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GENERAL EDITOR: Dr. A. B. Robins



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R. S. Luhman

Ethics of Scientific Research: Can Embryo Experiments be Justified?

The jubilation that accompanied the birth of Louise Brown, the first 'test-tube' baby, was not shared by a large number of Christians who saw it as the first step towards the fulfilment of Aldous Huxley's vision of the Brave New World. The virulence of feeling is seen not only in their opposition to the Warnock Committee but in the treatment accorded to a fellow Christian, Professor Gareth Jones, whose book, *Brave New People* sought to evaluate the issues surrounding in vitro fertilisation (IVF). He was subjected to personal abuse, his views were misrepresented and he was compared to a purveyor of books promoting incest, rape, pornography and child abuse. The campaign against him eventually led to the withdrawal of the book from the American market.¹ This attitude is not only non-christian but it also trivialises an important issue ...

Embryo Experiments

One of the by-products of IVF is the existence of superfluous ova extracted from the mother, which can be fertilised and inserted into the uterus if the first attempt fails or can be frozen for future use. If they are not required they can either be discarded or possibly used for scientific research under licence with the donor's consent.

The pioneer researcher, Dr. R. G. Edwards, argued, 'We would have to take several eggs from the mother, and transfer only one or two back into her. The remainder would be thrown away. Is it acceptable to discard the excess embryos?'² If they are not discarded he suggests that research could be done to develop knowledge of human reproduction, embryology and contraception and to alleviate the effects of genetic diseases and deformities. He rejects research on cloning, because, once produced, clones would be the continual subject of research and they would be deprived of the right to be different.³

l. D. G. Jones, 'The View from the Censored Corner' Journal of the American Scientific Affiliation (1985) 37 169–177.

^{2.} R. G. Edwards in D. Paterson (ed.), Genetic Engineering 28 (1969).

The Warnock Committee accepted experimentation on 'spare embryos' up to fourteen days, which included trans-species fertilisation under licence but not beyond the two-cell stage. They were less happy about using embryos for the testing of drugs because this would encourage the production of embryos for this purpose. Three members of the committee rejected research altogether, fearing that once allowed, embryos would be routinely used and the word 'spare' would be a euphemism.⁴ Other groups made similar recommendations. including the Medical Research Council and the Royal College of Obstetricians and Gynaecologists. The latter wanted to include research on the early development of the nervous system as well as the effects of drugs and desired to extend the research period to seventeen days. The time limit was dictated, according to Warnock. on broadly utilitarian grounds: the balance of benefit over harm. The beginning of the central nervous system occurs on about the twenty second day and one can be reasonably sure that before that time the embryo does not feel pain. Also implantation is not usually completed before this time.

Other experiments have been suggested such as the production of human-animal hybrids which 'would be able to carry out unpleasant jobs and mundane tasks in the community,'⁵ and the development of immunologically identical organs for transplantation. Both possibilities are discounted by Warnock as futuristic and, in any case, excluded on the fourteen day rule.

A Christian Critique

The Christian case against experimentation is based on the supposition that from the moment of fertilisation the organism-zygote, embryo, foetus—is a human being made in the image of God. O. R. Johnson actually argues that, 'When little Louise Brown was in the embryonic stage *it was Louise Brown* who was transferred to her mother's womb where she belonged, not a "thing", not a featureless generalised human being nor a piece of human tissue.¹⁶ Destruction of the embryo or foetus is regarded as murder of an innocent being because it is impossible to separate stages in embryonic development which would justify a division into viable and non-viable.

^{3.} R. G. Edwards and D. J. Sharpe, 'Social Values and Research in Human Embryology' Nature (1971) 231 88.

^{4.} M. Warnock, A Question of Life ch. 12. pp. 70-74; 90-93 (1985).

^{5.} W. Walters and P. Singer, Test-Tube Babies: A Guide to Moral Questions, Present Techniques and Future Possibilities (1982).

^{6.} O. R. Johnston, Warnock-weighed and found wanting (n.d.) 10.

Biblical support for this view is found in God's knowledge and care for His people before birth and that if the incarnation occurred it must have occurred at conception.

The Biblical Evidence

Professor J. W. Rogerson correctly points out⁷ that the Bible cannot be directly used to decide issues concerning the status of the foetus if only because the Biblical writers knew very little about the process of fertilisation.

