

# Biomedical Ethics: A Christian Perspective

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*This essay is the revised version of a talk I gave to Muslim scientists and lawyers organised by MUIS in July 2005.*

Mr Syed Isa Samit, Mufti of Singapore, Mr Haji Mohammed Alami, President of MUIS, members of MUIS, ladies and gentlemen.

I bring warm greetings on behalf of the National Council of Churches of Singapore. On behalf of Bishop Dr John Chew, President of the NCCS, and Bishop Dr Robert Solomon, I would like to thank Mr Alami, President of MUIS, for his kind invitation to participate in this consultation on a topic of great currency, and one which affects everyone in society.

From the second quarter of the previous century we witnessed tremendous advancements in science and technology, particularly in the specialized field of biotechnology and biomedicine. Many philosophers and scientists have described ours as the 'Age of Biology', and, judging from the developments that are taking place, it would not be an exaggeration to say that the twenty-first century promises to be the 'Biotech Century'.

From the mapping of the human genome to the successful cloning of human embryos and the harvesting of human stem cells, these advances present great promise on the one hand, and introduce profound ethical concerns on the other. These concerns are not just confined to members of religious communities; they are issues which touch every member of society. They have to do with profound issues like what it means to be human, issues with consequences that will shape the future of our society.

The value of consultations like this one, in which members of different religious communities can gather to share the perspectives from their own traditions, cannot be overstated. This is particularly true for the Islamic and Christian traditions, which understand that human life comes from God, and must therefore be respected and protected.

The Singapore government sees biomedicine and biomedical research as an important investment. Apart from wooing scientists from all over the world to Singapore, the government has also established Biopolis, a vast complex dedicated to research in genetics and biotechnology. A recent *Straits Times* article reported that biomedical

manufacturing in Singapore generated \$179 million last year, more than double the expected income. The same report announces that Bio\*Capital has a fund of \$1.2 billion, one-third of which is already invested and committed. No effort is spared to promote Singapore's edge as a biotech hub.<sup>1</sup>

Biomedicine is a very vast topic. What I propose to do this afternoon is to focus only on those aspects of biomedicine and biomedical research that were discussed recently in Singapore. In the past few years, the Bioethics Advisory Committee of Singapore has produced a number of consultation papers on a variety of issues related to biomedicine and biomedical research, from stem cell research to tissue donation, and most recently, genetic testing. These issues are of paramount importance since they affect members of the public in profound ways.

In 2003, the NCCS published a book entitled *Life Sciences: A Christian Perspective* in which some of these issues are discussed. I would like to recommend this book to you.

## **Christian Theological Framework for Biomedical Ethics**

Let me begin by sketching what may be described as a Christian theological framework for biomedical ethics. This, I must stress, is just a sketch on a very broad canvas. But I hope that it adequately provides the contours of the Christian approach to bioethics. I will discuss these fundamental themes under four headings: (1) Science and the Christian Faith; (2) Human Dignity and the Value of Human Life; (3) Health, Healing and Death; (4) Justice.

### ***Science and the Christian Faith***

A discussion on Christian biomedical ethics must deal with the relationship between the Christian Faith and the natural sciences in general, and the life sciences in particular. Although the relationship between Christianity and modern science as we know it has a complex history, it would nevertheless be true to say that the best of Christian tradition supports the development of science in general, and biomedical science in particular.

Far from being anti-science, the Christian Faith maintains that scientific knowledge and wisdom are made possible by the grace of God. Human beings have been entrusted with this awesome responsibility by their Creator, and the scientific enterprise is always an exercise of stewardship. Science that is directed at the betterment of individuals and the flourishing of human society fulfils the divine purpose and brings glory to God.

The Christian ethic of love compels the Church to use the resources of scientific knowledge and research for the healing of the sick and the alleviation of human suffering. Throughout its history, the Church has played a significant role in the

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<sup>1</sup> Betty Pisik, 'Singapore Talent Hunt at Biotech Meet', *The Straits Times*, Wednesday, June 22, 2005, 16.

establishment of hospitals and other health-care institutions. The Christian view of the sciences, especially the medical sciences, should therefore be understood under the rubric of God's general grace upon humankind.

Although Christians view the possibility and development of the scientific enterprise as the outworking of God's grace, we are also profoundly aware of the reality and gravity of sin in the world. Science can either be instances of divine grace or vehicles of human sinfulness. Science can be pursued or practiced with wicked intentions and ignoble goals. Even when its goals are noble, science can still be conducted in an inhumane manner when the ends are said to always justify the means.

