St Vincent's Bioethics Centre. Newsletter, Summer-Aut85, 3, 182 (3-9)

case between a viable foetus and non-viable foetal tissue. Similarly, and again without this distinction, foetal tissue may be the subject of Post-Mortem examination. If such tissue is removed in the course of an authorized post-mortem, it may without further authority be used "for therapeutic, medical or scientific purposes". (s. 30).

In the same way, once again with no distinction between viable and non-viable foetus, Part VI would allow the use of foetal tissue "for the purpose of anatomical examination; or for the purpose of . . . the study and teaching of the anatomy of the human body." (s. 32).

Under Part IX, the trading in all tissue, (including foetal tissue, whether a viable foetus or not) is prohibited, except that according to s. 39(2):

> Where he considers it desirable by reason of special circumstances so to do, the Minister may, by a permit in writing, authorize a person, subject to such conditions and restrictions as may be specified in the permit, to buy tissue or the right to take tissue from the body of another person.

Prima facie, this section gives enormous discretionary power to the Minister, but one presumes that the courts will interpret it according to the immediate context, which is the commercial aspect of the trading. It seems unlikely that the Minister has the power to allow the removal of a pound of flesh from Antonio by his creditor.

Conclusion:

It seems from this survey of the relevant law, that there is regulation of embryonic foetal tissue, which contemplates possible experimental procedures; there is prohibition of abortion, except when the health of the mother is such that the Menhennit ruling will permit the abortion, and in this case there seems to be no regulation of the use of the foetal tissue removed (s. 5 of the *Human Tissue Act*) so that there would seem to be the possibility of using women as cultures of foetal tissue, if the women in question can satisfy the Menhennit ruling; finally, there is very little practical check on the use even of a viable foetus if it is obtained from a mother who is dead within the terms of s. 41 of the *Human Tissue Act*.

Here are many serious matters requiring decision by legal principle, rather than by doctors or technicians acting *ad hoc* and in fear of later proceedings for malpractice or mayhem. We wait for Portia.

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FROM THE AUSTRALIAN LAW REFORM COMMISSION, REPORT NO. 7

Human Tissue Transplants
Canberra: Australian Government Publishing Service, 1977, p.21.

48. (cont') "The use of aborted fetuses raises substantial questions involving public policy, moral and religious attitudes, and legal problems. The legal problems alone are formidable, requiring among other things, study of the status of foetal tissue when *in utero,* when *ex utero*, when exhibiting attributes of life, when dead, when 'viable', and when 'not viable'. The subject is inextricably bound up with the laws applying to abortion, and the methods of abortion. Accordingly, any consideration of the use of fetal tissue for transplantation, necessarily will involve consideration of abortion practices and abortion laws. The subject of abortion is currently under consideration by the Legislative Assembly of the Australian Capital Territory.

49. *Recommendation:* The Commission recommends that the transplantation of foetal tissue should be excluded from the operation of legislation enacted pursuant to this report. The recommendations in the subsequent chapters of this report do not extend to such tissues. The subject should, however, be given early attention."

SOME COMMON MISUNDERSTANDINGS OF CATHOLIC TEACHING ON MARRIAGE AND HUMAN REPRODUCTION

Catholics and the Catholic Church have often been seen to be outstanding in their approach to issues involved in human reproduction such as in vitro fertilization, abortion, artificial insemination, contraception, divorce, adultery, masturbation, homosexuality and promiscuity. Besieged from within and without Catholic circles, the Church has presented its opposition to these practices in a variety of ways and has sustained a variety of attacks.

In the ebb and flow of argument many misunderstandings have arisen. So much so that often arguments are put forward as Catholic arguments both by Catholics and by their detractors which in fact are not the substance of the Church's opposition to particular practices. Straw men are made, the winds of logic blow and the psuedo-Catholic straws fly before the storm.

Motivated by the misunderstandings and the consequent difficulties, we have tried in this paper to present some common misunderstandings of that which we take to be the nature of the Church's teaching on these matters, and to contrast the misunderstanding of the principles which have been officially taught by the Church and the implication of those teachings.

1. **The Relevance of Naturalness**

"It is unnatural."

"It is against nature."

This is a fairly common spontaneous reaction to procedures such as in vitro fertilization. It comes from many good common sense people steeped in the tradition of the Church, and is based on a vague recognition that the procedure is not fully human.

Unfortunately, this reaction is often seriously misinterpreted(1). It is taken as based on some sort of objection to artificiality, though this is not at all what is meant.

What is artificial assists natural processes, as spectacles assist sight. But what is unnatural deprives the process of its natural power, as lying removes the truth from communication.

This misunderstanding is illustrated in the following comment from a Catholic Bioethics Committee in Perth, Western Australia.

> These hesitations concerning the degree of artificiality of the process and the moral legitimacy of employing technological procedures alternative to natural reproduction

lie at the heart of many Catholic reservations concerning I.V.F. and embryo transfer(2).