The only passage that may have any direct bearing on the subject of the status of the foetus is Exodus 21:22–24, but even here the meaning is disputed. The Hebrew literally reads, 'And when two men fight and they strike a pregnant woman and her child goes forth and there is no injury; surely he shall be fined as the woman's husband may put upon him... But if injury occurs you shall give life for life, eye for eye...' Many translaters and commentators think that the first reference is to miscarriage, but this is rejected by W. C. Kaiser,⁸ who points out that the verb means 'to go/come out' and is used of normal births except for Numbers 12:12. There is a Hebrew verb for miscarriage (cf. Ex. 23:26; Hos. 9:14) which could have been used if this is what was meant.

The Greek translation (LXX.) is literally, 'If two men strive and smite a woman with child, and her child be born imperfectly formed, he shall pay a penalty.' The addition of the word ἐχειχονισμένον (exeikonismenon = not fully formed) is not justified by the Hebrew and may have been inserted under the influence of current medical theory. Augustine accepted this as the basis for his distinction between the formed and the unformed foetus, which created problems for him in connection with the possible resurrection of the unborn who die in the womb.⁹ This distinction, '... between *foetus animatus* and *foetus inanimatus* or *informis* persisted unbroken in Roman Catholic tradition until the decrees of 1884 to 1902.'¹⁰

The Bible states that God created man in His image and likeness, but what does this mean? Commentators are agreed that it does not indicate physical likeness but are not agreed on what it does mean. Is it rationality (S. R. Driver) moral capacity (Laidlaw) knowledge of God in righteousness (Calvin) or dominion over the lower creation

^{7.} J. W. Rogerson, 'Using the Bible in the Debate about Abortion' in J. H. Channer (ed.) Abortion and the Sanctity of Human Life 77–92 (1985).

^{8.} W. C. Kaiser, Jr., Toward Old Testament Ethics 170-171 (1983).

^{9.} Augustine, The City of God, 22.13.

^{10.} G. R. Dunstan, The Artifice of Ethics, 82-83 (1974).

(Thieliecke)? Perhaps with F. Kidner, it should be taken as a transcription or distillation of the incorporeal in terms of the temporal. The concept of the image of God in man cannot help us in the question of IVF unless we can define what is meant by the term and when it is that the embryo takes on such an image.¹¹

If we study the words used to describe the nature of man in the Bible we are nearer a solution. The Hebrew word 'nephesh', often translated as 'soul', is used of both animals and man (Gen. 1:20, 21; Gen. 6:17) and the seat of the mind/spirit and often indicates the total person.¹² The New Testament uses $\pi v \hat{\epsilon} u \mu \alpha$ (pneuma) more often than $\psi v \chi \dot{\eta}$ (psyche) to indicate the divine image in man. Paul regards man's spirit as inactive until revived and activated at regeneration. (1 Cor. 2:11; 15:45)¹³ What he does not tell us is whether the spirit is present from conception onwards.

Apologists point to passages like Psalm 139:15–16 and Job 8:10–12, which indicate that God knows a person in the womb and is involved in the process of embryonic development to show that God's Spirit is present in the embryo from the beginning. More specifically passages like Jer. 1:5, Gal. 1:15, Luke 1:15, 41, are cited to prove not only that God is present within the womb, but that He chooses people before birth for His work. John Wenham writes, 'John's jumping (in the womb) is not to be equated with quickening ... Luke is describing a special movement inspired by the Spirit.' About Luke 1:41 he writes, 'Who is it that prompts John's joy, the two-week-old embryo of Jesus, or Mary? I incline to the former.'¹⁴ I find this unconvincing. It is sufficient to explain it in terms of Divine choice and care from birth so that, '... even before he was born, the hand of God was on him preparing him for his work.'¹⁵

Such passages show that God is not only the creator but also the sustainer of the universe and that He has foreknowledge. This is not enough to establish the thesis. As Rogerson points out, if we insist that an embryo is a person because God is involved, what do we say about spontaneous abortions? If they had been named by God, why didn't they live? Surely we only know that an embryo is a person in

^{11.} F. D. Kidner, *Genesis* 51 (1967); cf. J. I. Packer in B. N. Kaye and G. J. Wenham, *Law, Morality and the Bible* 169–171 (1978).

^{12.} Cf. E. Jacob and F. Baumgartel in G. Kittel and G. Friedrich, *Theological Dictionary of the New Testament*, 9. 608-631; 6.359-368. (ET. 1964-1974)

^{13.} Cf. D. Guthrie, New Testament Theology, 165 (1981).

^{14.} G. Wenham in Abortion: The Biblical and Medical Challenges 5. (1983).

^{15.} I. H. Marshall, The Gospel of Luke, 58 (1978).

