

Reproductive issues in 2026 will go back to 1986

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As we move into our new century from the 20th century's reproductive landmarks for women – effective contraception; IVF for treating infertility and preventing the transmission of familial genetic disease; and personal autonomy for women in the early stages of pregnancy – the divide between reproduction and sex continues to widen. Issues of impregnation, sexual intimacy and personal vulnerability in defining close human relationships into the 21st century are discussed elsewhere ⁽¹⁾. Here I focus on the differences of moral perception and faith-based beliefs that controversially still publicly govern life at conception.

It is now 20 years since Senator Brian Harradine (Ind Tasmania, and sometime Chair of the Parliamentary Pro-Life Group) introduced to the Senate the Human Embryo Experimentation Bill 1985 to ban IVF research and then sat on the Senate Select Committee that inquired into the matter across Australia during 1986 under the chairmanship of Senator Michael Tate (later ordained a Roman Catholic priest). The Bill was eventually rejected by the Hawke Government, but Senator Harradine's conservative legacy has found persistent expression through amendments he brought to the National Health and Medical Research Act 1993.

In 2006, as it was in 1986, the strenuous and frequently dubious moral debate on the status of unborn human life is being fought over the preimplantation embryo, particularly the embryo in vitro. Whether this will still be so in another 20 years, and how governments adapt to conflicting beliefs in a multicultural society, remains for now the most basic and important issue facing the progress of reproductive biology and medicine in Australia.

Imaging and imagination

Most people today accept that, to a greater or lesser extent, the unborn fetus by the time of birth deserves protection beyond that which the mother alone can or might provide. Historically, this right was developed by Aristotle, thence by descent through the Arab philosopher-physicians to medieval Christendom and to the modern world ⁽²⁾. Its essence was that the protection due to the human embryo grows in concert with its development towards maturity, or birth, by which stage feticide is equated with homicide. This was brought home again when, in the late middle ages, improving health and hygiene brought more predictable survival of the newborn into childhood ⁽³⁾.

Up to the mid- to late 19th century, Christians, including those following the Roman Catholic tradition, believed that the embryo was not ensouled until well after conception. Indeed it was becoming more widely held that until quickening, or the woman's sensation of movements, abortion was permissible, and after a permissive 18th century Britain tightened laws against abortion at the start of the 19th. It still came as a break with the past when, in 1869, Pius IX in the papal bull *Apostolicae Sedis* dropped all reference to the ensouled fetus and

moved the dividing line to the moment of conception ⁽⁴⁾. And there, for religious conservatives, it remains today.

Meanwhile, modern technology and imaging have allowed confident ultrasound and Doppler-based pictures and sounds of apparently viable fetuses or embryos to be recorded well back from the experience of quickening, to just a week or two from the missed period. The early excitement of the potential baby combines naturally with the anxious anticipation of today's woman who is increasingly likely to have postponed trying to get pregnant until her mid- to late 30s, close to the end of her naturally fertile life. In the last quarter of the 20th century, IVF has brought the preimplantation embryo into sharp focus.

The modern personification of the fetus and embryo – prematurely identifying it earlier and earlier in pregnancy with its less and less likely best-case potential for reproductive hope, the baby – is understandable. Figure 1 reveals a woman's excited personification of the developing eggs in her ovaries during IVF treatment. But biologically ... numerically ... this anthropomorphism is misleading.



Figure 1. Personification of the future child extending back beyond the moment of conception, prior even to conception, a view more consistent with humanist continuity of intended life than with the conservative Catholic traditions that date from 1869 and ensoulment from conception. Source: Ref. ⁽⁵⁾.

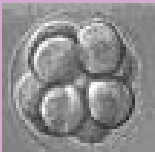





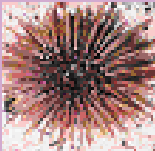


The purpose of embryos in Nature

That reproducing adults come from embryos or fertilised eggs is the factual foundation both for humanistic and for Catholic philosophy. But that is where today, as society debates the use of embryos for producing embryonic stem cells and medical scientists seek to develop embryos and stem cells from nuclear transfer, sympathy between the two opposing views of life from conception ends and the political battle for hearts, minds and public practice once again intensifies.

The Catholic church's moral position – articulated also by some non-Catholic fundamentalists – is that no fetus, implanted embryo or fertilized egg, whether normal or abnormal, may be deprived of any further potential it has to develop. IVF results in more preimplantation embryos than can responsibly be implanted, therefore IVF is immoral, and (in orthodox, undiluted form unaffected by pastoral tolerance or political reality) must not be practised ⁽⁶⁾. The emphasis is on the

sanctity of the embryo from conception and this rules over other considerations, such as IVF's potential for relieving personal suffering and creating children for the infertile.

