum outside the human body solely for purposes of research deserve to be examined further. In the first instance, it may be the only scientifically available solace to a grief-stricken person to get back a new life from the lost beloved, be it a spouse or a stillborn baby. If it is feasible, what is the bioethical objection? Does death reduce a human to a lower status? If organs are harvested from the dead to give life and vision, what makes a viable sperm or ovum different? If the objections come in this case from the moralist and the legislator, it would be they rather than the scientist who would be seen as "playing God." Of course, these are others whose objection has to do with the short circuiting of the grieving process.

In the case of the maintenance of an embryo outside the womb for any purpose, prohibitions and controls could only be counter-productive. A determined scientist has a feasible option. He may conduct the necessary research on a living guinea pig in the form of a naturally developing embryo in a mother's womb. Is it bioethically less objectionable? If experimentation, on an embryo is feasible without endangering the mother, what do objectors consider as undesirable or unethical?

E. Continuing Dialogue on Medically and Therapeutically assisted Procreation

With regard to the issue of medically and therapeutically assisted procreation as a whole, we are at a crucial stage when questions demanding urgent answers are many and complicated. This is the time when it is essential for the scientist to be in readiness to handle unforeseen developments in what is allowed and is in universal practice. Continuing research is indispensable. Indiscriminate prohibitions and controls

could be the death knell of research. If this happens, the losers will not be the scientists alone. Hence my plea for a continuing dialogue among scientists, advocates of bioethics, and legislators of national governments and the international community.

F. Medically assisted Termination of Life

Although the issues pertaining to abortion and mercy killing or euthanasia are important from the point of view of the sanctity of life, they do not relate directly to the question of the prevention of the misuse of biological sciences. They may really be issues of medical ethics wherein the Hippocratic Oath has a major role to play. I shall return to this question when the Buddhist attitude to these issues is discussed.

Issue III: Human Eugenics, Genetic Engineering, Euphenics, and Organ Transplantation

Spectacular progress has been made in biotechnology in the fields of human eugenics, genetic engineering and euphenics. Benefits to humanity in the form of rectification and cure of congenital malformations, genetic deficiencies and anomalies and hereditary diseases have resulted from research and development since O. T. Avery and his associates discovered the "secret of life" in DNA (deoxyribonucleic acid) in 1944.

Statistically, the magnitude of the task for the biological scientists is enormous. Over two thousand distinct inherited genetic defects have been identified. One in every six newborns is said to have hereditary disorders of varying severity. When seen in the light of relief due to such a large section of the population, one is tempted to welcome the progress made in genetic manipulation.

Eugenics is the branch of biotechnology which aims at enriching the human genetic pool. Eugenics in its negative form reduces the possibility of transmitting defective or inadequate genes by preventing or controlling reproduction on the part of genetically defective persons. Sterilization is a standard methodology. In the positive form, eugenics promotes preferential breeding with the objective of evolving a genetically enhanced humanity. Its aim is to distribute desirable traits and quality broadly and thereby improve the mental and physical well being of the human race. Genetic engineering which is also called gene therapy or "gene surgery" consists of ways and means of affecting the ova and sperms (=gametes) to inhibit transmitted genetic defects and improve the genetic quality of the person to be born out of the treated gametes. Germline gene therapy, which is an extension of genetic engineering, seeks to create genetic alterations which could be transmitted to the next generation. Euphenics is a procedure which does not affect the genes themselves but attempts to prevent or correct the detrimental effects of defective genes.

As curative procedures applied to an ailing individual, these three procedures are medical in character. The bioethical concerns, therefore, would relate mainly to competence, reversibility, informed consent of patient, noncommercialization or non-commodification of any resulting products, and patient-physician confidentiality.

In eugenics and germline therapy where the affected parties extend to future generations, the bioethical safeguards have to be far more stringent. Here the biological and medical scientists have the greatest temptation to be do-gooders. They would act with the conviction that the improvement of the overall genetic pool of the human race justifies whatever harm that would be done in the process to those whom they identify as the "genetically defective." Here in the first place there *is* no reversibility. Selective breeding, in the short term, had produced better milk or meat yielding livestock. Is the human race to be treated on par with livestock? Memories are still fresh as regards scientists under a dictator's orders who worked on breeding a blue-eyed blond pure race!

It is eugenics much more than cloning which interferes most with nature. Cloning makes a replica of the donor of a gene. Eugenics can change generations to come to fit any whim or fancy as regards height, weight, complexion, color of hair or other physical and mental qualities. One ethically most troubling step in the process is that which deprives certain individuals of the freedom to procreate simply because of a perceived genetic defect. Its most devastating corollary is genocide through compulsory deprivation of the right to reproduce. Who survives and who perishes for the good of the human genetic pool is too momentous a decision to be made by anyone. The scientists, who may be called upon to make it, might have no autonomy. As in the case of their counterparts making chemical and biological weapons, they may be cajoled, bribed or intimidated by their sponsors, whether political or commercial.

The issues concerned with eugenics are not purely ethical. There are scientific reasons why artificially enhancing the human genetic pool could lead to disaster. The principle of biodiversity assumes a special significance when it comes to the preservation of the incredible diversity in the humankind. Humanity has survived many a vicissitude of nature from Ice Age and floods to natural and man-made disasters because its diversity provided a wide variety of genetic characteristics to adapt to the changing environment. A standardized humanity would lose this advantage.

Organ transplantation is a science which has come of age. The advantages are self-evident. Bioethical questions relate to procurement of organs and prioritization of recipients. Those relevant to procurement of organs center on

- a. use of cloning technology for custom-made organs;
- b. exploitation of the poor and Third World populations as cheap sources of organs;
- c. theft of organs from unsuspecting strangers; and
- d. illicit traffic in organs with links to crime.