When Christians reject certain applications of scientific knowledge, therefore, it is not because we are anti-science or anti progress. It is rather because we wish for science to pursue its truest goals, and to protect its integrity and nobility. Science is good when it seeks to accomplish its true purpose by seeking to serve every human being. Bad science is that which disregards human lives, or that which seeks to protect some lives at the expense of others. Only good and ethical science will contribute to human flourishing.

### *Human Dignity and the Value of Human Life*

A Christian biomedical ethics is based on what the Bible and Christian tradition have to teach us regarding human nature and human beings. The importance of a theological anthropology in bioethical discussions cannot be over-emphasised. According to the Christian tradition, human beings are created in the image and likeness of God. This is clearly stated in Genesis 1:26-27: 'Then God said, "Let us make man in our image and likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground.'

Theologians have through the centuries discussed what it means to be created in God's image, and what that image entails. Some emphasise the substantive view and maintain that the image of God has to do with definite characteristics and qualities within the makeup of the human. Others prefer the relational view, and see the image of God as referring to the capacity of humans to relate to God and to each other. Still others maintain that the image has to do with the role that humans are asked to play. Thus, the functional view appeals to the command in Genesis 1:27-28 to the first humans to exercise dominion over the earth.

Each of these views contributes to our understanding of what the image of God means. All theologians, however, are agreed that when the Bible accords humans this special status as bearers of God's image, it distinguishes them from the animals and assigns to them a special dignity.

Human beings are therefore God's special creatures, and human life must be seen as a gift from God. Because human life is an expression of the creative love of God, it must be cherished and protected. Thus, it is impossible to speak of human beings as

created in the image of God without at the same time affirming the sanctity of human life. The value accorded to human life by the Bible is seen in its portrayal of the divine protection of the weak and the vulnerable. It is seen supremely in the sixth commandment which prohibits murder (Exodus 20:13; Deuteronomy 5:17).

The question confronting Christian biomedical ethics has to do with whether there are legitimate exceptions to this commandment. We shall take this matter up when we discuss abortion, stem cell research and euthanasia.

### ***Health, Healing and Death***

A Christian account of biomedical ethics must also address related questions concerning health, suffering, healing and death.

The Christian tradition teaches that human rebelliousness has not only brought about the fall of human beings, their alienation from God – it has also resulted in the divine curse on the created order. Sickness, suffering, decay and death came about as the consequences, either directly or indirectly, of human disobedience and rebellion. As Lutheran theologian Dietrich Bonhoeffer has put it, ‘The trees and the animals which once immediately represented God’s word as the Creator, now in often grotesque ways point instead as though to the incomprehensibility and arbitrariness of a despot who is hidden in darkness.’<sup>2</sup>

On this account, health and healing cannot be separated from the salvation of God in Jesus Christ. This has profound implications for a Christian view of medicine and medical ethics. On the one hand, sickness, suffering and death must be strenuously resisted because they do not represent the original divine intention for humans but its subversion. Every effort must be made to treat, prevent and eradicate diseases, and every human resource must be mustered and directed towards this end.

On the other hand, this account also reminds us that health and healing, because they cannot be understood apart from salvation, are eschatological realities that only God can bring about. On this basis, any attempt to deny the Creator and Redeemer of the healing and perfection of humankind, and to arrogate these functions for ourselves, believing that our science can achieve it must be rejected. In other words, the Christian eschatological vision rejects all forms of scientism which maintains that human perfection can be achieved through the instrumentality of science.

Furthermore, the Christian faith holds that death has been conquered through the death and resurrection of Jesus Christ. Death, in other words, is a conquered enemy. Once again, the implications of this insight for Christian bioethics are profound. Because death is a conquered enemy, it should not be resisted at every turn. This of course does not imply that aggressive treatment should not be applied when the prognosis is favourable. It means that death must be accepted as an eventuality when

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<sup>2</sup> Dietrich Bonhoeffer, *Creation and Fall*, 134.

the prognosis is poor. This insight compels us to make the distinction between beneficial and futile treatment.

### ***Justice***

Any discussion on biomedical ethics must give serious attention to the question of justice. Healthcare is not only the privilege of those who are able to pay for it, but should be accessible to everyone regardless their financial or social status. This assumption is the basis of both Christian and secular medical ethics. For the Christian, the right to healthcare is established on the biblical-theological premise that human beings are created in the image of God and that every person should be treated with the same respect and dignity.