Reference is made to this type of objection and it is claimed to be a "Catholic" objection, yet nowhere could we find an authoritative Catholic source or any other Catholic publication which actually makes a claim of this kind. There are many Catholic objections to IVF but none which would seem to object to the artificiality of the procedures as the core of a reason for rejecting them.

Rather, this type of objection seems only to be put forward as a Catholic objection by those who want to debunk Catholic objections to IVF. The Church does not, as this line of argument would imply, object at all to the technological procedures that enable us to build roads and houses and to make clothes, nor does it object to supportive medical and surgical interventions, including such things as appendectomies, heart surgery and pharmacological interventions.

The argument may, of course be made that the technology applied in IVF is supportive and not suppressive. We consider that argument as a serious one, though in fact we reject it, as we shall show later. But once this distinction has been brought up artificially itself has ceased to be the issue.

Indeed, even the mention of artificiality can considerably weaken a moral case. Torture, for instance, is wrong and unnatural because it suppresses natural respect for the autonomy and integrity of the victim. No doubt there are refined technological products that are used at times in torture, but a protest against torture would not be strengthened, but greatly weakened, if it were phrased as an objection against "artificial torture".

The same misunderstanding is normally found in the use of terms like "artificial contraception" when the simple term "contraception" would be more appropriate.

Catholic morality supports the use of Natural Law, a systematic approach to ethics founded on human nature and the natural ends of human functions. Spontaneous rejection of some practice as "unnatural" frequently accords with such an approach. Artificiality is not the issue.

While containing some positive points, the Perth document mentioned above has some fundamental misunderstandings of Catholic thinking on marriage and sexuality. Since they are common misunderstandings it is worth analyzing them in some detail.

2. **The Theology of Procreation**

We accept the statement contained in the document that IVF must be assessed morally as a conjugal and procreative act *alternative* to sexual intercourse, not as a *variation* on it(3).

But we hold that the standard teaching of the Catholic Church that neither the unitive nor the procreative aspect of intercourse may be excluded from an act of intercourse is not irrelevant to such an assessment. The attempt in the document to deal with the Church's teaching on this point is not at all satisfactory or compatible with the Church teaching in general. To quote from the Perth document:

> Secondly, the human and emotional context in which IVF takes place is the mutual love of husband and wife, and the desire to express that love in the generation of children. In IVF they each continue to express that love by contributing their distinctive genetic elements as they do in natural reproduction. The difference is, of course, that in natural reproduction the expression of love and the contribution of gametes are integrated in the conjugal embrace, whereas in IVF they are not so joined. The human and emotional contexts are the same, but the biological manner of expressing their love has been varied(4).

We claim, on the contrary, that neither the human nor the emotional context is the same in IVF and normal reproduction, that the insertion of the word "biological" here is misleading, that it does not suffice to carry the weight of a distinction from what is truly human, and that the variation in the manner in which the couple express their love in the two cases *is* humanly and morally significant.

The human context of ordinary fertilization is a truly human act in which body and mind act together as one and are experienced strongly as one's own and as being in union with those of one's partner, and as a meaningful expression of the love between the partners, and of openness to the initiation of the life of a new member of the family. The human context of IVF, completely lacks this subjective experiential involvement of the body, leaving the body to be involved as the object of operations, and these performed by a third person or a team of other people. The Document here seems to be assuming a notion of "human" as centred in the mind and will, without any essential involvement of the body.

The ordinary person can look back to his or her origin in a truly human action in which bodies, minds and emotions all made a notable contribution that was integrated into the event. The person generated by IVF looks to an origin in a joint act of two wills that was implemented by the decisions and actions of further agents that involved his or her mother's body only as a passive object on which others operated, and his or her father's body as performing in isolation an act that normally would be strongly outgoing and unitive.

The emotional context of ordinary fertilisation is one of mutual arousal and the reinforcement of a relationship that prepares for the new relationship to the child. The emotional context of in vitro fertilisation is one of great desire for a child but without any direct co-operation by the body or bodily reinforcement of the personal relationship.

The use of the term "biological" here in contrast with "human" and "emotional" suggests that the authors of the document believe, and the reader should believe, that conscious bodily activities, like sexual intercourse, are not properly human nor connected with the emotions, but nothing more than activities like the circulation of the blood that occur unconsciously and are known only through their objective investigation by scientists and other outsiders, and are performed as operations by outside technicians.

Unless further explanation is given, this use of the term "biological" seems calculated to downgrade the importance of the body in human life and seems to be based on a false dualistic view of body and soul.

As for the claim that the standard teaching of the Church is not applicable here, since this demands that no act of intercourse should be such as to positively exclude either the unitive or the procreative meaning of intercourse, and since in IVF no act of intercourse at all is involved, there is a logical, abstract, sense in which this claim is true, but we must also note that this argument is quite inadequate, since it leaves the investigation unfinished and up in the air.

