At the temperature of liquid nitrogen, approximately minus 195°C, living cells can be stored in a state of "suspended animation" for an almost indefinite period of time. According to CBS's "60 Minutes" program, aired in July, 1986, there are currently 250 living human embryos in deep-freeze storage in England's Bourne Hall, not to mention those in other centers. When the program was prepared already one child had been born alive and healthy from the Bourne Hall "nursery." One reason for the freezing, it was reported, was to provide "back-up" embryos in the event that the first one (or 2nd, or 3rd) transferred to the woman's uterus did not implant or was not successfully brought to term.

Implications

One implication of the long term durability of frozen human embryos, is that long after the parents (or, the donors of the egg and sperm — if one prefers) are deceased the embryo can be thawed out and be implanted in a woman years, decades or even centuries later. Who would be the true father and mother of that child? Who would be morally, legally and emotionally responsible for that child's proper upbringing?

A variation on that theme would be if the recipient of the embryo were, say, a granddaughter of the embryo's genetic parents. This situation means that the woman receiving the embryo could be the mother (gestational) of her aunt (or uncle). Imagine someone trying to do a genealogical diagram of that family tree!

Another implication is concerned with the legal status of these frozen embryos. Are they property? If so, can the parents (or their heirs) dispose of them? Or, does the embryo bank "own" them? If they are not property, are they human persons? Many of those working in the IVF field would like to consider them as only potentially human and possessing none of the basic rights inherent in being a human person. Yet, if they are not merely property to be owned, bought, sold or traded, and if they are only potentially human, then what are they? To what species of the animal kingdom do they belong?

Although one of the physicians on the program stated that at the early stages of embryonic development (say an embryo of 8 to 16 or more cells), he "could call it an elephant," that is nonsense. From the moment fertilization is completed, the new being now equipped with a full set of human chromosomes is a member of the human species. It will not develop into an elephant, shark, tiger or oak tree. It is destined to become eventually an adult human being, but only after it has gone through necessarily a series of developmental stages. While superficially it is not recognizable as a human being, examination of its chromosomes with appropriate techniques can identify it unequivocally as a member of the human species. This determination is made by counting the chromosomes (humans have 23 pairs), observing their gross structure — e.g., range of sizes and overall shapes, and by noting their banding after treatment by appropriate reagents. This latter process produces alternate bands of light and dark, of varying widths, across each chromosome which can function as identifying marks much like the Universal Products Code (UPC) found on many packaged food products.

Another implication of frozen human embryos is that it will tend to foster their use for research purposes. The Ethics Advisory Board of the former Dept. of Health, Education, and Welfare had several years ago allowed non-therapeutic research (that is, research not directed to the well-being of this particular embryo) on human embryos up to 14 days old (see Ethics & Medicine, April 1979). This age is calculated in terms of developmental stage, not by how many calendar days had elapsed since fertilization had been completed — important, for the frozen embryo could be one year, or one century "old" in the latter sense. With the Ethics Advisory Board's permission, experiments could be done on frozen human embryos who had been stored for several decades or more and have tenuous connections with their antecedents with the likelihood of less severe constraints being operative as compared to the "fresh" embryo where the "parents" were still acutely conscious of their child. Who would have the clear responsibility for the well-being of those frozen embryos 100 years from now?

In addition, the "60 Minutes" program pointed out that certain human embryos were "created" specifically for research purposes. One would be hard pressed to find a more inhumane goal: to create human beings for the sole purpose of being used for research! Of course, those who promote or tolerate such a practice rationalize away the horror simply by maintaining that these human embryos are not human beings! But, again, what are they?

Does the End Justify the Means?

Several times during the CBS program, those defending IVF justified the procedure on the basis that so many (about 1000) children now exist who would not otherwise be; many couples now have children who otherwise would be childless. A classic example, this is, of the end allegedly justifying the means.

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“60 Minutes” interviewed a spokesman (a professor of history) who opposed IVF. He pointed out that these children are alive but along the way many others (a much larger number) died. These had been brought to the embryonic stage but had either been deliberately discarded or had failed to implant or be carried to term. In defense, the proponent of IVF argued that, after all, nature allows a large number (some 40% it is claimed) of natural conceptions to be aborted. The evidence for that high (or higher) percentage, is not at all unequivocal; it needs to be carefully assessed. The argument proceeds further by asserting that it seems unreasonable for nature (or God) to create so many humans only to have them destroyed so early in life.

In response, one could point out that what evidence is available suggests that at least 50% of the naturally aborted embryos had severe genetic abnormalities. This process appears to be a built-in way of reducing the number of severely developmentally delayed children born (see Ethics and Medics, April 1980, p. 2-3). Furthermore, until the beginning of this century the number of born children who died by age one was about 50%. Would anyone claim that these were not humans because so many died before reaching adulthood or the age of reason? No, the high rate of naturally occurring intrauterine death — if such there be — does not justify the death of human embryos brought about by technological intervention. To admit that it did, would be similar to arguing that since all persons die eventually we are free to accelerate the process when so desired — which would be euthanasia.

Suspended Between Earth & Heaven

The cold facts of frozen human embryos entrain chilling implications, notwithstanding the good and noble goals — the procreation of children when otherwise impossible, the reduction of genetic defects in the population — the means proposed, however, are morally unacceptable. The deliberate direct destruction of human embryos for whatever reason is morally the killing of innocent human life. The placing of human embryos in a deep freeze status whether for a short time or for extended periods morally is not acceptable, not only for the reasons discussed in the article but because it places a human being without informed consent in a state which is ambiguous — neither fully living (since its growth is totally at a standstill) nor dead. Such embryos are suspended, as it were, somewhere between earth and heaven.

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