The intersection of business and medicine has spawned numerous anecdotal evidences that patients are refused healthcare or provided sub-standard treatment for cost reasons in some countries. The ever-present danger of the physician's obligation to the patient being undermined when the business ethos, with its emphasis on bottom line and profit maximization, is allowed to eclipse medical ethics, should be taken seriously.

Justice in medical ethics is often classified as distributive justice (giving people their due) and compensatory justice (making amendments of past unfairness). Both are upheld by the Christian tradition because they are expressions of love based on the intrinsic value of human beings, and are imitations of God's very own intentions and acts.

Both types of justice constitute society's basic obligation to its members. As James Nelson and Jo Anne Smith Rohricht put it, 'Precisely because our society does have the *capacity*, both in medical knowledge and economic resources, to defend the right to a decent minimum of good health care for every citizen, we can claim this as society's *obligation*.'<sup>3</sup>

The issue of justice in biomedical ethics has to do not just with the accessibility of treatment but also with problems of discrimination, especially in light of the increasing number of diseases that can now be detected through genetic testing. These tests can contribute to the improvement of human lives in ways not possible before. But they can also result in the stigmatization of certain individuals in society and in discriminatory public health and insurance policies.

## **Issues in Biomedical Ethics**

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<sup>3</sup> James B Nelson and Jo Anne Smith Rohricht, *Human Medicine: Ethical Perspectives on Today's Medical Issues* (Minneapolis: Augsburg Publishing House, 1984), 211.

As we turn our attention now to some of the developments and issues in biomedical ethics, I would like to present the discussion under three headings: (1) Ending Life, (2) Beginning Life; and (3) Biotechnological Research.

### *Ending Life*

Some of the most difficult decisions in biomedical ethics have to do with the wilful termination of human life. The Christian position regarding the taking of human life is clear: because human life is a gift from God, human beings have no prerogative over the lives of other human beings. However, while this primary premise is clear, we are sometimes confronted with decisions that are morally complex. For example, doctors are sometimes faced with the moral dilemma where in order to save a life, they must take another. These difficulties imply that although the basic axiom regarding the taking of human life is clear, its application must be carefully nuanced to meet the different situations.

The first issue that we must discuss under this heading is abortion. In Singapore the Abortion Act was instituted in 1969 for the specific purpose of protecting women against illegal abortions. The introduction of this Act however has resulted in the liberalization of attitudes towards abortion in Singapore. Furthermore, the legalization of abortion has also become the legitimization for the destruction of embryos either in the context of research or as a possible course of action after prenatal genetic testing.

For example, although the BAC acknowledges that abortion remains a contentious issue in certain sectors of society in its report entitled, 'Ethical, Legal and Social Issues in Human Stem Cell Research, Reproductive and Therapeutic Cloning', it also notes that elective abortion is permissible in Singapore and governed by the Termination of Pregnancy Act (Cap 324). Consequently, in its consultation paper on Genetic Testing, the BAC states that parents who have subjected their unborn child to genetic testing have the option to abort the child if the test results show that it has a genetic disorder that will cause it to be ill or severely disabled.

In its responses to the two documents, the National Council of Churches has made its position regarding abortion unequivocally clear. Regardless its age, the human embryo is worthy of the respect and protection that is accorded to all human beings. On this premise, the NCCS insists that abortion is tantamount to the wilful killing of an innocent human being in the interest of someone other than the victim and should never be countenanced.

This position is supported by the Bible as well as the tradition of the Church. Passages like Psalm 139 and Jeremiah 1:5 indicate that God knows the foetus personally while it is in its mother's womb. These passages imply that the foetus is valued by God regardless its age. This understanding of the sanctity of the life of the foetus has influenced the Church's view on abortion. For example, the Council of Trullo in the seventh century equates abortion with murder and states that 'those who give drugs

for procuring abortion, and those who receive poisons to kill the foetus, are subjected to the penalty of murder.<sup>4</sup>

The next issue that must be discussed, albeit briefly, under this heading is euthanasia or physician-assisted suicide. Perhaps the clearest definition of euthanasia comes from the American Medical Association's (AMA) Council on Ethical and Judicial Affairs:

Euthanasia is commonly defined as the act of bringing about the death of a hopelessly ill and suffering person in a relatively quick and painless way for reasons of mercy. In this report, the term euthanasia will signify the medical administration of a lethal agent to a patient for the purpose of relieving the patient's intolerable and incurable suffering.<sup>5</sup>

Euthanasia is illegal in Singapore, and the world medical community generally considers euthanasia and assisted suicide to be in conflict with basic principles of medical practice. But euthanasia has been legalised in some countries. In the Netherlands for example, both euthanasia and assisted suicide have been widely practiced since the 1970s, although it was legalized only in 2002.<sup>6</sup> In Belgium, the act legalizing euthanasia was passed on May 28, 2002, and went into effect on September 23, 2002.<sup>7</sup>

The recent case of Terri Schiavo also brings out clearly the confusion that prevails among both the civil authorities and members of the public on what euthanasia entails. I will not be surprised if this issue would invite more attention in bio-medical ethics in the years to come.