The task of the theologian is not one of making simple deductions from a finite set of clear and certain "first principles". It is rather one of struggling to make sense of a whole range of teachings of the Church, so

that he can come to some understanding of them and then move on to an understanding of new issues in a way that makes sense of all those former teachings of the Church.

Theological argument is not abstract but must take account of the full context of the deposit of faith. As an aside, we may note that the best philosophical reasoning similarly goes much deeper than mere abstract argument. It takes concrete reality at its starting point, and struggles to explore it in a way that refuses to neglect any of its aspects, however unformulated they may happen to be.

The theological principle referred to throws light on the place of sexual intercourse in God's plan. Each act of intercourse is a significant event, and the Church seems to be insisting in a notable way on its integrity. This makes sense of the understanding that the human ministry of procreation is a high dignity, that sexual intercourse is meant by God to be a way of co-operating with him in procreation (which can remain just as true when only a small proportion of such acts in fact result in the initiation of a new human being, as it would if every act did so), and that this particular means of procreation has been chosen by God as a way of developing human warmth in parents and of giving dignity and assurance to each new human person in the knowledge that he or she started life as the result of an extremely human and significant act of love that involves intimately both the bodily and the spiritual dimensions of humanity and that is such as can be a genuine welcome to the new person and can be recalled by the parents as a celebratory act.

If any of this helps us genuinely to understand what sex is about, then it also helps us to understand the importance that God places upon the conditions of the generation of each new human being. An act of generation that by-passes this strongly human bonding is imperfect and is not to be chosen, just as those other truncated forms of generation which we call adultery and rape are not rightly to be chosen precisely because they lack something that is required for making the start of life something wonderful.

So the well-known principle is just one aspect of a whole theology of sex that does seem to throw considerable light on our present technological novelties. This can be expressed very reasonably as a requirement that each human being should be able to look back on his or her origin in an intimate and intensely human act of love which brings him or her into the world as a partner of equal dignity with the parents and not just as a product which can be evaluated as a consumer good. There is a brief and sharp dismissal of this line of thought in the Perth Document(5). The dismissal is not only a neglect of valuable theological understanding, but also a discourtesy to the Catholic Bishops' Joint Committee in Great Britain that seriously and with some detail and care proposed this line of argument(6).

On closer examination, however, it becomes clear that the line of argument that we have been presenting here, and that is presented in the submission of the British Catholic Bishops' Joint Committee, is not rejected in the Perth Document, but simply misunderstood and by-passed. What is in fact rejected, quite rightly, is

> the suggestion that the child born of IVF is a "product" rather than a "baby"(7).

The misunderstanding consists in assuming that this is a "distinction that has been invoked by some critics of IVF"(8). The Document is, probably unwittingly, in full agreement with these critics when it asserts that

> we believe it to be highly tendentious and unnecessarily provocative to speak of IVF babies in any sense of the word as "products"(9).

But it would have to agree that if it is wrong to **speak** of the babies as products it would be even worse to **treat** them as products. The latter, of course, is what the British Bishops are objecting to, and what they find in the IVF programme. The Document does not address itself at all to this point. It is like the man who did not object to racists who treat migrants like second-class citizens, but complained about my language when I said that some Australian's treat migrants like second-class citizens.

The misunderstanding is the same as that of those critics of Pope John Paul's well-publicised statement of October 8th, 1980, on the grounds that he was speaking of a man's wife as a sex-object, when what he said was that it was wrong for a man to **treat** his wife as a sex-object:

> Man can commit this adultery "in the heart" also with regard to his own wife, if he treats her only as an object to satisfy instinct(10).

What the British Bishop's Committee said was:

> We are very conscious that the childless parents of the IVF child **want a child**, and that the child conceived is not **in fact**, in relation to the human race, a mere object or product . . . To choose to have a child by IVF is to choose to have a child as the product of a making(11).

There insistence on the duty of everyone to treat the child, once conceived, as more than a product, despite the fact that the child was treated as a product in its origin, is quite parallel to their earlier insistence

> that children have a right to be born the true child of a married couple, and thus to have an unimpaired sense of identity(12)

while also insisting that

> if a child is conceived out of wedlock, it has the right to life and thus the right to be brought up in the nearest approximation to the normal conditions of legitimacy, whether by subsequent adoption, or by making the best of a "one-parent family"(13).

This misunderstanding in section 13 of the Perth Document is not corrected later in section 27, where the humaneness of sexual intercourse is neglected to such an extent that the assertion is made that "the human and emotional contexts are the same" in IVF and in natural reproduction(14).

The Document also asserts that:

> In both natural reproduction and in IVF it is from the union of the natural gametes that the embryo is formed. It is the biological context rather than the substance of the process that is varied in IVF(15).

