The human embryo - its status, value, rights, and destiny

Questions about the status, value, rights, and destiny of the human embryo are central to the debate on how far the new reproductive technologies are morally acceptable. When does the human embryo become a person, so that it may be seen to have intrinsic value as a human being and the right to protection? The answers to this question vary considerably.

Before we try to answer this question, we should recall that accurate scientific knowledge concerning sperm, ova, and embryonic human life has been acquired only in recent times. In fact, we know more about human reproductive processes and early embryonic life because of modern reproductive technology. However, the making of ‘Hi-Tech Babies’ (to use a term from Newsweek, March 18, 1985) - preceded by sperm banks and followed by the founding of surrogate mother associations and agencies - has often clouded the status of the most important ‘participant’, the human embryo itself.

In ancient times, the embryo was described as ‘the product of male spermatozoa and nutritive “soil” provided by the female’ (Aristotle, 384-322 BC). Earlier, the famous Greek physician Hippocrates (about 460-377 BC), who is regarded as the ‘father of medicine’, thought that the human embryo was ‘the product of water and fire’ (Wood and Trounson). Only during the first and second centuries AD did Aristotle’s ‘seed-soil’ theory become obsolete by discoveries of the workings of the female anatomy.

It was not until the fourteenth century that interest in anatomy increased. We know that during the Renaissance, artists and scientists became increasingly interested in the human body. We may remember the beautiful drawings of Leonardo da Vinci (1452-1519), who dissected 30 corpses, and brought the knowledge learned from the dead to the living, (Wood and Trounson). The sixteenth century gave us scientists like Andreas Vesalius of Brussels (1514-1564), who described the egg follicles and what happened to them after egg release; and his well-known student, Fallopius (1534 - 1562), who described the woman's oviducts, which later were named after him (Falloplian tubes). From the days of Vesalius and Fallopius, the male and female reproductive structures became better known to people in the Western world. Improvements to the lens system of the microscope (invented by Zacharias Jansen in 1590) gave scientists a very important research tool. Reproductive structures in animals were carefully studied, but precise knowledge was not acquired until further improved microscopes were made, which enabled scientists to make more accurate observations. It was only by the middle of the nineteenth century that scientists were able, in more or less general terms, to describe how embryos formed and developed. Further animal studies, including experimentation, were made, and reproductive knowledge increased. Scientists then considered extending experimentation to human generative tissue.

The changes in the social and moral climate of the Western world during the 1960s and 1970s- including the general acceptance of abortion- removed many ethical barriers to those scientists who wanted to experiment with external human fertilization. Tubal infertility, often incurable, had become an increasing problem among women who wanted to have a baby, and the number of healthy and ‘acceptable’ babies available for adoption had sharply declined. So the work of these scientists, if successful, would provide a range of technological alternatives to infertility. There was no doubt that society would hail their achievements...

In all these developments, the human embryo became the subject - and victim - of reproductive experimentation and test-tube technology. At the beginning of 1986, we knew of about 4,000 births of 'test-tube' babies in the world. Many more such births will follow. Now we are being asked to accept the need for surplus embryos and extended embryo growth in vitro for further research and experimentation purposes (for example, to find cures for various genetic diseases). We are also being told that these very tiny early embryos are not really human beings. They are ‘pre-human’ or ‘potential’ human beings or even, as suggested recently, ‘pre-embryonic’ human embryos! These and other descriptions serve to confuse people about the moral status of the human embryo. The argument of ‘ensoulment’ (the endowment of the embryo with a soul) adds to the general confusion about this vital issue.

There are only two possibilities: either the embryo is an embryonic human being endowed with human personhood, or it is embryonic human life with the potential of becoming a human being or person.

It is an indisputable fact that human conception brings into existence a one-cell human embryo, called the zygote, a word derived from the Greek for 'yoke' or 'yoked', that is, to be joined together.

Neither a sperm nor an egg alone will ever become a human embryo. The fusion of their nuclei is a biological event which marks a new genesis, a new beginning, a new life-process, a new development, a new growth of a unique human life. It is 'new' because it has its own genetic identity, a 'personal belonging', which remains throughout life.

About six hours after the beginning of this one-cell embryo, a new sign of a continuing growth process occurs: the first cell division. After a journey of about five days through the Fallopian tube into the uterus, the rapidly developing embryo finds its nidus (nest) inside the uterus, its natural habitat, where it lives, grows, and moves until the day it will be born as a baby with a nine-month pre-birth history.

If we believe that human personhood - in the philosophical and moral sense - comes about only when the developing embryo, fetus, or baby becomes...
a person in the psychic, social, or legal sense, we will never be certain as to when one becomes a human person. This development model assumes that the achievement of human personhood depends on biological development to a certain stage; this model is therefore fraught with difficulties.

We should admit that in earlier days people were taught that, until the human embryo had a recognizable human form, it could not be regarded as having a soul. This ancient philosophical error, based on inadequate knowledge of embryology, led people to believe that a male fetus was animated at the 40th day of its development, and the female fetus at the 90th day. This belief has been discredited by serious theologians and philosophers for a long time, and therefore it cannot be used as a valid argument in support of the development model.

Many people, however, still believe that the time of animation should be set at the time of quickening, that is, when a mother becomes aware of the child's movements in her uterus. Some people identify this experience as the time when the fetus acquires 'social' personhood.