The humanist and more liberal Christian view – as well as the position of the other major religions, Judaism, Islam, Buddhism and Hinduism – holds that embryos are a means to a valuable and sought after end: the formation of families with healthy children able in due course to have children of their own. Preserving Aristotle's gradualism, today the humanist's emphasis is on the autonomy of the reproducing couple and the decisions they may take to form a family responsibly. The sanctity of the developing embryo and fetus is accumulated in stages according to law, custom and personal belief, and this, as it was more universally before 1869, determines its need for protection. The respect and requirement for protection afforded an embryo in vitro is contingent on its potential for becoming a person, a potential that in turn may be influenced by the couple's circumstances and how the embryo has come about.

Sea urchin	Mouse	Human	Biological significance
 one hour	 one day	 three days	Cleavage stage embryos require the metabolic and genomic resources of the egg. In the human and mouse, these embryos float in uterine fluid. In the sea urchin, these embryos can float for months below the ice in the ocean. In each species the wastage rate is very high.
			Among animals with a coelomic (peritoneal) cavity, the blastocysts that form have more in common than different. The next major step is gastrulation, or the formation of the embryonic layers. In the sea urchin, gastrulation occurs in situ. In the human and mouse, the embryo must hatch and implant before gastrulation. In each species the wastage rate is still high (see Box 2).
			Major differences do not arise until well after gastrulation, after the development of the embryo proper. These are the reproducing "ends" to which embryos are the "means".

Box 1. In nature, embryos are the means to an important end in every species, but the cleavage-stage embryo can be induced to form without an egg's fertilization by a sperm: the egg has the metabolic and genomic resources to bring itself to this point with no contribution from the new diploid genome.

Since 1869 there has been no reconciling these positions. For many it is apparent or obvious that it is the humanist perspective that conforms best with the realities of nature (see Box 1 and Box 2). It is also plain that a high and increasing proportion of our multicultural community have this view (see Figure 2).

Do you approve or disapprove of the test-tube baby method or IVF programme for helping married couples who can't have children?

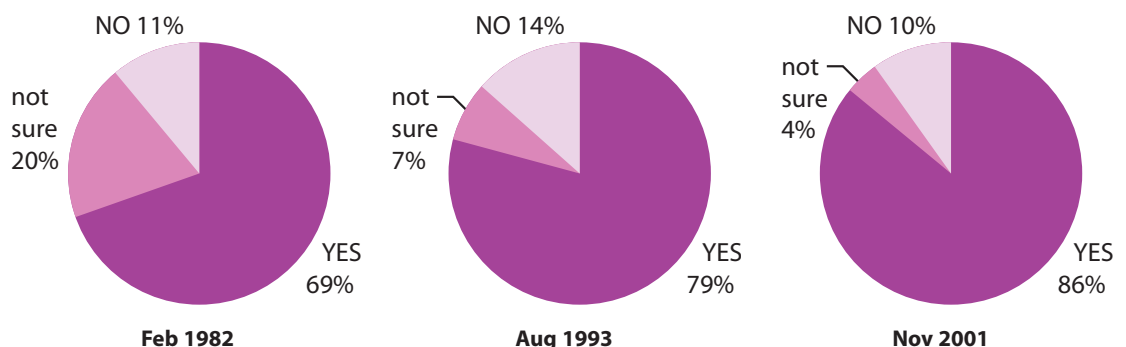


Figure 2. Australian's increasing acceptance of IVF, which leads to the creation of excess embryos. In 2002 a majority of Australians were also in favour of producing stem cells by nuclear transfer for the treatment of severe disease such as spinal cord injury. Source: Roy Morgan Research.