Of these, only the utilization of cloning technology would fall within the sphere of responsibility of biological scientists. Apart from the consent of the donor and the recipient, no major moral issue should arise, unless, in the prioritization of recipients, affordability of high cost becomes the only criterion. If the need arises to mass-produce organs and it is done as a human service rather than a lucrative industry,

bioethical principles, norms and rules could be developed to maintain requisite moral standards.

Both scientific and ethical reasons would indicate that the procedures discussed here have to be used in a limited scale and directed to specific defects in individuals purely with the intention of effecting a cure or remedy. Particularly apt in this context is the following statement with which V. J. Genovesi concludes his article on Genetics in the *Encyclopedic Dictionary of Religion* (eds. Paul Kevin Meagher et al) Corpus, Washington D.C. 1979:

What must be decided is whether human influence upon human evolution will continue to be haphazard or instead be systematically planned. If a sense of responsibility inspires the choosing of deliberate intervention, it must also include the caution to proceed humbly and with the utmost wisdom; hopes for future generations must be balanced by an acknowledgement of, and respect for the personal rights of each presently existing individual, including especially those of the weak, the defective, and the defenseless. If the step is taken to modify humanity, according to what specifications will alterations be made? Who will decide upon such specifications, and who will supervise the implementation of the plan? The state of public policy-making in environmental, domestic and foreign affairs is proof enough to that questions about genetic policy-making are not at all idle. In the effort to reshape humanity it is imperative not to undermine those very conditions of possibility for genuine human communication among individuals—personal freedom, the desire for truth, the capacity to recognize goodness, and the courage to love.

Issue IV: Genetic Interventions in Plants

Much has already been said in passing on the issue of applying genetic and related procedures to plants and animals. Ever since civilization found a more stable food supply for the primitive human in agriculture and animal husbandry, manipulation of nature has become increasingly complex. Ethical issues connected with land, water, plants and animals vary from culture to culture. Some enjoined the emulation of “the tender care of the bee that draws the nectar without harming the flower.” Some asserted the overall right of the humankind to be the sole beneficiary of all that was on earth. In others the exploitation of the environment proceeded with such abandon as to create serious ecological problems. Pollution in diverse forms have assumed the magnitude of a global threat to the survival of life on the planet.

Increasing awareness of the limit to growth has brought about in our times a keen realization that nature, if not treated with respect and moderation, could endanger the very existence of human race. The human responsibility to safeguard the irreplaceable heritage of flora and fauna is being recognized with increasing assiduity. The global agreement on the principle of sustaining biodiversity is a direct result of this consciousness. The approach to sustainable development seeks to rectify errors of the past and treat Planet Earth with the respect that is due to it.

The errors of the past have been exacerbated and complicated by the application of science and technology. Their rectification has thus become a concern of the scientists and technologists. It is commendable that they have shown a degree of commitment which is in line with the principles, norms and rules as are identified for the purpose by advocates of bioethics. One must, however, underline the potential danger which continues to lurk in the form of human cupidity for short-term gain. Needless to say that scientists and advocates of bioethics should be united in their effort to save Mother Earth and cooperate to prevent its further degeneration.

The most recent controversy relating to Roundup resistant soya beans raises the issue of how long and to what proportion of profit an inventor of a gene-altering technique should exercise a monopoly over its products. The dispute results from the inventor's insistence that seeds for each cultivating season should be bought from his firm. Tight supervision is exercised to prevent farmers using seeds from their own crop. A new kind of concern is generated by this issue. Will the large-scale interference with diversity of each species result in the removal of nature's own device in dealing with extinction?

One has to commend the dedication of the scientists involved in developing high-yielding and disease resisting crops, fruit and vegetables with longer shelf-life, and ways and means of enhancing the efficiency of food production and preservation for the growing world population. The bioethical concern of interfering with biodiversity and its possible consequences does, however, persist in relation to the genetic manipulation connected with these efforts.

Issue V: Genetic Manipulation of Animals and Animal Rights

Directly related is the issue of animal rights. To protect the habitat of endangered species is only one aspect. Animals sharing the common space with humans have their rights to life.

A document of special significance on animal rights is the Pillar edict V of Asoka the Righteous whose non-aggressive military policy was discussed earlier. Issued in his twenty-sixth regnal year, that is, circa 239 BCE, it is the world's earliest known decree on the protection of endangered species. In addition to twenty species of land, sky and water who are declared "exempt from slaughter," the decree offers sanctuary to pets, suckling farm animals, newborns up to six months and "all quadrupeds who are neither utilized nor eaten." Rules are promulgated on castrating, castration and branding of animals. So are the slaughter of animals and sale of meat and fish on specific holy days restricted. "Husks with living creatures should not be burnt and forests should not be burnt without a purpose or simply to harm," he decreed. The dictum "Living should not be nourished with the living" was the principle on which he abolished the daily slaughter of hundred thousands of animals in the royal kitchen and disbanded huntsmen and fishermen supplying food to the palace. He appealed to his people through his inscriptions to be kinder to the animals and forbade animal sacrifices of the day, even though he did not proclaim laws urging all to become vegetarians.

Today, a growing awareness of animal rights, specially among the youth, makes a significant impact. Vegans argue that one should not only desist from killing animals for food but also refrain from stealing their milk and eggs. Others adopt a more moderate position and consume eggs and milk products. Only extremely stringent codes of ethics, such as that of Jainism, extend the ban to plant life and forbid the eating of roots, yams, onions, garlic and what could be vegetatively propagated. Ecologists decry the unjustified over-exploitation of land in the process of growing animals for meat. Statistics are quoted to show that more land could be freed to nature if the meat consumption declined dramatically. That would be accompanied by a reduced use of chemical fertilizer, which constitutes the most extensive cause of water and land pollution. Biological sciences do play a major positive role in the remedial processes set in motion for environmental protection.