As well as the odd concept of what is biological, on which we have already commented, this statement is remarkable for assuming, without any further argument, that sexual intercourse is not part of the "substance" of the process of reproduction in human beings. This assumption seems to imply a dualist, or even an angelic view of human nature, such as the Church has always strongly opposed. It is not a sound basis for the formation of a Catholic attitude.

3. **Is Artificiality Objectionable?**

Artificiality is discussed at length in the document and we referred to it earlier in our section entitled "The relevance of Naturalness".

The Perth Document says that

> the mere fact that a process is artificial does not, of course, thereby render it morally questionable or unacceptable(16).

It nevertheless suggests, by the length of the discussion, that artificiality might be a serious factor in moral issues. It suggests this also by using the misleading term "artificial contraceptives" and bringing it into this discussion.

There is probably a simple semantic ambiguity behind this confusion. The Church commends natural processes and approves of natural family planning. The word "artificial" is often contrasted with "natural" and so a feeling arises that what is artificial is not altogether acceptable. Of course, "artificial" is not the only notion that can be distinguished from "natural". Natural processes can be "suppressed" or disrupted and this opposition may be morally significant. The heart, kidney and liver transplants that are referred to here are clearly artificial, but also just as clearly not suppressive of natural functions, and even the "removal of diseased and pathological organs" is morally acceptable precisely because the disease has already disrupted the natural physiology and so the decision to remove the organ is not itself the cause of the suppression of a function. On the other hand contraception has been condemned by the Church in terms that indicate the suppression of a natural function. Only the most superficial accounts of Church teaching on this matter have referred to artificiality, and these references are much commoner among opponents of the Church's teaching than amongst those who accept it.

Similarly, in IVF, it is not artificiality that we should be examining, but suppression. Because the Perth Document has not explicitly noted this, it is able to assume that the suppression of marital intercourse from the generation of an IVF child is morally irrelevant, even while explicitly mentioning this suppression.

The British Bishops' Committee mention this suppression:

> the IVF child is also deprived of an essential aspect of the **identity** or self-understanding of other children who can (in effect) say of themselves: "I had my origin in a single act, an act of love or friendship or mutual involvement and commitment, an act **equally of each of my parents**, and of them alone; an act by which they submitted themselves to each other and to the source of human life"(17)

and they place this deprivation, and not any artificiality, at the centre of their moral assessment of the procedure:

> What is of immediate moral significance about the severance of procreation from sexual intercourse is, therefore, neither the physical separation, nor the physical/biological abnormality and the artificiality, precisely as such. What is directly relevant is rather the fact that the procreation can no longer be said to be radically dependent on an act of intercourse between the spouses(18).

They stress these very human and important elements in the origin of a child that are not conceded to the IVF child:

> Thus the IVF child comes into existence, not as a gift supervening on an act expressive of marital union, and so not in the manner of a new partner in the common life so vividly expressed by that act, but rather in the manner of a product of a making (and indeed, typically, as the end-product of a procress managed and carried out by persons other than his parents)(19).

The Perth Document, on the other hand, concentrates on artificiality throughout and suggests that it has been a factor in some moral decisions by the Church.

> Whereas artificial clinical interventions in other fields are readily acceptable, interventions in this area of reproduction and embryonic human development are subject to much more restrictive monitoring. Hence the strictures of Pope Pius XII concerning the legitimacy of artificial insemination, and those of Paul VI in the very controverted field of artificial contraception(20).

We submit that this strained interpretation of the mind of the Church does not fit in with the sources, whereas reference to a principle opposing the suppression of natural powers or functions does so quite easily. Pius XII explicitly accepted the artificiality of the means used for artificial insemination by a husband but he set conditions on this procedure that are clearly concerned with avoiding disruption of the human process, or suppression of some important aspects of intercourse:

> Artificial fecundation . . . must be absolutely rejected. In speaking thus, one is not necessarily forbidding the use of certain artificial means destined solely to facilitate the natural act, or to enable the natural act, normally performed, to achieve its end(21).

Similarly, when the Church teaches that "each and every marriage act must remain open to the transmission of life"(22) it is not referring to artificiality but to suppression of openness. And this approach is constantly followed in the same document:

> To use this divine gift destroying, even if only partially, its meaning and its purpose is to contradict the nature both of man and woman and of their most intimate relationship and therefore it is to contradict also the plan of God and his will(23).
>
> Similarly excluded is every action which . . . proposes, whether as an end or as a means, to render procreation impossible(24).
>
> Condemning, as being always illicit, the use of means directly contrary to fecundation(25).

It seems clear that reference to artificiality and taking it as somehow frowned on as though condemned by approval of what is natural is not only a misinterpretation of the mind and teaching of the Church, but also a diversion from what the Church does consider morally important, the suppression of natural powers or functions. In this case the powers are especially important as they are connected with interpersonal relationships and even the very origin of persons.