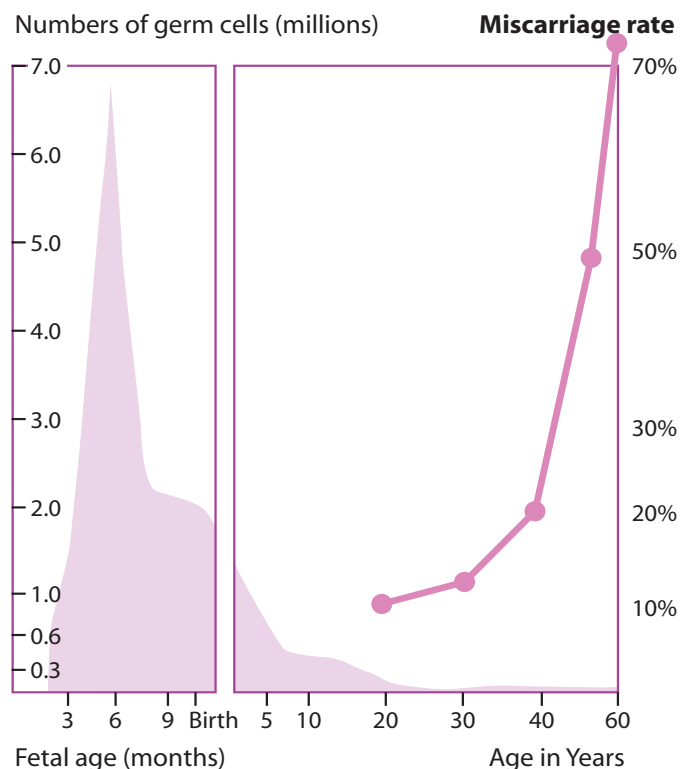
These realities can appear to have resulted in compromise. IVF is now a well accepted practice for avoiding infertility and avoiding familial genetic disease. And in a free society those who hold the traditional Catholic view may practise their beliefs according to their own morality, their own faith and their own personal beliefs. There is, however, a mission still to influence society more widely, and in an era where a family's excess IVF embryos can now be turned into stem cells that could benefit extant children, there are new challenges for the religious right to continue to influence public policy against the democratic odds and in spite of multiculturalism.

Embryonic stem cells

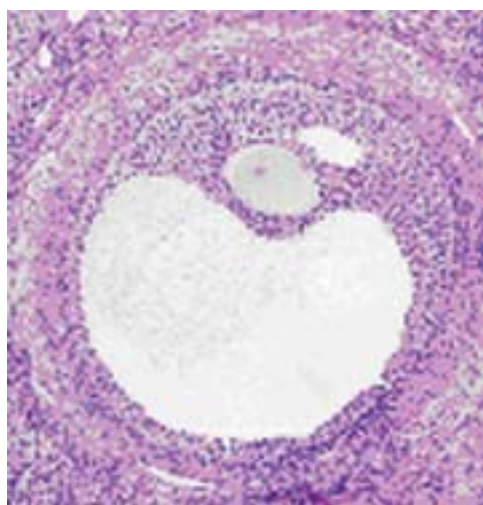
Embryonic stem (ES) cells are qualitatively capable of differentiating into all non-placental tissues and, quantitatively, are capable of infinite propagation while still in the undifferentiated, pluripotent state⁽⁷⁾. Their marked plasticity and their ability to divide put them in sharp contrast with 'adult' type stem cells, or (tissue) 'niche-occupying' stem cells, such as haemopoietic cells in umbilical cord blood. ES cells promise immense usefulness for treating presently untreatable degenerative disease and injuries, as well as for producing life-like in vitro bioassay systems for screening and developing drugs, including drugs active against rare but disastrous genetic diseases such as fragile X and Huntington's disease.

Present success rates for turning excess embryos at the blastocyst stage into stem cell lines approximate 50 per cent (Sydney IVF, unpublished). In Australia, four clinics are licensed to produce ES cells from excess embryos. Given stem cells' potential for helping seriously sick or injured children in the future, and the fact that there is an almost 1-in-4 chance of a perfect tissue match for an IVF embryo with each child in any particular family, a family's interests can be expected to focus increasingly on the preservation of excess embryos or stem cell lines derived from them to help cover future serious medical contingencies among the children in the family.

This development will raise concerns with religious conservatives, as it has for the Australian Health Ethics Committee, which has concluded that the number of embryos used to produce ES cell lines must be restricted [Ref.⁽⁸⁾ p.16] and that the generation of stem cell lines by nuclear transfer (although not yet proven to be possible in primates, including humans)^(9,10) will be unethical and must not be practised in Australia.



Box 2. A. In nature, human eggs (red) and human embryos (green) are both formed in numbers greatly exceeding the number that can become babies.



B. The ovarian follicle has two functions: to produce reproductively competent eggs and to produce health-requiring estrogen for mothers.

The importance of the latter, to maintain the health of the mother while, on average, she is likely to have dependent children, has caused the evolution of physiological sterility for up to a decade before menopause, during which follicles produce estrogen and eggs fertilize but do not produce viable pregnancies that could put her life at risk. These facts were not known in 1869. Nature evidently uses eggs and embryos as means to an end, the preservation of the family unit to ensure survival into the next generation.