The other issue of equal ethical importance relates to commercialization or commodification of transgenic animals, plants and micro-organisms. A European Council Directive on patenting these as well as sections of the human genome led to a controversy in which ethical concerns figured prominently. A central argument of the Bioethics Working Group of the European Ecumenical Commission for Church and Society has been its ethical position that living organisms are products where "the distinction between what is God's creation and what is human invention is lost or blurred" or which could be "what God has given as free to all."

An ethical issue of far greater connection with the misuse of biological sciences pertains to animal testing. How much of it is absolutely necessary? How much abuse takes place because creatures for testing are expendable? It must be first made clear that no biological science or products and procedures discovered by biological and medical scientists would ever have been possible without experimentation on animals. Bioethics has to be concerned with avoidable abuse and excess rather than on a total ban. If the use of animals in research and animal testing are banned on principle, the only option open to science is to experiment on humans or to create living organisms genetically.

In the ongoing debate on cloning, it is said that 277 experiments preceded the successful production of Dolly and equally large numbers are recorded in more recent replications. Deformed and defective sheep and other animals resulted from them and hundreds of embryos had to be thrown away. Apart from declaring that the experiment should not have been undertaken at all, there appears to be no alternative.

The entire question of experimentation with animals and animal testing of industrial products is to my mind an area where the bioethical parameters should realistically be "scale and intention." It cannot be gainsaid that the bioethical demand for greater respect for animal life and rights, whether on the ground of the belief in God and Creation or on a commitment to the sanctity of all life, is justified and calls for the support of scientists experimenting with life forms for knowledge or products for the society.

Bioethics in Action

The foregoing discussion on bioethical issues, sketchy indeed in view of constraints of time and space, leads us to five conclusions:

1. There are unavoidable ethical questions which must be dealt with in the realm of biological and medical sciences and these must be raised and answers sought.
2. Biological and medical sciences should advance in research and experimentation without loss of momentum as many a serious problem of life and living is yet to be resolved.
3. Between the moralists looking at bioethical problems and scientists intently concentrating on discovery, a *via media* has to be evolved, expanding, as necessary, the principles which UNESCO had identified in the Universal Declaration on the Human Genome and Human Rights.
4. Legislators at the national and international levels should evolve principles, norms and rules to implement a collectively formulated and approved consensus and install the necessary institutional and procedural infrastructure for this purpose.
5. Nothing would be gained by the adoption of any extreme position. A basic policy which would be conducive to the greater good of the humankind is one in which scale and intention form the primary criteria.

Thus the three partners, namely the moralist, the scientist and the legislator, have specific responsibilities to bear. It is gratifying to observe that interdisciplinarity has been the hallmark of many groups that have been active in dealing with issues and making representations to governments and the international community. They should continue to cooperate in drawing up mutually acceptable principles, norms and rules for bioethics to be functionally effective. Unless bioethics reaches the level of action on the basis of widely accepted principles of socioethical significance rather than on mere dependence on religious dogma, its promise of guiding science and legislation would be an empty dream.

In this context, a most forward-looking and practical course of action has been worked out in relation to the application of biotechnology to humans by the International Bioethics Committee which the Director General of UNESCO (Professor Federico Mayor) set up as far back as 1991. After four years of deliberation was produced the Universal Declaration on the Human Genome and Human Rights. As an intergovernmental declaration, its timeliness is as significant as the pragmatic standpoint from which the need to "reflect on implications of progress before it is too late" is recognized and action urged.

In considering principles, norms and rules which bioethics should evolve to prevent the misuse of biological and medical sciences, the following, to my mind, are overarching guidelines:

1. The sanctity of life without exception and human life in particular;
2. The inalienable right to human dignity;
3. The restraint that is absolutely essential for sustaining bio-diversity and ecological equilibrium as *sine qua non* for long-lasting life on Planet Earth;
4. The autonomy of the scientists to unravel the secrets of nature and to utilize their research findings for the good and the benefit of the humankind;
5. The need for principles, norms and rules for regulation of improper use and application of scientific knowledge, skills, and technology, whether such regulation be through self-policing by scientists, codes of ethics or legal provisions with the direct involvement of the legislatures and the judiciary;
6. A minimum program of action jointly and severally by scientists, advocates of bioethics, governments and international community.
7. The active involvement of the international community through a well-represented pluri-disciplinary, dynamic, pace-setting and regulatory body with UNESCO, the UN organization responsible for science, as the lead agency and WHO, the corresponding UN organization for public health and medicine, as a key collaborator.

Bioethics within Universal Ethics

The guidelines for action identified above in the domain of bioethics are in conformity with the overall principles which have resulted from the UNESCO Universal Ethics Project, as are embodied in "A Common Framework for Ethics of the Twenty-first Century." (Yersu Kim 2000) Its Preamble underscores that

Scientific and technological advances are creating opportunities on a scale previously unimagined, even as they threaten to destroy the very foundation of human life...

and advocates

"a reflective equilibrium" to establish a dynamic relationship among "the conflicting but by no means irreconcilable values" of "cultures and societies, religion and world-views."

Though biotechnology or moral issues relating to bioethics find no specific reference in this document, the section on "Relationship with Nature" urges the following:

We must seek a balance such that we maintain a sustainable harmonious relationship between the human species and nature.

As our desires are insatiable, we must learn to accommodate our desires to the limits nature sets, not to push the limits of nature beyond its capacity for

regeneration.

We must learn to balance short-term thinking and immediate gratification with long-term thinking for future generations by shifting the balance towards quality rather than quantity.

Consumption must be such as to ensure basic needs for all, without compromising the well-being of others and without mortgaging the choices of future generations.

It is likely that the bioethical caution is implied in emphasizing the well-being of others and choices of future generations. Yet a note of disappointment needs to be sounded that the Universal Ethics Project has given little or no in-depth consideration to moral and ethical issues relating to biotechnology and other biological sciences in the new century.