^{16.} Cf. R. F. R. Gardner, Abortion: The Personal Dilemma, 126 (1972).

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retrospect. A live-born child can sue for damages suffered in utero, but a still-born child cannot sue simply because it is not a person.

It is true that the Bible prohibits killing (Ex. 20:13) because man is made in the image of God (Gen. 9.6.) But this too must be balanced by the fact that on occasions, God also commanded that whole groups of people, children included, should be exterminated. (Josh. 10:40; 1 Sam. 15:2.) Even if it is possible to justify such destruction,¹⁷ it nevertheless proves that the sixth commandment is not absolute. The Royal College of Gynaecologists' Report asks, 'Knowing as we do that in the natural process large numbers of fertilised ova are lost before implantation, it is morally unconvincing to claim absolute inviolability for an organism with which nature itself is so prodigal.' It will not do to reply, with Dr. Iglesias, that, 'We are moral beings. Physical nature is not'¹⁸ if we believe that God is in control of nature. If God can dispose of embryos and cause handicaps (Ex. 4:11) and is wholly good, why should we not be permitted to dispose of them?¹⁹

Philosophical Arguments

l. Persons

It is generally assumed that embryos are either persons or potential persons and that we all know what a person is, but this is far from certain. The philosophical literature on the subject is considerable and I am indebted to Michael Tooley's monumental survey²⁰ for what follows:

In what sense could we claim that embryos are persons? Is membership of the species 'Homo sapiens' sufficient? If a baby is born without a brain (anencephaly) would we want to say that it is a person? Doesn't an individual need to possess some attribute, like awareness, desires, memories or even self-consciousness or rationality? Even if we limit the list to awareness, memory and the ability to discriminate are these not also possessed by robots and artificial intelligences? Would we want to call these persons? If we include a sense of pain and limited visual discrimination then these are possessed by all vertebrates, but yet cannot be found in an embryo. One thing that distinguishes mankind from other animals is the capacity for imitative learning yet this does not come much

17. Cf. J. W. Wenham, The Goodness of God, 123-127 (1974).

18. T. Iglesias 'Social and Ethical Aspects of IVF' in Test-Tube Babies: A Christian View, 92 (1984).

19. Cf. R. S. Luhman, 'Belief in God and the Problem of Suffering' Evangelical Quarterly (1985) 57. 330.

20. M. Tooley, Abortion and Infanticide (1983).

before the second year of life. On purely scientific grounds there seems little support for the idea that the embryo is a person.

Professor O'Donovan in his article²¹ stresses that there are no 'criteria of personhood' independent of personal engagement. A person is known only in relationships. How can one have a relationship with an embryo? For Tooley, a person must be an agent and possess the concept of himself as having a variety of inter-related desires at different times.

Could not an embryo be a person because it has a mind/soul and is created in the image of God? Besides the problem of what constitutes the mind or soul and whether it can be separated from the brain,²² there is the question of when the soul/mind begins. From fertilisation until implantation the fertilised egg (zygote) is totipotent, that is each cell in the morula could become an embryo if implanted in the uterine wall. Indeed identical twins can develop during this time. If this occurred would we want to say that the soul of the fertilised ovum had split into two? We know that many embryos do not grow to maturity but are spontaneously aborted. If all these aborted embryos are persons with souls then, as Gardner observes, the majority of human beings in heaven will not have reached recognised human form.

Even if it were possible to maintain from fertilisation all humans have souls this of itself would not imply that we should not allow them to die, because as Tooley shows, if post-mortem life is superior to that on earth we would be doing them a favour. The same would not apply to mature human beings who already have established relationships on earth. The only objection would be if we adopted the view that unbaptised or unsaved infants or unborn children are consigned to hell or limbo. It is interesting to note that David, whose psalm of contrition has been thought to give credence to this view, expressed the hope that he would one day see Bathsheba's dead child in a future life.

1. Potential Persons and Possible Persons

It is often argued that because it is not possible to make any clear divisions between the fertilisation of the egg and the birth of a child there can be no distinctions drawn. Thus it is maintained that the zygote, although perhaps not a person in its own right, is nevertheless

^{21.} O. O'Donovan 'Again: Who is a Person? in Channer (ref. 7).