The teaching on contraception is thus opposition to the suppression of the procreative function and meaning of the expression of sexual love. In the light of this understanding contraception is the destruction or derangement of otherwise healthy reproductive organs and systems.

That destruction or derangement is especially revelant to the spiritual significance of a couple's openness to the generation of new life and the value attached to the co-creative role played. The contraceptive premise is in essence opposed to the generation of new life. That premise has theological significance in being a refusal to accept the divine gift to conjugality of procreativity, in the openness of a couple's relationship to its extension to include a new person, an embodiment of the love expressed. The premise has philosophical significance in being a devaluing of procreative capacity and by implication a devaluing of human life.

The conjugal bond is a union of bodies as well as of souls. "The two become one body"(26). Consistent with the teaching of Christ and the Church on

marriage is a rejection of artificial fecundation. In this the unity of conjugality and procreativity is fragmented in such a way that the origins of the new lives are not integral to the union of their parents. Through the displacement of conjugality as the source of the new life the child of artificial fecundation is not an extension or an embodiment of its parents' relationship with the inherent retention of equality involved in being thus, but is more a product, an object of artifice and hence is denied the status of being an equal third party to the relationship of the parents. Thus what is unacceptable in IVF is not so much what has been added but what is lacking. The nature of the procedure denies the new individual status as a moral equal.

This facet is made even more evident in the actual practice of IVF in which the goal of producing a child justifies the making of more embryos than can survive, experimental freezing, and greater fragmenting of parent child relationships through the donation of gametes.

Having allowed the child to be produced as an object of artifice rather than as a consequence, extension and embodiment of an expression of conjugal love, the IVF procedure denies a fundamental respect for this child as a moral equal, and the breaking of that principle admits the extended possibilities for further exploitation.

4. **Protection of Embryonic Life in Catholic Tradition**

The British Medical Journal, in an editorial last year, praised the historical reflections of Professor G. R. Dunstan, emeritus professor of moral and social theology at the University of London(27). Professor Dunstan writes:

> the claim to absolute protection for the human embryo 'from the beginning' is a novelty in the Western, Christian and specifically Roman Catholic moral traditions. It is virtually a creation of the later nineteenth century, a little over a century ago; and that is a novelty indeed as traditions go(28).

Statements of this kind have been used to debunk the Church's teaching that each human life is to be protected from its very beginning. The suggestion is that there is no traditional or theological basis for such teaching, which is then portrayed as a modern invention. Frequent reference is made to the mediaeval scholar St Thomas Aquinas whose writings underlie so much of modern Catholic thought on theological questions.

In fact the substance of such claims depends upon the embryological ignorance of mediaeval times, and the respect that theologians had for the scientific teachings of their contemporaries. Reminders of that in no way undermine the traditional basis of current Church teaching.

The ancient and mediaeval view that the embryo did not become human until some weeks after conception was based on contemporary science which we now know to have been quite erroneous but which was nevertheless extremely plausible.

Spontaneous generation of living things from corrupt matter was accepted as a well-known fact — for which the easily observable origin of blowflies from carcases seemed to be obvious evidence — and even in the nineteenth century Pasteur had trouble in convincing people that such an interpretation was faulty. The philosopher could not, then, assume that the beginning of an animal's life was itself something living.

St Thomas himself makes the connection quite explicitly:

> And thus in man, as in the other animals, the final substantial form comes about through many comings-into-being and dissolutions. This is apparent in the case of animals brought into being by the process of putrefaction.(28a).

Even more important was the common knowledge that menstrual blood was retained after conception — with the seemingly obvious implication that each baby grew from a mixture of seminal fluid and menstrual blood. And these were, reasonably, not considered as having any life in themselves — they were just waste materials, which like leaf-mould, had to lie decaying for days or weeks before any growth could occur in them.

St Thomas, who gives many references to Aristotle's long discussions of these matters, makes an application of it thus:

> It is required of a mother that she furnish . . . the matter, which is menstrual blood . . . So it is to be held that in the actual conception of Christ, the blessed Virgin did not actively effect anything in the conceiving, but ministered the matter only(28b).

Elizabeth Gasking(29) has shown convincingly how that common-sense view was completely demolished by Thomas Harvey in the study of generation he made after discovering the circulation of the blood. Harvey proved, by a series of dissections of pregnant deer, that there was nothing at all in the womb comparable to what was supposed by the common view. So, although he failed to find the fertilized ovum, he helped us forget the views that had been common until then, and that had constrained the mediaeval philosophers.

The basis for that theory of delayed animation was the common but erroneous scientific view that human life had to start from an unformed mass of material, supported by the belief in spontaneous generation and by complete ignorance, not only of the ovum but even of the cellular theory. All three of these were remedied in the nineteenth century. One would have expected the British Medical Journal, and even a London moralist, to have preferred moral assessment based on modern scientific knowledge to speculations made in the age of scientific error.