Buddhist Contribution to Bioethics

Reference has already been made to the Buddhist views on the sanctity of life and human dignity as well as on violence, war and armament. The Buddha's teachings and the overall world-view of Buddhists confirm a major principle: Lives of all sentient beings are of equal sanctity and equally worthy of loving kindness and compassion. No distinction exists as to whether they are already born (*bhūta*) or in the process of being born (*sambhavesi*), seen (*diṭṭha*) or unseen (*adiṭṭha*) or as tiny as an atom (*anuka*). The state of a human being, of course, is considered supremely important. That is on account of the uniquely human capacity for self-transformation and transcendence. As a corollary, the human being's capacity to think for oneself critically and for guiding one's own destiny without divine or supernatural intervention has been consistently underscored. The appeal to humans in the teachings of the Buddha is to make oneself the standard of moral and ethical rectitude and responsibility. Here lies the claim of humanism that is made by Buddhism. To explore what contribution Buddhism can make to bioethics, a number of pertinent questions need to be raised:

- Does Buddhism have specific answers to issues raised by the rapid advances of biotechnology?
- To what extent are my own views expressed in connection with each issue a reflection of my upbringing in a traditionally Buddhist environment and my extensive study of the teachings of the Buddha and various interpretations thereof?
- To what extent are these views supported by the teachings of the Buddha as recorded and understood in different traditions, schools and sects?
- What guidelines can Buddhism offer in evolving a system of universal values in the domain of bioethics?

None of the bioethical advances of modern times was even imagined or dreamt of—let alone, dealt with or hinted at—in any literature which purports to record the teachings

of the Buddha. It is futile, therefore, to seek direct answers or reactions to any bioethical issues in either Buddhist literature or the world-view of Buddhists. But the Buddhist world-view has offered a way of looking at related moral issues from a predominantly rational and dogma-free standpoint. My own pro-biotechnological views as well as my cautions emanate from this standpoint.

God and Creation -The Buddhist View

Buddhism has no place in its teachings for a Creator or Creation. A God or any other power or force plays no part in the redemption of a person. One has to achieve one's liberation by dint of one's own effort. As Winston L. King has quoted, U Chan Htoon of Myanmar says,

To begin with, it must be understood that in the Buddhist system there is no place for a Creator God. There is moral law and moral order, and these principles are supreme... The moral order works through the continuum of events on the psycho-physical level which we call life. It is the spiritual aspect of the law of cause and effect that prevails in the physical universe. (King 1964 74)

The Buddha was not unfamiliar with the concept of a Creator God as it existed in contemporary Brahmanical concepts of Mahābrahmā and Prajapati. In the Mahāvagga of the Anguttaranikāya (III, 61) the Buddha examines three hypotheses (or sectarian tenets) which seek to explain "whatever a person experiences or whatever deeds he/she does by body, speech or thought":

- All that is caused by past actions.
- All that is caused by God's creation and will.
- All that is uncaused and unconditioned and happens by chance.

The Buddha rejects all three on the ground that they lead to a doctrine of inaction even if adopted because of tradition. He calls them "unwholesome views."

The reason for rejecting the hypothesis of God's creation and will is stated as follows:

If that is so, then it is due to God's creation and will that people commit murder, theft, unchaste deeds; due to God's creation that they indulge in lying, slanderous, harsh, and idle talk; due to God's will that they are covetous, malevolent, and hold false views.

Those who have recourse to God's creation and will as the decisive factor for what they do now will also lack the impulse or the effort for doing this or not doing that. Therefore for them, really and truly, no motive obtains that this or that ought to be done or not to be done. The term 'ascetic' does not rightly apply to those who live without mindfulness and self-control. This is my second justified rebuke to those who teach and hold the God's creation view. (tr. Yogacars Rahula: The Way to Peace and Happiness, Taiwan p.90)

The Buddha was also familiar with the Vedic creation theory wherein Brahmans are said to have emanated from the mouth of the Primeval Man who was sacrificed (Rgveda X, 90) (Dīghanikāya 27). Yet, he found no need to proffer a theory of creation. Subscribing to the prevailing concepts of endless and boundless universes and a similarly described cycle of birth and death (*saṃsāra*), the Buddha declared that the beginnings of the *saṃsara* of "beings, cloaked in ignorance and tied to craving" is not revealed (*pubbakoṭi na paññāyati*) and *saṃsāra* itself is "of incalculable beginnings" (*anamataggo 'yam saṃsāro*). Saṃyuttanikāya IV—Anamatagga-saṃyutta. The Buddha discouraged delving into beginnings of existence with the famous parable of the wounded.

Apparently, the question of God and Creation was actively pursued in the Buddhist circles. A biography of the Buddha translated into Chinese in the early centuries of the current era elaborates in a discourse attributed to the Buddha a series of arguments leading to the conclusion: "Therefore all that lives may after all be uncreated—without a maker." (Samuel Beal: Abhiniṣkramaṇasutra)

Without the dogmatic acceptance of God and Creation, a Buddhist finds it easier to keep pace with modern scientific thought. The theory of evolution is viewed as compatible with the concept of ever-recurring change and transformation of all phenomena (*viparināmadhamma*—Anguttaranikāya 185). With the recognition of the unlimited capacity of the human mind to explore and understand reality at diverse levels, a Buddhist is not surprised by the discoveries which a human being makes or by his or her achievements in any field. Nor is a Buddhist inclined to restrict such exploration or discovery unless and until harming oneself or another is the intention.

Human-centered Ethics of Buddhism

The Buddhist system of moral or ethical values is founded not on the dictates or commands of a supernatural being or power or force but on an empirical assessment of good and evil. The assessment is based on such criteria as

extending to others the same standards of likes and dislikes which one has for oneself (i.e. the Golden Rule; *attānam upamaṇi katvā*—making oneself the standard of comparison. Dhammapada 129-130);

considering the reaction of one's own conscience as to whether a given action results in joy or repentance (ibid., 67-68)

analyzing the judgement of wise and informed persons as regards others' behavior (Karaṇīyamettasutta); and

evaluating action on the basis whether it is for the good and the benefit of the many (Kālāmasutta);

A Buddhist accepts his responsibility for adhering to a life of moral or ethical rectitude on the basis of one's own conviction. "Not by legislation but by leading one to conviction through contemplation and reflection (*nijhatiyā*)," said Emperor Aśoka after evaluating his own fifteen year campaign to reform his subjects (Pillar Edict VII).