^{22.} Cf. H. D. Lewis, *The Elusive Mind* (1969) R. S. Luhman, 'Belief in God and Life after Death' *Faith and Thought* (1983) 110 156-185.

a potential person and should not be tampered with. But why stop at fertilisation? Gardner quotes Means, who says that at fertilisation all that happens is that, '... two squads of 23 chromosomes each perform a nimble quadrille on the genetic drill-field ... There is no more human life present after this rearrangement than there was before.' More questionably Glover claims that if it is a cake that we are after it doesn't matter whether the ingredients are thrown away before or after mixing.²³ In fact, of course, the genetic constitution of the zygote is different from that of the ovum and sperm and the zygote will develop into an adult unless prevented. However neither an embryo nor a foetus can survive on its own. In fact infancy needs to be fairly advanced in humans before we can say they are truly visible.

Professor Hare once suggested that if it is better to be alive than not have the opportunity to live then there is an obligation upon people to procreate as many children as possible. But is it possible to deny rights to a possible person if we fail to procreate him? Derek Parfit puts forward another case. A woman could conceive now with the knowledge that her baby may be deformed, but could wait three months and conceive a normal child. Would we want to say that by failing to give birth to the first child that she has deprived him of life when she could have a different child who would have a better life? Although the outcome of destroying a potential child and having another is the same as not destroying the first child, we intuitively know that a potential person is different from a possible one. It is never right to treat even potential persons as means only but always as ends.

Possible Responses

1. Banning Experiments

The Care Trust in their submission to Warnock stated, 'We believe that the vision of a society from which disease and disability has been banished is a noble one. But no advance towards this end should ever be undertaken if it demands the discarding or destruction of human individuals en route^{'24} They were sympathetic to the relief of infertility but not at the price of embryo research.

If we adopt the view that it is never right to kill an embryo, then we not only ban experiments but also abortion and the use of the I.U.D. contraceptive. At most we would allow an abortion if the life of the

^{23.} J. Glover, Causing Death and Saving Life, 122 (1977).

^{24.} Human Fertilisation and Embryology 32 (1983).

mother was in danger on the principle of double effect, that is that we intend to save the life of the mother but, as a consequence, the life of the foetus is unintentionally destroyed. The danger of this approach is that it elevates the embryo and gives it precedence over existing persons.²⁵

A moderate position is adopted by the Norfolk Clinic, Virginia, U.S.A. whose practice is only to reinsert all fertilised eggs. A practical difficulty could arise if an ovum was found on fertilisation to have a genetic abnormality. Although it could possibly be justified to advise a pregnant woman whose child might be born with a genetic abnormality to go on with the pregnancy, it cannot ever be morally right knowingly to reinsert a genetically abnormal embryo into a woman's body. In such a case it would be more advantageous to allow research on the embryo in the hope that any knowledge gained would prevent similar abnormalities recurring in the future.

2. Limited Experimentation

Gareth Jones said of his critics' position, 'To adopt a position that deviates from the view that the embryo is anything less than a person demanding complete protection under every conceivable circumstance is to exclude one automatically from the domain of evangelicalism.' He then asks what meaning this has '... in the midst of some of the horrendous dilemmas which doctors and families have to face.'²⁶

The moderate view adopted by the Warnock Committee is to limit research to a fourteen day period and severely restrict the type of research undertaken. Many see this as unworkable and see doctors Frankenstein, Moreau and Mengele waiting in the wings ready to do unmentionable things. Reference is often made back to the Nazi era where it is said that it all started with doctors claiming that there was such a thing as a life not worth living. This led on to the taking of life of the chronically sick followed by those not wanted for racial or ideological reasons. Professor Dawidowicz believes a fear of returning to such a situation is groundless and is based on a misunderstanding of Nazism. The so-called euthanasia only had meaning in terms of 'the purity of the nation (Volk)' interpreted in ideological, not real terms.²⁷

Man is made in the image of God but that image is tarnished and doctors and scientists have not always acted in a responsible manner; the abuses of animal experimentation and the workings of the Abortion Act are ample testimony to this. Part of the reason no doubt

^{25.} M. Kohl, The Morality of Killing 40 (1974).

^{26.} D. G. Jones (ref. 1) 174-175.

^{27.} See H. Kuhse and P. Singer, Should the Baby Live? 93-95 (1985).

is the bad wording of the laws and the lack of adequate supervision. There is always a danger that men will seek to 'play God' but as David Hume long ago pointed out, '... If it is for God alone to decide when we shall live and when we shall die then we 'play God' just as much when we cure people as when we kill them.' Man was also given dominion over nature, including his own, and the responsibility of using God given knowledge for the benefit of all of God's creatures. Sometimes this will mean making decisions as to who should die and who should live and perhaps whether to do research on embryos. If we are to play God let us do so in the spirit of Newton, who sought to think God's thoughts after Him.