Christian medical ethics cannot countenance euthanasia or assisted suicide simply because no human being has the right to take the life of another human being. Furthermore, the principle that governs Christian compassion in medical practice is 'maximise care', not 'minimize suffering'.<sup>8</sup> Thus the duty of the physician is always to care, but never to kill! If medical ethics is governed by the principle of minimising suffering, then there is a sense in which the elimination of all sufferers can be justified.

During his papacy, Pope John Paul II strenuously urged the world community to resist the culture of death and promote the culture of life. The Pope's message of course spans a very large terrain, but it is acutely relevant in the area of biomedical ethics. The abortion assumption and euthanasia are examples of the culture of death even when strong humanitarian arguments are forwarded towards their justification.

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<sup>4</sup> John Breck, *The Sacred Gift of Life: Orthodox Christianity and Bioethics* (Crestwood, New York: St Vladimir's Seminary Press, 2000), 152.

<sup>5</sup> Council on Ethical and Judicial Affairs (1992), *Journal of American Association* 265: 2230.

<sup>6</sup> See Penal Code of the Netherlands, §293 and §294.

<sup>7</sup> For the text of the Belgian law, see: 'The Belgian Act on Euthanasia of May 28, 2002', *European Journal of Health Law*, Vol 10, 329-335 (2003).

<sup>8</sup> Gilbert Meilaender, *Bioethics*, 65.

## *Beginning Life*

Some of the most important advancements in biotechnology and medicine have to do with the start of human life. As we turn our attention now to the issue of ‘assisted reproduction technology’ (ART), we must bear in mind that the discussion must be set within the larger context of the meaning of procreation and the family. Once divorced from this context – which is sometimes the case – ART will assume a status that does not properly belong to it.

Before we look at specific issues concerning ART, let me very briefly outline a Christian understanding of procreation. In recent decades, there has been a worrisome shift in the language from procreation to reproduction. By employing a metaphor from the factory, this shift brings with it some disturbing consequences. The acceptance of such language is often accompanied by related concepts: the image of commodities, the production line, quality control, and the rejection of inferior products.

According to the Christian understanding, however, procreation is the outcome of the love that is shared by the husband and wife. Procreation, to be sure, cannot be the sole object (goal) of their love, since love is never utilitarian. But procreation cannot be separated from that love. To do so is to violate the divine order of marriage.

The metaphor taken from the factory suggests that the child is the product of the rational will of the married couple. This is roundly rejected in the Christian understanding, according to which the child is always God’s gift to the mutual self-giving of husband and wife. The implications of this insight cannot be overemphasised: because children are a gift from God and not the direct result of human willing, they cannot be seen as the continuation of their parents’ projects.

Although the biological fact of conception and the birth of a child rest on the sexual union between a man and a woman, the child must still be seen as a gift from God. As Gilbert Meilaender has argued,

They have not simply reproduced themselves, nor are they merely a cause of which she is the effect. Rather, the power of their mutual love has given rise to another who, though different from them and equal in dignity to them, manifests in her person the love that unites them. Their love-giving has been life-giving: it is truly procreation. The act of love that overcame their separation and united them in ‘one flesh’, that directed them out of themselves and toward each other.<sup>9</sup>

The danger of the language of production and therefore of ART is that ‘conception takes on a higher priority than the marriage itself. The one flesh union is perilously jeopardised under the strain and demands we make upon ourselves, on each other, and on God.’<sup>10</sup> The implications of this understanding on what it means to have

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<sup>9</sup> *Bioethics*, 15.

<sup>10</sup> Richard Eyer, *Holy People, Holy Lives*, 126.



children are seen not just in the ethics of ART but also in that of prenatal genetic testing, which will be discussed shortly.

The most common reproductive technology is in vitro fertilisation (IVF), which is a procedure that combines the use of fertility drugs and egg transfer techniques. The procedure is deceptively simple: by laparoscopic technique, the physician removes an egg from the woman's ovary and unites it with her husband's sperm in a culture dish. At the appropriate stage, usually when the zygote is 36-48 hours old, the physician places the embryo in the woman's uterus.

