

were tackled intelligently two weeks ago by the Supreme Court of Tennessee. This is how the argument goes. If the genetic parents of frozen embryos wish that one or more should be implanted in the uterus of the woman, physicians and medical ethicists see no problem. After all, the *in vitro* fertilization was presumably undertaken to help the parents give birth to a child. But what if one of the genetic parents dies, leaving fertilized gametes unused? Or what if a couple divorce and cannot agree on the disposition of their potential progeny? That is what happened in the case of Junior Lewis Davis and Mary Sue Davis (now Mary Sue Stowe), whose contentious divorce included a dispute about the disposal of seven frozen embryos the couple had created in happier times.

Mary Sue Stowe, no longer wishing to have Junior Davis's child, wants to donate the embryos anonymously to an infertile couple. Junior Davis, arguing that he does not wish to be the anonymous father of someone else's child, would like to see the embryos discarded. On 1 June, Justice Marth Craig Daughtrey of the Supreme Court of Tennessee issued a Solomon-like decision in the case, which had been heard previously in two lower state courts. Her opinion, which is an extraordinarily lucid exposition of the issues, hangs on a person's right to privacy as implied, in her reading, by both the US and state constitutions. The court ruled that Junior Davis has a right not to become a parent against his will.

The most interesting feature of the decision is the reasoning behind the court's conclusion that a frozen embryo at the four-to-eight cell stage is legally a "preembryo", not an embryo at all. "[S]emantical distinctions are significant in this context", Justice Daughtrey wrote, "because language defines legal status and can limit legal rights." In defining a preembryo, the court relied on scientific data regarding fertilization and development in a 1990 report of the American Fertility Society, *Ethical Considerations of the New Reproductive Technologies*.

The society, represented in the proceedings *amicus curiae*, said of the embryo after three divisions that: "Each blastomere, if separated from the others, has the potential to develop into a complete adult. Stated another way, at the 8-cell stage, the developmental singleness of one person has not been established." As cell division continues, the outer and inner cells of the developing organism become increasingly different, particularly as the outer cells of the blastocyst implant into the uterine wall. "Thus, the first cellular differentiation of the new generation relates to physiological interaction with the mother, rather than the establishment of the embryo itself."

In accepting this description of the beginning of life, the Tennessee court explicitly rejected a lower court ruling, based on the testimony of French geneticist Jerome Lejeune that "life begins at the moment of conception" and that four-to-eight cell entities are "tiny persons" and thus his "kin". By defining a preembryo as it did, the Tennessee Supreme Court rejected both the proposition that a frozen embryo is a person, with full legal rights, and that an embryo is simply property that can be divided like pieces of silver, but said,

instead, that preembryos "occupy an interim category that entitles them to special respect because of their potential for human life."

Recognizing both that the Davis case is probably without precedent and that *in vitro* fertilization is a growing enterprise, the court also went beyond the strict legal limits of the case to offer advice in other ethically difficult areas. Thus it extended the definition of parenthood to include genetic parenthood (thereby honouring Junior Davis's privacy right not to become a father) and also stated that a preembryo is not entitled to protection under laws embodying a state's legitimate interest in protecting life. There are also valuable practical suggestions; men and women undertaking *in vitro* fertilization should carefully consider the disposal of unwanted preembryos before the procedure, and then bind themselves to donate or discard the embryos or contribute them to research. The genetic parents, who enjoy the rights, must accept the responsibility.

By weighing the issues as thoroughly as it has done, the Tennessee Supreme Court has done a service to physicians, researchers and potential parents. It is to be hoped that its arguments will be widely accepted. Perhaps the most valuable outcome of the decision would be a general understanding, among those who oppose contraception in particular, that the definition of life is not as simple as it is sometimes made to seem. □

Mrs Brundtland's wish

The prime minister of Norway, having popularized sustainable development, now wants world government.

Mrs Gro Harlem Brundtland, who appeared at Harvard University's commencement ceremonies on 4 June straight from a red-eye flight from Rio de Janeiro, is an admirable and admirably forceful woman. Like many others, she wants to make the world a better, even a much better, place. She has won a great deal of what she wants already: the current conference at Rio is happening partly because of the urging of the international commission of which she is a member, for example. She explained last week her disappointment that the conference will say nothing about population growth, which will be widely shared.

But there is also a sense in which Brundtland is asking for the Moon. Last week she argued cogently that the Gulf War was an example of supranational action against an aggressor. She went on, correctly, to argue that many problems in development and environment are supranational, but then went on to conclude that their solution requires a measure of world government. That, too, is a widely shared ambition, but is it attainable in the short term? The difficulties of creating a European government (see above) have given pause to the European enterprise: can it be in the best interests of development and the environment that their amelioration should wait on world government? Do not the recent successes in arms control suggest that urgent hatchets can be buried without waiting for the abolition of sovereignty? □