Accordingly is worded the formula of Buddhist precepts or resolutions which one takes upon oneself voluntarily: *veramaṇī sikkhāpadaṃ samādiyāmi*—I take upon myself the discipline of abstaining from.)

Even more emphatic is the Buddha's proclamation of intention or volition as the criterion of morally effective action: *Cetanā'ham, bhikkhave, kammaṃ vadāmi cetayitvā kammaṃ karoti kāyena vācāya manasā*—Monastics, I call volition the Kamma for having thought one acts with deed, word, and thought: Anguttaranikaya LXIII, Mahavagga 11-12).

In keeping with the overall humanistic foundation of the Buddha's teachings, his ethical system is human-centered in that the discernment of good and evil is an individual's judgement and is conditioned by his or her intention. This responsibility of the individual is further underscored by naming good or bad action as skillful (*kusala*) or unskillful (*akusala*). In the Vinaya where the Buddhist jurisprudence examines in meticulous detail how blame and punishment is to be apportioned in respect of alleged offences of monastics, three factors are carefully weighed: namely, (i) intention, (ii) repentance or remorse, and (iii) self-reform. Its parallel in the moral plane is the teaching that the Karmic effects of an intentional or volitional action are variable through repentance, self-reform or corrective action, and positive accumulation of merit (Pali *Puñña*; Skt. *Punya*) through charity (*dāna*), virtuous conduct (*sīla*) and the purification of the mind (*bhāvanā*). (for a detailed discussion, see Kalupahana 1995 70-112)

Each person not only creates one's own Karma but also influences the effects of Karma by one's own effort. No external power, force, or divinity can do anything about it. Even the Buddhas are only teachers—pointers of the way (*akkhātāro tathāgatā*; Dhammapada 276). Buddhist ethics stand in contrast to the theocentric ethics (cf. Gustafson 1981 81) which have hitherto had an overwhelming impact on the evolution of bioethics. Buddhists, therefore, are bound to react differently to bioethical issues under discussion in this paper under two broad categories of (1) termination of life and (2) manipulation of life.

Termination of Life

Every set of Buddhist "precepts" (*pañcasīla*—five precepts; *atthangasīla*—eight precepts; *dasasīla*—ten precepts; *sammā kammantā*—right action) begins with the resolution to abstain from depriving a being of its life (*pāṇātipāta*). The rationale for this prohibition is that life is dear to all. (*sabbesaṃ jīvitaṃ piyam*—Dhammapada, 129-130) In the Vinaya, a monastic is enjoined to avoid killing even an ant and depriving a human being of life *even* down to causing abortion (*manussaviggahaṃ jīvita voropeti antamaso gabbapātanam upādāya*—Mahāvagga I, 78, 5). The violation of this injunction renders a monastic unfit to be considered a recluse or a "Sakyian son" (*sakkaputta*, meaning a member of the Sangha of Sakyamuni Buddha).

The most serious offence for which a monastic is deemed "defeated" (*pārājikā*) and expelled from the Sangha is stated as follows:

Whatever monastic should **intentionally** deprive a **human being** of life, or should look about so as to be his **knife-bringer**, or should praise the beauty of death, or should incite anyone to death, saying, "Hallo there, my man, of what use is this evil, difficult life? Death is better for you than life," or who should **deliberately** and **purposefully** in various ways praise the beauty of death or should incite anyone to death: he is also one who is defeated, he is not in communion. (Suttavibhanga III, 78)

As in any legal document, the Vinaya defines all important terms in a rule or injunction. Among them are the following:

Intentionally: a transgression committed knowingly, deliberately, consciously

Human being: from the mind's first arising, from the time of consciousness becoming first manifest in a mother's womb until the time of death

Knife-bringer: (one who uses an instrument of killing such as) a knife, a dagger, an arrow, a cudgel, a stone, a sword, poison or a rope

Deliberately: as the mind so the thought; as the thought so the mind

Purposefully: conscious of death, thinking of death, intending death (ibid.)

A series of actual cases illustrate exceptions wherein Intention and remorse minimize or cancel the seriousness of the offence. Relevant to the current bioethical issues is how these exceptions apply to suicide, euthanasia, and abortion. (As regards intention in Buddhist Ethics, see Richard Gombrich, The Ethic of Intention in Prebish 1992 92-111)

Suicide and Euthanasia

The background to the proclamation of the above injunction known as the Third Defeat or Pārājikā, is that monastics, being convinced of the unwholesomeness and futility of life as preached by the Buddha, either committed suicide or hired others to kill them. The rule as such is as applicable to suicide as to homicide. But for obvious reasons, the Vinaya prescribes no penalty in the case of suicide. Attempted suicide, of course, is listed as a wrong-doing.

As regards euthanasia, cases discussed under the Third Defeat make the Buddhist position clear:

A bhikkhu sees a man about to be executed and tells the executioner, "Do not keep him in misery; kill him with one blow." The executioner complies and the bhikkhu incurs Defeat.

A man whose hands and feet are severed is surrounded by his relatives. A bhikkhu asks them if they would rather wish him dead. They agree and the bhikkhu prescribes buttermilk. The man dies and the bhikkhu incurs Defeat.

A bhikkhuni in a similar situation prescribes salted sour gruel. The man dies and she incurs Defeat. (ibid., III, 86)

The desire to save a person from mental or physical suffering does not supersede the intention of bringing about death.