Although IVF is widely used, its success rate is surprisingly unimpressive. A 1993 review in *Science* states that out of 16,405 eggs attempted to be fertilised, only 14% come to full term.<sup>11</sup> Because of this low success rate, several embryos are created and stored for repeated attempts. Excess embryos are either destroyed or used for research and eventually destroyed. Both these options are unacceptable for the Christian.

A third party may be involved in the process: the egg or the sperm may be received from a donor. Furthermore, the woman who receives the embryo for implantation may not be the biological mother but a surrogate. As John Kilner and Ben Mitchell put it, 'When a third party intrudes on the procreative relationship, the divinely instituted structure of the family is altered.'<sup>12</sup>

Furthermore, the procedure may cause harm to the woman. The hormones used to stimulate the eggs can cause the ovary to rupture and the anaesthetic used in surgery carries the risk of morbidity and mortality. Ectopic pregnancy may also result when the zygote is implanted accidentally in the fallopian tube instead of the uterus.

ART also opens up two important and related issues in bioethics: the medicalisation of procreation and the commodification (and commercialisation) of human beings, their bodies and their bodily products. Procreation is taken out of the hands of the husband and wife and the process itself has become independent of them.<sup>13</sup> It is placed in the hands of scientists, doctors and technicians.

Here again the Christian tradition has the resources to address the anxieties of the child-less couple in the midst of cultural and other pressures. Christians understand and sympathise with those who want to have children but are unable to. But the Christian standpoint maintains that procreation is neither the exercise of a right or a means of self-fulfilment – it must be seen in the light of the mystery of God's providence. The infertile couple therefore must not consider themselves as second-class humans and infertility as God's disfavour or punishment. God blesses his

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<sup>11</sup> Robert M. L. Winston and Alan H. Handyside, 'New Challenges in Human in Vitro Fertilisation' *Science* 260 (14 May 1993), 932-936.

<sup>12</sup> John Kilner and Ben Mitchell, *Does God Need Our Help? Assisted Suicide & Other Challenges in Bioethics* (Wheaton, Illinois: Tyndale House Publishers, 2003), 47.

<sup>13</sup> Eugene C. Sandberg, 'Only an Attitude Away: The Potential of Reproductive Surrogacy', *American Journal of Obstetric and Gynecology* 160 (June 1989): 1442.

children in different ways. He is fulfilling his purpose in the union of the infertile couple in other ways, insofar as they are available for tasks not open to those with children.

Before we turn our attention to genetic research, we must look briefly at the issues surrounding prenatal genetic testing. The BAC recently circulated a consultation paper entitled, 'Ethical, Legal and Social Issues in Genetic Testing and Genetic Research' to different groups in society, including religious communities, for feedback. I would like to briefly highlight here two issues found in this paper.

The first concerns Preimplantation Genetic Diagnosis (PGD), a procedure which seeks to determine if early embryos created by in vitro fertilisation are predisposed to any genetic diseases. The NCCS's response clearly states that it does not support PGD, for the simple reason that embryos found with genetic defects will be destroyed. The NCCS expressed the same concerns regarding Prenatal Genetic Diagnosis (PND). Although PND is morally acceptable if it is done for the purpose of preparing parents for the child, it must be rejected if unfavourable results compel the parents to abort the child.

The second relates to Preimplantation Tissue Typing (PTT). PTT is a procedure that allows the selection of embryos that may provide a matched tissue for a sick sibling. Although the potentials of PTT are truly staggering, the NCCS has serious reservations and does not support the procedure. The ethical issue surrounding PTT is the commodification of the child who is conceived to provide his / her sick sibling with a matched tissue. Commodification and a utilitarian view suggest themselves in the language of the HFEA definition quoted favourably in the BAC document which describes PTT as the procedure which 'allows the selection of embryos in order to bring about the birth of a child who can provide a matched tissue donation to an existing sibling ...' The response of NCCS is unequivocal and forceful:

No human being should be seen as a commodity serving utilitarian ends ... The underlying philosophy of the commodification of human beings is a utilitarianism which regards humans as objects that are not valued for who they are but for their usefulness. Such approaches should never be countenanced no matter how 'great' or 'noble' the ends may be. The theological vision of our humanity espoused by the Christian Tradition demands that each and every human being is treated as inherently valuable.<sup>14</sup>

### ***Biotechnological and Genetic Research***

We turn finally to biotechnological and genetic research and examine their ethical implications. This is a broad field involving developments as diverse as the Human Genome Project, genetic engineering and cloning. Due to time constraints we will focus our attention only on stem cell research in this presentation.