SPECIALIST OBSTETRICIAN GYNAECOLOGIST – CONSULTANT Western Australia

A Specialist Obstetrician Gynaecologist Consultant is sought to provide obstetric and gynaecological care for the Peel Region. This is a consultant position working in association with Dr Bill Patton, specialist consultant, and five GP/obstetricians. Applicants must be eligible for Medical Registration with the Western Australia Medical Board and have medical indemnity coverage.

Peel Health Campus is a state-of-the-art facility and is located in the coastal city of Mandurah, centre of the Peel Region and only one hour's drive from central Perth. Peel Health Campus has a full range of comprehensive health services including an emergency department that sees in excess of 30,000 attendances per year. There are over 600 births per annum and the service is supported by a dedicated team of visiting specialist and GP/obstetricians.

The Peel Region is the fastest growing region in Australia and has the second highest population of the State's regions. Mandurah is the largest urban centre outside the Perth metropolitan area. New infrastructure includes an extension of the Kwinana Freeway from Perth through to Bunbury in Western Australia's South West and the Southern Suburbs Railway that will make Mandurah a 48-minute trip from the centre of Perth.

For an informal discussion about this position tel (08) 9531 8581 and speak to Mrs Ann Fletcher, Chief Executive, or call Dr Bill Patton on mob 0417 337 235.

**Peel Health Campus
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www.peelhc.com.au**

The issue for 2026: Faith-based morality or evidence-based ethics?

Unlike other principal committees of the NHMRC such as the Medical Research Committee, AHEC's determinations must not be altered by NHMRC⁽¹¹⁾ (an effect of Senator Harradine's requirements for passage of the National Health and Medical Research Act in 1993). In a recent public submission to the Lockhart Review of the 2002 Research Involving Human Embryos Act, AHEC advised the Inquiry – and for the first time articulated in public – that in deriving effectively mandatory moral prescriptions and proscriptions for Australian medical and scientific practice it will

In this way, AHEC has determined that deontological, or faith-based ethics should prevail over evidence of good or harm done under the imprimatur of the NHMRC, and that a tradition that dates from 1869 will prevail over:

- biological realities,
- the public's opinion as expressed in opinion polls,
- a 6:4 majority of the House of Representatives Standing Committee on Legal and Constitutional Affairs when referred the matter in 1999 by the then Health Minister, Dr Michael Wooldridge),

- the signalled intention at the United Nations of a majority of OECD countries, including Britain and New Zealand, as well as several other major trading partners, namely the U.S. and China with whom we have free trade agreements under negotiation, and
- the Lockhart Inquiry's findings and recommendations in favour of embryonic stem cell research including nuclear transfer⁽¹²⁾.

If the discovery of the telescope from the seventeenth century challenged the Church when Galileo and others trained it at the heavens and revealed no obvious locale for life after death, then today the microscope and molecular-level biological investigation are challenging faith-based beliefs in the realm of life before birth, as genetics and DNA are better understood, and the issue of the totipotency of stem cells provides frightening competition for classical constructs of human conception.

The reproductive issue for the next 20 years that will challenge us as practising obstetricians and gynaecologists is thus the extent to which politics will be permitted to enable proponents of the total sanctity of embryos to encroach our patients' reproductive autonomy in the corridors and committees that lie, largely invisible to the community, behind government and public life.

... (rely) on an argument of a deontological kind ... (and) that the preferred advice is that which reflects enduring ethical traditions of thought and belief and which has clear, if not overwhelming (sic), community support [Ref. (8) p 32, but see Figure 2].

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Update on the Schedule Pharmaceutical Benefits (Schedule) Distribution Process

Changes are currently underway to modernise the Pharmaceutical Benefits Scheme (PBS). The Pharmaceutical Benefits Branch of the Federal Department of Health and Ageing has recently announced they will no longer print or distribute the Schedule Pharmaceutical Benefits (Schedule) from late 2006.

The printed version of the Schedule Pharmaceutical Benefits (Schedule) will be available until August 2006 and the comprehensive user-friendly, online Schedule will be available from December 2006. Users of the Schedule will be able to view, download to CD and/or print out an up to date copy of the Schedule free of charge every month from the Department's website. Users of the Schedule will also have the option of purchasing a printed version or CD of the Schedule or the summary of changes. Fellows may subscribe to the email update services at www.health.gov.au/Pharmbiz