All these elaborate discussions on the gravity of a violation in relation to a graded system of penalties are in respect of the conduct of monastics. As regards the laity, all that is applicable is the voluntary resolution embodied in the First Precept to abstain from depriving a living being of its life. It has motivated Peter Harvey to delve deep into Buddhist ethics in theory and practice spanning all traditions and schools and to present the results of the study in his recently published excellent treatise: **An Introduction to Buddhist Ethics—Foundations, Values, and Issues, Cambridge University Press, Cambridge (UK) 2000**. On a thorough examination of the literature as well as beliefs and practices in traditionally Buddhist countries of Asia, he reaches the following conclusion on the issues of suicide and euthanasia:

Overall, it can be seen that Buddhism regards human life as a precious quality that should not be thrown away by suicide, and maintains that people should not incite or aid others to kill themselves.

Euthanasia scenarios present a test for the implications of Buddhist compassion, but the central Buddhist response is one of aiding a person to continue to make the best of his or her 'precious human rebirth,' even in very difficult circumstances, rather than prematurely ending this.

The adage 'where there is life there is hope' is appropriate, though 'where there is human life, there is opportunity to reflect and learn' is one which Buddhism might emphasize.

At a certain point in terminal illness, though, it may be appropriate to abstain from futile treatments that reduce the quality of life on its last short lap.

It may also be appropriate to deal with mounting pain in such a way that death is a known but unintended, and unsought, side-effect of increasing dosage of drugs.

Any help for the dying that does not include the intention of bringing death is acceptable. (Harvey 2000 309-310)

Abortion

A form of terminating life, which has far more serious ethical, legal and social implications, is abortion. In Buddhist terminology, the subject of abortion is a being seeking to be born (*saṃbhavesi* = *sambhava*—birth + *esi*—seeker). As earlier discussed, a being in that state is entitled to loving kindness (*mettā*). Neither invisibility nor the miniscule size detracts from that entitlement. Beings unseen (*aditṭha*) and atom-sized (*aṇuka*) are specifically mentioned as worthy of loving kindness. The destruction of such a life is a matter of serious concern to a Buddhist.

In the Vinaya, abortion is a form of homicide and a monastic guilty of it loses his or her standing in the Sangha and is expelled. In the Mahāvagga, a monastic who commits homicide even in the form of “getting an embryo to fall from the womb” is disqualified from membership in the Sangha (Mahāvagga III, 73). The keyword in this injunction is *antamaso* which means “in the least,” “at the lowest level” or “even.” The commentary to the Vinaya goes on to explain that an abortion of a fetus in its earliest phase as a *kalala*, when it is nothing more than a drop of oil on a hair-tip, is on par with homicide (Harvey 2000 316).

The Vinaya definition of a human being has been examined to find out what Buddhism considers as the beginning of life of an embryo or fetus. When does the mind’s first arising take place? When does consciousness become first manifest in a mother’s womb? The Vinaya has a definite answer: These take place at the time of conception. It is thus that the minimum age of twenty years for higher ordination of a novice is calculated to include the full term of pregnancy of nine or ten lunar months. This view of life as beginning with conception is further explained in the Buddhist theory of conception.

Conception results from three conditions, says Mahātaṇhāsankhaya-sutta of Majjhimanikāya (M 38): namely, the presence of parents (i.e. in sexual union), the mother being in season (i.e. in the state of ovulation), and the presence or rather arrival of the *gandhabba*. The Pali term in the current spelling in manuscripts and published texts resembles Sanskrit *gandharva*, which from early Vedic times has the meaning of a divine spirit with multiple roles. (Monier Williams: Sanskrit Dictionary sv). Accordingly, T.W. Rhys Davids and W. Stede assumed that *gandhabba* was a “divine spirit presiding over child-conception.” (PTS Pali-English Dictionary sv). Such a concept of the intervention of a supernatural or heavenly spirit does not tally with the general tenor of Buddhist thinking.

A more plausible explanation assumes that *gandhabba* is a misspelling of the verbal form *gantabba* (one who is due to go; that is, to go from one existence to another). Such an etymology would permit the third condition for conception to be the presence of a rebirth-seeking consciousness. In the Abhidhamma analysis, such a consciousness is called “relinking consciousness” (*paṭisandhicitta*). In the Buddhist teaching of Dependent Origination (*Paṭiccasamuppāda*), *namarūpa* (i.e. “name and form” signifying a person) arises from consciousness. Thus is the arising of consciousness, as earlier shown, is equated to the beginning of human life. Mahanidāna-sutta of Dīghanikāya (D15), reconfirms this view in a dialogue between the Buddha and Ananda. Such phenomena as miscarriage and still birth are explained as instances where consciousness, having fallen into the mother’s womb, turns aside from it (*okkamitvā vakkamissatha*).

This Buddhist view of conception and explanation of natural end of the life-force of an embryo or fetus have significant implications as regards cloning, other forms of asexual reproduction, and contraception. We shall return to these Buddhist concepts in discussing related bioethical issues.

As regards intentional, willful and deliberate termination of a human

pregnancy, the Buddhist position is unequivocal. Again, the detailed discussion with case studies relates to how monastics are dealt with when accused of committing or aiding and abetting abortion or related offences. The Vinaya analyses seven cases:

1. A woman conceives a child from a lover in the absence of her husband and asks a monastic for an abortive preparation. The child dies. The monastic is remorseful, but incurs Defeat.
2. A co-wife obtains from a monastic an abortive preparation to end the pregnancy of a rival. The child dies. The monastic is remorseful, but incurs Defeat.
3. In a similar situation, the child does not die. The mother dies. The monastic incurs Grave Offence and not Defeat.
4. In a similar case, both the child and the mother die. The monastic does not incur Defeat. It is only a Grave Offence.
5. In a similar case, neither die. But the monastic incurs Grave Offence.
6. A monastic advises a woman to abort her pregnancy. He is remorseful. But he incurs Defeat.
7. A monastic advises a pregnant woman to abort by scorching herself. He is remorseful, but incurs Defeat. (Suttavibhanga III)

In each case where the offending monastic incurs Defeat and is thus expelled from the Sangha, the child's death as was deliberately intended. Being remorseful was not a factor in mitigation of penalty. Where the result was unintended as in the cases 3, 4 and 5, the deaths had not been regarded as tantamounting to the violation of the Vinaya rule on homicide. The penalty for a Grave Offence is temporary suspension from the Sangha. What is clear from these cases of abortion is that Intention determines the gravity of the offence. Though no discussion of ethical implications of abortion as regards the laity is to be found, the general principle that intention or volition entails morally effective Karma appears to have been applied to abortion too.