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<sup>14</sup> National Council of Churches, 'Feedback on the BAC Consultation Paper entitled, "Ethical, Legal and Social Issues in Genetic Testing and Genetic Research"'.

While knowledge about stem cell science and its potential applications has a history of some thirty years, it was only in November 1998 that scientists were able to do what had eluded them for years: the isolation and culturing of human embryonic stem cells. Briefly, stem cells are precursor cells that have the ability to differentiate into multiple tissue types. Scientists believe that by stimulating stem cells to develop into particular tissues, they are able to treat a variety of diseases for which there is currently no cure, like diabetes and Parkinson's. While adult stem cells can be used, scientists maintain that stem cells derived from human embryos are more 'plastic', that is, they have the ability to differentiate into more tissues.

For the NCCS, adult stem cell research poses no ethical issues because it does not result in the harm or destruction of human beings. The NCCS therefore encourages more research to establish the therapeutic potentials of adult stem cells, as well as stem cells taken from umbilical cords.

The NCCS, however, cannot support embryonic stem cell research since such research would result in the wilful destruction of human embryos. This is consistent with our view that human life begins at conception, and that in the earliest stage the blastocyst is already a human being created in God's image and therefore deserving of respect. This view can be defended philosophically since a zygote of human parentage cannot articulate itself into any other animal. Thus, even though the zygote does not look like an adult human, it is nonetheless human. It is exactly what an adult human being looks like at that stage of development.<sup>15</sup>

The designations 'pre-embryo' and 'embryo', so common in literature on stem-cell research, must be called to question. While proponents of embryonic stem cell research maintain that there is a consensus in the scientific community on when the pre-embryo becomes an embryo (when it individuates after implantation), this is not the case at all. In *Human Embryology and Teratology*, Ronan O'Rahilly and Fabiola Müller describe 'pre-embryo' as 'ill-defined and inaccurate' and list it among 'discarded and replaced terms'.<sup>16</sup> The authors explain why 'pre-embryo' must be rejected:

...although life is a continuous process, fertilisation is a critical landmark because, under ordinary circumstances, a new genetically human organism is thereby formed ... The combination of 23 chromosomes present in each pronucleus results in 46 chromosomes in the zygote. Thus the diploid number is restored and the embryonic genome is formed.<sup>17</sup>

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<sup>15</sup> For a detail treatment, see Roland Chia, 'Embryonic Stem Cell Research: Ought We Do What We Can Do?', *Church and Society*, Volume 4, Number 3, December 2001.

<sup>16</sup> Ronan O'Rahilly and Fabiola Müller, *Human Embryology and Teratology*. 2<sup>nd</sup> Edition (New York: Wiley-Liss, 1999), 12.

<sup>17</sup> O'Rahilly and Müller, *Human Embryology and Teratology*, 8, 29.

The distinction between ‘reproductive cloning’ and ‘therapeutic cloning’ must also be called to question. According to some scientists, reproductive cloning is the process by which an embryo is created by nuclear transfer and implanted into a woman’s womb in the hope of bringing it to term. Therapeutic cloning, however, is the process by which an embryo is created through nuclear transfer in order to obtain stem cells from it. This distinction is accepted by the BAC document on stem cell research.

The distinction between the two, however, is purely academic. According to these definitions, the distinction between reproductive and therapeutic cloning has to do with the purposes to which the clone will be put to use, not the *nature* of the clone. In both cases an embryo is cloned. In both cases one is dealing with a human being. The distinction between ‘reproductive cloning’ and ‘therapeutic cloning’ must therefore be rejected. The cloning of human beings must be banned.

Supporters of embryonic stem cell research have often appealed to its therapeutic potentials as its justification. This argument is compelling and emotive because of its motivation to alleviate (or eradicate) the suffering of so many people. Such an argument is based on the principle that a certain research must be allowed if it holds scientific promise and therapeutic benefits. If this is the sole principle governing decisions regarding certain researches, then the approach is dangerous. The principle which says that something should not be done unless there are compelling reasons to do it is no principle at all. This is because the principle that maintains that limits can be vitiated if there are compelling reasons to do so in effect implies the abandonment of all principled limits. Such is the fundamental presupposition of every form of eugenics.