According to the development model, there are a number of possibilities for recognizing when personhood begins:

- at conception;
- at implantation;
- some time after implantation, e.g., during the second month after conception, when acquire, merit of Psychic personhood has been suggested;
- at quickening, when social personhood is assumed to have been acquired;
- at the time a pre-born child can be kept alive outside the mother's body, i.e. about the 26th week of gestation, or even earlier.

Those who support a development model will always argue about their reasons for choosing a particular time for the beginning of human personhood (when the moral status of being a human person is acquired). We should remember that, whatever choice they make, they choose arbitrarily.

We can see that those committed to a development model believe that the physical form or appearance of the human embryo or fetus determines when it acquires human personhood. This is illogical. A human being is not merely the sum total of his or her body cells. For instance, genetic disorders or other physical and mental disabilities, caused by cellular malfunctions or defects, can never be a reason for declaring a human being a non-person.

If there are abnormalities in the genetic make-up of an one-cell human embryo, the child will suffer from those same abnormalities (unless they are corrected). A human being at any stage of life is what he or she was and will be. Various branches of the life sciences might be able to influence, correct, or alter some aspects of the biological development of a human embryo, fetus, or child, but the one-cell human embryo will always develop according to the given laws of nature.

Human conception leads to human birth, progressing along the path of human development until the moment of human death. Physical and mental qualities may develop and wane. Physical and mental disabilities may become so severe that the human appearance almost seems to have faded away. Yet, who could declare that a human being in such an awful state is a non-person? No one should be allowed to make such a pronouncement on any member of the human family.

An alternative to the development model is the endowment model. If we hold this view, we will reason as follows:

The following summary represents the case. It combines the endowment model with the various stages of development.
The duration of gestation of the human fetus

<table>
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<th>7.5 weeks</th>
<th>16-18 weeks</th>
<th>38 weeks</th>
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<tbody>
<tr>
<td>Conception</td>
<td>Fetal reflex response</td>
<td>Quickening</td>
<td>Birth</td>
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From conception to birth and beyond we are human persons in the moral sense.

From 7.5 weeks after conception to birth and beyond we are human persons in the moral and psychic sense.

From 16-18 weeks after conception to birth and beyond we are human persons in the moral, psychic, and social sense.

From birth until death we are human persons in the moral, psychic, social, and legal sense.

The value of the human embryo flows from its moral status. No one objects to disposing of superfluous, damaged, sick, or dead tissue. Such action generally does not involve violating nature or the laws of humanity. The living (dividing) one-cell zygote, however, is not a disposable human tissue. Embryos in the early stages of their development should not be flushed down the sink in the laboratory, as so often happens after the experiments of reproductive scientists. Taking life into human hands is a great moral responsibility, and this responsibility should not rest with scientists and doctors alone.

Just because people do not recognize or accept the given moral value of each human embryo, that does not mean it is not there. Blindness does not remove the existence of matter. The current mass-destruction of human embryos and fetuses is taking place basically because people are denying the value of embryonic and fetal human beings. People's insensitivity toward embryonic human life has caused grave and considerable damage to inter-personal relationships within the family and outside it. It has also meant that less people understand the moral principles concerned with the unique value of being human. If our value system is not 'other-directed' but 'self-directed', we will soon be living 'on our own'. Values are meant to be shared, and people can see what sort of values we have by our attitudes and behaviour.

If we have no respect for the status of the human embryo, we should not be surprised when people are not concerned with its value and deny its rights. Rights are rooted in values and connected with responsibilities. If the human embryo has no moral status and therefore no intrinsic value, it is futile even to suggest that it has 'rights'. People will recognize that the embryo has the right to our respect, protection, and care, only if we uphold its moral status and value which it has in common with all human beings.

Last but not least, the destiny of the human embryo is the same as our destiny, that is, to remain in the natural state of being alive until we die. The human embryo should not be subjected to life-threatening experimentation. It should not be a victim of our desire to learn how to imitate nature and the natural reproductive processes. It should never serve as a non-consenting donor of its life or its tissue for the sake of technological advancement.

There are ethical rules governing experimental and therapeutic treatment of human patients: experimentation on human embryos should be bound by the same rules. This implies that there should be no novel attempts at possible sexing and cloning of human embryos. The embryo should not be placed in an unnatural environment for its further development. As participant in natural family formation, it has the right to be where it belongs, namely, in its mother's womb. As participant in artificial family formation, it may have begun its life in a woman's Fallopian tube or in a laboratory dish. Nevertheless, its right to its human destiny remains. The rights of human embryos stored in deep-freeze tanks or used as subjects for experimentation are being violated, because people refuse to recognize their moral status, their value, and their 'natural' destiny. These embryos do not die as others who, for a variety of reasons, may die in their natural habitat. Their death is the direct result of what we do when we take life into our human hands.

(The idea of individuality cannot be dealt with here in detail. The human embryo is in fact an individual. It has genetic, organic, and personal individuality. It seems, however, that scientific observation has led to a philosophical problem in the cases of twinning and recombination. Twinning in nature, which takes place before day 14 after conception, means that the embryo ceases to be one individual human person and becomes two. Without presenting detailed arguments, we can simply say that the individual human embryo is the 'mediating parent' of the twin. Recombination has been observed in IVF embryos. It is the fusion of the one embryo with another embryo, and may occur between the 2-cell and blastocyst stages of embryonic development. There are scientists who claim that recombination does not occur in the natural processes of embryonic development in vivo. Since recombination in vitro has been observed, we can simply state that an embryo death occurred. These two events do not affect our statement that an embryo is an individual human person front the moment of its conception.)