As in the case of suicide and euthanasia, Peter Harvey has surveyed the thinking and the practices of Buddhist societies of all traditions as regards abortion and come to two main conclusions:

- Buddhist are more willing to condemn abortion on moral grounds than to oppose legislation of it, often being more permissive in practice than in their outlook. (Harvey 2000 350)
- Buddhists have accommodated themselves to abortion to varying degrees. (ibid.)

He further states

The approach to abortion most in tune with central Buddhist principles would be:

1. Encouragement of reflection on the value of human life;
2. Encouragement of responsible use of contraception, so as to minimize the chances of women even having to consider an abortion;

3. Encouraging the non-use of 'contraceptives' which actually cause early abortions, and the development of more effective contraceptives which do not do this;
4. Encouragement and support for adoption services; with 'giving up' a child for adoption being seen as a form of dana;
5. Support for legal abortion only where the case for its being a 'necessary evil' is strong, or where the fetus is badly impaired;
6. Compassion for those who have had an abortion by provision of some kind of ritual to alleviate their psychological pain, encourage an expression of sincere regret and attempt to benefit the dead child spiritually. (Harvey 2000 351-352)

As instances where abortion is to be permitted as a "necessary evil", Harvey lists the following:

1. a real threat to the life of the mother
2. a possible threat to the life of the mother
3. rape causing great trauma
4. the alternative being a mentally ill woman further traumatized by having to give up her child for adoption (ibid., 326)

He further adds that cases 2-4 would need, careful medical/psychological assessment. He sees in Japanese Buddhist ceremony of Jizo Bodhisattva a ritual which could provide spiritual support to mothers of unborn children whether due to abortion or natural causes.

Destruction of Embryos in Asexual Reproduction

All processes of asexual reproduction entails the destruction of embryos. The Buddhist view would be that a viable fertilized egg is a living organism into which consciousness has entered. But several questions have to be raised. When such an organism fails to survive on implantation in a womb or dies when not implanted in a womb, is its destruction an intentional act for which the parties involved bear moral responsibility? If the intention is to enable a person to fulfil his or her desire to have a child of one's own when the natural process has failed, does the unintended destruction of embryos entail any Karmic consequences? Here the Buddhist explanation could be that the relinking consciousness which gives life to the embryo turns away from it when a viable environment is not provided for it. Not all living embryos survive to birth even in the natural reproductive process. How much of what happens in asexual reproductive processes is to be attributed to natural causes? A Buddhist may argue that the death of embryos is an unavoidable consequence and should be weighed against the overall benefits which humankind derives from biotechnology.

Further questions may be raised as regards forms of viable environments which might be provided for an embryo to grow. The engagement of a surrogate mother may have legal and social implications rather than ethical. How would one react to the implantation of a human embryo in a compatible animal's womb? Would an artificial womb in extension of in vitro process be less objectionable? There seems

to be little discussion of these issues in Buddhist circles, mainly because of the gap in scientific development. So are related issues of embryos for research, sale and unauthorized use of embryos, and freezing embryos for future use. The need for a Buddhist opinion on all the unresolved issues pertaining to asexual reproduction cannot be gainsaid.

Contraception

The Buddhists would hardly consider contraception to be a termination of life. For this purpose, they are more likely to regard the “morning after” pill to be linked to abortion rather than contraception. Sperms and ova are potential sources of life. But the Buddhist explanation of conception requires that a fertilized egg receives the consciousness of a rebirth-seeking person. Not allowing a conception to take place willy-nilly may be explained by a Buddhist as an intentional effort to ensure that a child is conceived only when the parents are ready to provide it a healthy and congenial environment to survive and develop.

Manipulation of Life: Cloning and Other Biotechnological Procedures

In the absence of a theocentric dogma of creation, a Buddhist may see no serious ethical objection to cloning as a procedure in asexual reproduction. One may advance in justification of one’s position the benefits of cloning as regards affording the only chance for a person to have a child of his or her own flesh and blood, growing compatible tissues and organs for transplant, and developing cures for chronic diseases. Non-survival of numerous embryos and the possible births with deforms are no doubt serious concerns for which the perfection of scientific techniques for prevention would be strongly urged. A lively discussion is in progress on the Buddhist position on cloning. As of September 10, 2001 Internet recorded 1560 references on Buddhism and cloning. A random check on over hundred references indicated an equal distribution of those for and those against, with a slight margin in favor of those for cloning.

The arguments of those against cloning either center on the destruction of living organisms inherent in the procedure or the socio-political complications of irresponsible people reproducing themselves for ulterior purposes. Interestingly, the most of those in favor of cloning cited the “science-friendly” approach of Buddhism.

The Buddhist explanation of conception answers the concern of those who fear that a person might be reproduced through cloning to have identical traits of character and personality of the donor of the tissue or cell. As conception requires the entry of the relinking consciousness into the biologically created entity of an embryo, each resulting being from cloning procedures would be a different individual with his or her own Karmic heritage from past lives. This explanation excludes the possibility of a single person reproducing oneself many times physically and psychologically.

Free from fears generated by science fiction, a Buddhist would support the continuing research and experimentation—such as those currently approved in respect

of stem cells—on the same conditions of intention, scale and non-commodification or non-commercialization which bioethicists now apply to the cloning of animals.