In the light of this, Joseph Donceel's remark that St Thomas "knew very well that the early embryo was not yet a fully organized human body"(30) is a magnificent understatement. Thomas simply did not know that there was any organization at all. In the circumstances it was reasonable for him to accept the view that there was a series of corruptions and generations during pregnancy. Today there is no serious basis, whether scientific or philosophical, for that view.

The principles which have always been a part of Christian tradition can now be applied to the new embryological evidence. We now know that an individual human being exists from the moment of fertilization. This point is developed more fully in the next section.

5. **The Problem of Identical Twinning**

Frequently in the public discussion of IVF the fact that the early human embryo, prior to differentiation, is capable of dividing to form two identical twins is mentioned as a challenge to the Catholic view that the embryo is a human individual from the moment of fertilization.

Sometimes this is voiced as a theological argument based on the indivisibility of the soul. "If the embryo has an indivisibly human soul", it is asked, "How can it be that it divides to form two souls?" Professor Glanville Williams puts it thus:

> Using the language of the soul, either you must say that the quins owed their origin to a fertilized ovum inhabited by five souls, or you must say that the single soul in the fertilized ovum subsequently divided into five souls(31).

and he adds with an engaging obscurantism

> Would it not be more sensible, from every point of view, to agree that the question must not be considered at least within the first two weeks of fertilization?

To deal with this problem it is worth examining what actually occurs in the process of fertilization and early human development.

The successful fertilization of a human egg with a human sperm produces a progenitor human cell. That is, it produces a unique cell which has the power to organize its multiplication and differentiation in a way which ordinarily leads to a human adult, without requiring any action from outside other than the availability of nourishment and the provision of a favourable environment.

Thus what happens in the process of fertilization is that the genetic material which is contained in a woman's egg is combined with the genetic material from her partner's sperm to form a new cell which is different from the cells of both parents but containing parts which are similar to parts of the parents' cells.

For a time that cell develops by producing copies of itself so that a mass or ball of cells forms. At a later stage those cells begin to form organs and to take on the character of the cells of particular organs. Thus liver cells differ from brain cells, kidney cells and skin cells, and so on, although they all retain the same genetic structure of the original undifferentiated cells.

This fusing of material from two parents of opposite sex and the subsequent development of the new individual through multiplication and differentiation is the ordinary pattern of sexual reproduction.

There are, however, some exceptions. The most common exception is that of identical twinning. Identical twinning occurs when the original cell multiplies in the normal way to produce a cluster or mass of cells, but this then divides, before the cells start to form organs, to form two clusters of cells. Each cluster then develops to form an individual. The individuals thus formed are genetically the same but, of course, their development then occurs in parallel but independently of each other.

Identical twinning is thus initially sexual reproduction in the formation of the original cell; the development of the second individual, however, might be described as a form of asexual reproduction.

A second form of asexual reproduction which has never been known to occur in humans but might be possible, is the form of reproduction commonly known as cloning.

Cloning might occur in a number of ways. Firstly, it might be possible to take a cell from an adult human person and so treat it to cause it to start behaving like an embryonic cell, thus to cause it to start multiplying and differentiating. Secondly, it might be possible to take an egg from a woman, remove the nucleus from the egg and put in its place the nucleus from a cell from an adult human person. Thirdly, the latter process might be done using an already fertilized egg, that is, an embryo.

In each of these cases, it is assumed that if the procedure were successful then the new individual formed would be like an identical twin of the person from whom the cell was removed, except, of course, the new individual would be of a different age.

Another form of reproduction which has never occurred in humans but might be done, would be to take two eggs from a woman or an egg from each of two women and to combine the two eggs to form a single embryonic cell. Thus we might be able to reproduce women from women without the involvement of men or male genetic material at all: perhaps the ultimate in women's liberation.

Finally, to extend the scientific possibilities to their limit, it might be possible to artificially construct an embryonic human cell from the biological and chemical material that is its make-up.

All these possibilities may sound increasingly far-fetched, but so did IVF when Aldous Huxley wrote of it only thirty seven years ago.

A final possibility which is claimed to have occurred is that of the fusion of two different embryonic cells to form one embryonic cell.

At this point it would be useful to introduce three different categories of individuality(32).

Firstly, we can talk of genetic individuality or uniqueness. Each of us here has a different genetic makeup, we are genetically different from every other person. However, this is not so for identical twins who, as we have seen, are genetically the same, nor would it be true of a person who is a clone or who has been cloned.

Secondly, we can speak of organic individuality. Organic individuality occurs when an entity exists who or which functions independently of others. Thus with identical twinning, when the cluster of cells has divided to form two distinct clusters we can speak of them as having organic individuality or uniqueness, from then on their lives operate independently of each other and one may even die without disturbing the development of the other.