## **A Brave New World**

Both the scientific community and the media are quick to emphasise the profound benefits of biomedical technology. They not only include the prevention and cures for diseases of body and mind but also the increase in life expectancy. Although the benefits of biomedical technology are indisputable, the fact that they are not unmixed must not be trivialised. The power that science wields over nature can be misused and abused by some. The ability to intervene technologically in the human body and mind may bring dilemmas and painful consequences that we are as yet unable to anticipate. Even when technology is used with benevolent intentions and for noble, humanitarian goals, it can yield undesired consequences. The conquest of nature for the benefit of humankind can lead to dehumanisation, what C. S. Lewis has referred to as ‘the abolition of man’.<sup>18</sup>

Two generations ago Aldous Huxley wrote a charming but disturbing novel *Brave New World* which addresses almost prophetically the triumph of humanitarian science and its dire consequences. Huxley depicts human life seven centuries from his own that is rendered fully competent by genetic manipulation, hypnopaedia and psychoactive

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<sup>18</sup> C. S. Lewis, *The Abolition of Man* (New York: Macmillan, 1965). See Chapter 3.

drugs. Science has achieved an earthly utopia by eliminating disease, anxiety, aggression, suffering and grief. The power of Huxley's depiction lies in the fact that this utopia was brought about by humankind's most humane and progressive aspirations.

But the triumph comes with a heavy price: homogenisation, mediocrity, triviality, debased tastes and shallow relationships. In short, utopia was achieved at the cost of a process of dehumanisation so subtle and complete that man does not even realise what has been lost. As Leon Kass, chairman of the President's Council on Bioethics has so provocatively put it, 'Perfected bodies are achieved at the price of flattened souls.'<sup>19</sup> And this can come about very subtly. Technological humanitarianism is like a warm bath that heats up so imperceptibly that one does not know when to scream!

Genetic technology, it is true, came into existence as part of the larger project in medical science to cure disease, prolong life and alleviate suffering. It therefore enjoys a high moral ground because its goal is compassionate healing. Who would not welcome genetic therapy to correct the genetic defects that would lead to Huntington's disease, breast cancer or sickle cell anaemia? If genetic technology in its application were confined only to the diagnosis and cure of diseases, it would raise few questions beyond those of safety and efficacy. Genetic technology would be an extension of and continuous with modern high-interventionist medicine. Even intrauterine gene therapy on existing foetuses with genetic diseases could be seen as an extension of the growing field of foetal medicine.

But as Leon Kass is careful to point out, genetic technology when fully developed will possess two powers not shared by ordinary medical practice. Medicine treats existing individuals and its goal is remedial; that is, it seeks to correct deviations from a stable norm of health. 'By contrast,' Kass explains, 'genetic engineering will, first of all, deliberately make changes that are transmissible into succeeding generations and may even alter specific *future* individuals through direct "germline" or embryo interventions'.<sup>20</sup> Secondly, genetic engineering may be able to create new human capacities through genetic enhancement, and therefore new norms of health and fitness.

Scientific and technological positivism in Western culture for the last two hundred years has resulted in what some have called the 'technological imperative'. It asserts rather naively that if something can be done, it *ought* to be done. A classic example of this approach is seen in the arguments forwarded by Dr Panos Zavos who claimed to have cloned human embryos and implanted them in women's wombs. Testifying on March 15 2004 before the House Subcommittee on Oversight and Investigation during a hearing on an issue raised by human cloning research, Zavos maintains that since human cloning is possible, it should be allowed. Coupled with the technological imperative is what I call the 'ethics of inevitability'. This ethics argues that since cloning is technologically possible, someone somewhere will create clones despite a global ban. It would be more sensible to legalise human cloning but subject it to strict

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<sup>19</sup> Leon Kass, *Life, Liberty and the Defense of Dignity* (San Francisco: Encounter Books, 2002), 134.

<sup>20</sup> Kass, *Life, Liberty and the Defence of Dignity*, 121.

regulations. Such an ethical philosophy is ludicrous! Murder, genocide and terrorism cannot be prevented. Should they therefore be legalised?