An overall Buddhist attitude relevant to the issue of cloning and other related biotechnical procedures is that the unravelling and utilizing the latent potential of nature for humanity's benefit is not abusing or exploiting nature. A tissue's capacity to produce a new life through cloning is undoubtedly nature's provision for some kind of emergency. Its discovery and use is thus another achievement in the human endeavor to understand and master nature. The Buddhist will, however, urge that the intention should be pure and free of greed, hatred and delusion. This appeal to moral rectitude is particularly apposite as regards eugenics and genetic engineering. The urgency for expressing a Buddhist point of view is underlined by the successful production of a human embryo by cloning in the United States in November 2001, and the hue and cry in religious and political circles to ban further research.

Humanistic Buddhism

Humanistic Buddhism, as interpreted by Grand Master Hsing Yun of Fo Guang Shan Buddhist Order, seeks to utilize the Buddha's original teachings and their elaborations, explanations and interpretations by various Buddhist traditions, schools and sects for the purpose of ensuring social well-being and progress here and now. In such an effort, the discussion of the Buddhist position on current ethical issues is assigned very high priority. Issues of bioethics figure both in relation to the wider issue of environment and ecology and in relation to personal concerns in choices to be exercised in daily life. Contraception, abortion, asexual reproduction, and euthanasia create the same emotional and ethical conflicts in Buddhists as much as in other societies. The choices to be made in respect of each one of these call for help in the form of counseling and religious guidance. In what ways can Buddhism help?

Counseling in conflicts and issues of daily life, with special attention to matters of life and death (e.g. abortion, collateral destruction of embryos in asexual reproductive procedures, implementation of a living will of a relative or decisions on when to switch off life-support machines), is increasingly recognized as an indispensable service of monastics to lay congregations. Fo Guang Shang Buddhist Order has systematically pursued in its many seats of higher learning the search for ways and means of performing this function effectively, as in the Buddhist Psychology and Counseling Research Center of His Lai University, California, USA. The more these subjects are delved into, the more it is realized that Buddhists have throughout history developed a significant knowledge base and corresponding techniques and practices. But glaring gaps remain to be filled. Two courses of action by Buddhists appear necessary for this purposes:

1. share with the rest of the world the knowledge base of the Buddha's own teachings and of the vast body of Buddhist literature in different languages
2. compare and contrast traditional methods of Buddhist mental cultivation with those of modern practitioners of counseling and psychiatry.

As regards issues highlighted in this paper, the urgent need is for Buddhists to take an active part in the on-going debate on bioethics. The Buddhist positions on each of these issues could have a significant impact on the evolving ethical principles and values. At the same time, the Buddhists participating in the debate would find it necessary to review the current thinking and practices in Buddhist societies. For both these ends, the promoters of Humanistic Buddhism are bound to recognize how urgent it is to be involved in the evolution of bioethics as part and parcel of universal ethics. Bioethics developed without Buddhist inputs and participation will be lopsided, and lack the power to persuade governments, organizations, opinion-builders and practitioners to act in a concerted manner to benefit humanity.

References and Bibliography

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|----------------------------|------|---|
| Alpern Kenneth D.(ed.) | 1992 | The Ethics of the Reproductive Technology, OUP |
| Engelhardt H. Tristram Jr. | 1996 | The Foundations of Bioethics, Oxford University Press (OUP) |
| Gert Bernard et Al (eds.) | 1997 | Bioethics—A Return to Fundamentals, OUP |
| Groding Michael A. (ed.), | 1995 | Meta Medical Ethics—the Philosophical Foundations of Bioethics, Kluwer Academic Publishers, Dordrecht |
| Guruge Ananda W. P. | 1993 | Asoka the Righteous—A Definitive Biography, Central Cultural Fund, Colombo |
| Gustafson James M. | 1981 | Ethics from a Theocentric Perspective, Vol I: Theology and Ethics, University of Chicago Press |
| Harvey Peter | 2000 | An Introduction to Buddhist Ethics, Cambridge University Press, Cambridge (UK) |
| Holm Jean with John Bowker | 1994 | Making Moral Decisions, Pinter Publishers, London |
| Kalupahana David J. | 1995 | Ethics in Early Buddhism, University of Hawaii Press, Honolulu |

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|--|------|---|
| | 1999 | The Buddha and the Concept of Peace, Sarvodaya Vishva Lekha, Ratmalana (Sri Lanka) |
| Kim Yersu | 2000 | A Common Framework for Ethics of the Twenty-first Century, UNESCO, Paris |
| King W. L. | 1964 | In the Hope of Nibbana: An Essay on Theravada Buddhist Ethics, Open Court, La Salle (Illinois) |
| Maguire Daniel C. | 2001 | Sacred Choices: The Right to Contraception and Abortion in Ten World Religions, Fortress Press, Minneapolis |
| Matsunami Kodo | 1993 | Update Buddhism in Japan, Kinryuji Searchlight Center, Tochigi |
| Parrinder Geoffrey | 1980 | Sex in the World's Religions, Oxford University Press, New York |
| Pernick Martin S. | 1996 | The Black Stork—Eugenics and Death of "Defective" Babies in American Medicine and Motion Pictures since 1915, OUP |
| Prebish Charles S. (ed.) | 1992 | Buddhist Ethics: A Cross-cultural Approach, Kendall/Hunt, & Dubuque (Iowa) |
| Tan Geok Koon et al. | 1986 | Man and His Universe, International Buddhist Progress Society, Singapore |
| Walters Leroy | 1996 | The Ethics of Human Gene Therapy, OUP |
| Wentzel Regina Wolfe and Christine E. Gudroff (eds.) | 1999 | Ethics and World Religions, Orbis Books, Maryknoll (New York) |
| Reseau Europeen | 1996 | <<Medecine et droit de l'homme>>, La sante face aux droits de l'homme, a l'ethique et aux morales—120 cas pratiques. Council of Europe Publishing, Strasbourg |