In humans, the only time when organic individuality might be confused would be with Siamese twins who share vital organs. However, even then, given separate nervous systems and brain functions, one could probably affirm organic individuality of each of them.

Given that an embryonic cell develops as a unit only needing the provision of a favourable environment, we can ascribe to it organic individuality. That it may reproduce asexually to form identical twins is no more of a problem for organic individuality than ordinarily occurs when two people reproduce sexually. In the latter case two organic individuals give some genetic material to form a third organic individual. In twinning, one organic individual gives some genetic material to form a second organic individual.

A third form of individuality would be personal or spiritual individuality. Of an ordinary adult person we can readily assert personal or spiritual individuality.

Whether or not we can ascribe personal individuality to an embryo is part of the question about which there seems to be so much difficulty.

The difficulty arises in the difference between personal individuality being expressed as **personality**, and personal individuality expressed as **personhood**(33).

Which of these one is inclined to use will depend on which is considered morally relevant. Moral relevance in turn is determined by the kind of moral theory being applied.

Personal individuality expressed as **personality** will be described in terms of the function and capabilities an individual actually has, such as the ability to feel pain, the ability to reason, to choose, decide, doubt, love, etc. These are all expressions of personality.

Personal individuality expressed as **personhood** will be described in terms of the subject who is capable of having personality.

To summarize the claims made so far, the human embryo may divide to form more than one individual and thus may or may not have genetic individuality, for if the original cluster of cells has divided then two or more embryos exist which are genetically the same.

However, both before and after twinning the embryo has organic individuality, just as the organic individuality of parents is preserved through sexual reproduction. Twinning and cloning are merely asexual variations to the normal sexual means of reproducing another organic individual or other organic individuals.

Personal individuality can be expressed either as personality or personhood. The choice of which word to use is determined by the choice of moral theory to be applied.

Human embryos are organic individuals which need development to have personality. Thus they do not at that stage have personal individuality expressed as personality although the biological determinants of personality are present. However, they do have personal individuality expressed as personhood for it is only a matter of time before the organic individuals develop personality. In that sense thay are individuals which are capable of having personality.

Expressed in that way human embryos from the moment an organic individual is formed at fertilization belong to the category of personal individuals defined in terms of having the capacity to express or experience personality. Barring mishaps they are the organic individuals who will later experience and express personality, who will love, desire, choose, decide, doubt, reason, etc.

Now the question to be answered is, is it personality, the actual experiencing of cognitive states, or is it personhood, being a subject who has the capacity to have personality, which is important or morally relevant?

The strength of Christian tradition in its upholding of the sanctity of human life and in its protection of each human individual from its beginning supports the notion of personal individuality defined here in terms of personhood. We are valued because we are the kind of beings who have the capacity to desire, choose, affirm, love, etc. We do not lose our status simply because some of these things at a particular moment are not actually experienced or expressed.

Having developed this explanation of the continuity of individuality we can tackle the question of the indivisibility of the soul. If body and soul are understood in such a way that the body is the material manifestation of the soul then we can attribute the organic and personal individuality of the embryo to the organization due to the soul.

In identical twinning genetic individuality or uniqueness is not preserved but there would seem to be no difficulty in holding that with the formation of the second individual a new soul comes into existence as the organizational 'essence' of its organic and personal individuality. The type of the new organization is derived from the organization of the first embryo, just as the type of organization of any normal embryo is derived from its parents, but there has been no 'soul-splitting'. The original organic and personal individual, and hence its soul, continues as before. The indivisibility of the soul is retained, as well as the permanent distinctiveness of the soul of each organic individual.

To establish this point more simply, it is scientifically possible to clone any adult human person. The fact that a person may be or has been cloned does not alter their status as an individual person, although it may affect their genetic uniqueness or individuality. In addition there would seem to be nothing which would support the claim that cloning involves 'soul-splitting'. A new person as soul and body comes into existence by asexual means. There is no more mystery in that than there is in normal sexual reproduction. Identical twinning and cloning in that respect are alike.

6. **The Unacceptability of IVF Embryo Loss Rates**

The death rate of embryos in IVF and embryo transfer is currently about ninety-six per cent(34). Catholics have expressed concern about this high loss rate.

Attempts to reject the validity of this concern are sometimes made by claiming there is a high natural loss rate of embryos fertilized normally through sexual intercourse. Estimates of the natural loss rate have been as high as eighty per cent although there is little scientific evidence to support this figure(35).

Indeed, a recent study published in the Lancet put the normal natural loss rate at around 8%(36).

As a counter to the concern about IVF loss rates, sometimes an example of a woman who has a diseased uterus is used, in which she is able to conceive but the embryo is not generally able to implant in the uterus. She would have a very high embryo loss rate from normal sexual intercourse. If IVF loss rates are relevant, it is argued, then so would the loss rate of the woman of the example be relevant. Should she be prohibited from having sexual intercourse during fertile periods?