This situation suggests the need for sound ethical judgement. While science tells us what can be done, ethics considers the question whether it ought to be done. One of the most fundamental tasks of bioethics is to achieve moral clarity: to provide the sort of analysis that would set a clear agenda of ethical questions that need attention. Because of the ramifications of bioethical issues, careful consideration across society is warranted. Discernment and choice should not be left only to those who develop the technologies since the knowledge and application of biotechnology has the potential of producing harmful side effects.<sup>21</sup> There is a need for the different communities in society to think ahead and anticipate the ethical questions that will accompany emerging technologies. As Bernard Davies has put it: ‘useful public discussion must be built, as far as possible on recognition of what is likely to become technically feasible soon.’<sup>22</sup>

A number of Christian bioethicists have expressed their objections to certain applications of biotechnology because they are seen as man’s attempts to ‘play God’. This phrase was used by Paul Ramsey in his celebrated work, *Fabricated Man: The Ethics of Genetic Control*: ‘Human beings should not play God before they have learned to be human beings and when they are human beings they will not want to play God.’<sup>23</sup> By ‘playing God’ Ramsey refers to the approach epitomised in Francis Bacon’s *The Great Instauration*, where knowledge is sought solely for its utility and its ability to make humankind ‘capable of overcoming the difficulties and obscurities of nature.’<sup>24</sup>

The Baconian project does not only set humankind over nature but against it. According to this view, nature and the natural processes have no dignity of their own – their value is seen only in their usefulness to humanity. By using the phrase ‘playing God’, Ramsey is warning against that titanism of the human spirit that seeks to master nature and the powerless, forcing them into servitude. ‘Playing God’ warns against the wilful commodification of human beings and the treatment of some individuals as a means instead of as an end.

With characteristic astuteness, however, Ramsey argues that there is a sense in which we *are* to ‘play God’. We are to ‘play God in the correct way’<sup>25</sup> or to ‘play God as God

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<sup>21</sup> Eric T. Juengst, ‘The NIH “Points to Consider” and the Limits of Human Gene Therapy’, *Human Gene Therapy* I (1990): 429.

<sup>22</sup> Bernard D. Davis, ‘Ethical and Technical Aspects of Genetic Intervention’, *The New England Journal of Medicine* 285, no. 14 (1971): 800.

<sup>23</sup> Paul Ramsey, *Fabricated Man: The Ethics of Genetic Control* (New Haven, Yale: Yale University Press, 1978), 151.

<sup>24</sup> Francis Bacon, *The New Organon and Related Writing*. Edited by Fulton H. Anderson. (The Liberal Arts Press, Bobbs-Merrill Co., Indianapolis [1620], 1960), 19.

<sup>25</sup> Paul Ramsey, *The Patient as Person: Explorations in Medical Ethics* (New Haven, Yale: Yale University Press, 1970), 256.

plays God.’<sup>26</sup> For the Christian, this invitation to ‘play God’ must be taken with all theological seriousness because according to the Christian tradition human beings, as bearers of the divine image should mirror their Creator. The invitation to play God therefore directs attention to the God we are invited to play. He is a God who cares profoundly for his creatures, especially his rational creatures who bears his image. He is a God who heals, saves and protects.

Those who seek to ‘play God in the correct way’, to ‘play God as God plays God’, will seek to promote life and not death or suffering. They will seek to provide healing to all, and not just to some at the expense of others. Those who seek to imitate God’s ways, in the service of God’s cause, will not celebrate abortion as a therapeutic option. They will mirror God’s concern and care for the poor, and will never exploit the powerless for the sake of financial profit or in the name of research and scientific progress. They will always be concerned to protect the dignity of the human being and acknowledge the sanctity of human life.

Finally, those who seek to ‘play God in the correct way’ would know that to ‘play’ God is to ‘imitate’ God, and not to ‘be’ God. As Allen Verhey has put it: those who wish to ‘play God in the correct way’ must ‘refuse to pretend to substitute for an absent God – *etsi deus non daretur* ... God is God, and not us, but God has called us to follow where God leads, to imitate God’s works, to serve God’s cause.’<sup>27</sup> The invitation to ‘play God’ therefore comes with a clear prohibition. And it is absolutely imperative that scientists, ethicists, policy-makers, and whoever else is involved in biomedicine understand the gravity of this prohibition. For as Paul Ramsey has so wisely put it, ‘The good things that men do can be made complete only by the things they refuse to do.’<sup>28</sup>

Thank you!

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<sup>26</sup> Paul Ramsey, *Ethics at the Edges of Life: Medical and Legal Intersections* (New Haven, Yale: Yale University Press, 1978), 203.

<sup>27</sup> Allen D. Verhey, ‘Playing God’, *Genetic Ethics: Do the Ends Justify the Genes?* Edited by John Kilner, Rebecca D. Pentz and Frank E. Young (Grand Rapids, Michigan: Eerdmans, 1997), 72.

<sup>28</sup> Ramsey, *Fabricated Man*, 48.