The answer to this challenge lies in the proper formulation of the original concern. The concern about the loss rates is for the extent to which embryos are deliberately destroyed or deliberately placed in unnecessary circumstances of risk. It would not normally be the wish of the woman with the diseased uterus that her embryo should die, although she is unable to prevent its death.

However, in the current practice of IVF the high embryo loss rate is at least partly attributable to the multiple production of embryos and the use of ovarian stimulants.

In the effort to have one embryo survive more embryos are produced than can survive if transferred and some embryos are treated as 'spare'. The use of ovarian stimulants to produce a large quantity of eggs also affects the lining of the uterus in such a way as to reduce the chances of implantation. Pregnancy is more likely to occur in a non-stimulated cycle(37).

The concern for embryo loss in IVF is thus for the likelihood of the loss of embryos being attributed to the deliberate actions of those involved where a careless attitude towards the protected status of each human individual prevails.

The production of multiple embryos in order to achieve a higher pregnancy rate but with the consequent greater risks to each individual embryo formed is not acceptable.

T. V. Daly, S.J.
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NOTES

(1) See for instance pp 36-41 of *The Reproductive Revolution* by Peter Singer and Deane Wells, Oxford University Press, Oxford, 1984.
(2) *Response of the Diocesan Bioethics Committee of the Roman Catholic Archdiocese of Perth to the Interim Report of the In Vitro Fertilization Ethics Committee of Western Australia*, Section 11.
(3) Ibid. Section 28.
(4) Ibid. Section 27.
(5) Ibid. Section 13.

(6) *In Vitro Fertilization: Morality and Public Policy,* Evidence submitted to the Warnock Committee by the Catholic Bishops' Joint Committee in Great Britain, 1983, Sections 16-28.
(7) Perth *Response* cited at 2, Section 13.
(8) Ibid.
(9) Ibid.
(10) John Paul II, *Blessed are the Pure of Heart,* Boston, 1983, St Paul Editions, p 145.
(11) Catholic Bishops' Joint Committee, Op Cit, Section 25.
(12) Ibid. Section 17.
(13) Ibid.
(14) Perth *Response* cited at 2, Section 27.
(15) Ibid.
(16) Ibid.
(17) Catholic Bishops' Joint Committee, Op Cit, Section 25.
(18) Ibid. Section 24.
(19) Ibid.
(20) Perth *Response* cited at 2, Section 11 (Cf Sections 4, 10, 27).
(21) *AAS,* 1949, 560, quoted with discussion by L. P. Fitzgerald in an address entitled "In Vitro Fertilization and Catholic Moral Teaching" published in the *Proceedings of the 1984 Annual Conference on Bioethics,* edited by D. N. Santamaria and Nicholas Tonti-Filippini, St Vincent's Bioethics Centre, p 130-2.
(22) *Humanae Vitae*, p 11.
(23) Ibid. p 13.
(24) Ibid. p 14.
(25) Ibid. p 16.
(26) Matthew 19.5.
(27) *British Medical Journal*, 289, 28 July 1984, p 207-8. Editorial.
(28) Professor C. R. Dunstan, *Journal of Medical Ethics,* 1984, 1, pp 38-44.
(28a) St Thomas Aquinas, *Summa Theologiae,* I q 118 a 2 ad 2, Blackfriars edition 1970, Volume 15, translated by M. J. Charlesworth.
(28b) St Thomas Aquinas, *Summa Theologiae,* III q 32, a 4, Blackfriars edition 1971, Volume 52, pp 53, 55, translated by Roland Potter OP.
(29) Elizabeth Gasking, *Investigations into Generation* 1651-1828, London, 1963 Hutchinson, Ch 2, especially pp 21-2.
(30) Joseph F. Donceel, "Immediate Animation and Delayed Hominization", *Theological Studies*, 31(1970) pp 76-105, at p 83. Cf p 80.
(31) Letter to *The Times*, April 13 1983, p 11.
(32) We are indebted to Prof Teresa Iglesias of the Linacre Centre, London, for these categories.
(33) We are indebted to Rev Dr Francis Harman, Melbourne, for this distinction.
(34) *Interm Report* of the Victorian State Government Committee Enquiring into the Social Ethical and Legal Aspects of In Vitro Fertilization and Embryo Transfer, September 1982.
(35) J. J. Billings, "The Technology of IVF and its Possible Extensions", in a submission to the Victorian Committee to Examine In Vitro Fertilization from St Vincent's Bioethics Centre, July 1982.
(36) Wittaker, P. G. et al "Unexpected Pregnancy Loss in Healthy Women", Lancet 1983, No 1, pp 1126-7.
(37) *Report on the Disposition of Embryos in In Vitro Fertilization and Embryo Transfer,* IVF Committee, State Government of Victoria, August 1984, p 12.

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