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ASSISTED HUMAN REPRODUCTION:
POSTHUMOUS USE OF GAMETES

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ABSTRACT

In the past posthumous reproduction has been primarily a result of accident or fate. More recently, the ability to freeze sperm and embryos (and the potential for use of stored ova) has lead to greater control over procreation and its timing in relation to the lives of parents. The technology associated with posthumous reproduction is now commonplace, but the application of these techniques represents a subtle shift of focus from the technical aspects to the arguably insidious acceptance of this development. This thesis critically reflects on both the ethical and legal considerations of posthumous use of sperm and particular implications in the New Zealand context.

Four cases are presented to illustrate the complexity of posthumous conception by assisted means: (1) the gamete provider stores sperm with the express intention of posthumous use by his partner; or (2) that the sperm not to be used posthumously; (3) storage of sperm is for other purposes prior to medical intervention, for example, cancer therapy; (4) the gamete provider makes no provision for storage of sperm but the opportunity for retrieval arises when the gamete provider is permanently unconscious or recently deceased.

A framework for discussion of the ethical issues in posthumous reproduction highlights the difficulty of measuring unknown or possible harms to the child-to-be and the limitations of reducing ethics to an individualistic consequentialist analysis. The moral weighting in this analysis is complex because of the tripartite relationships involved; the deceased father, the surviving mother, and the child. Ethical issues are embedded in a social and cultural context. These contextual features include the significance of the reproductive experience and views on mortality, the concept of family formation and relatedness of family members, the moral status of gametes in a context where their potentiality has been realised, and a bicultural approach to addressing these issues.

Existing legislation in New Zealand and applicable common law demonstrates that the law takes scant account of the more complex ethical issues that arise in posthumous reproduction. Gametes may be regarded as a form of property with the gamete provider having the control of their disposition during their lifetime but not after death. The rights
and intentions of the parents take precedence over any consideration of the child born posthumously. In the absence of specific legislative direction, posthumous reproduction would create some legal anomalies. The case of R v Human Fertilisation and Embryology Authority ex parte Blood [1997] 2 All ER 687 is discussed in the New Zealand context.

Recommendations for guidelines on this topic are made. Posthumous reproduction, as with other novel aspects of assisted human reproduction, would benefit from legislation to provide a framework for ethical debate and, where necessary, decision making.
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1. Introduction

In 1996 the issues surrounding posthumous reproduction were highlighted when the plight of Diane Blood was brought to the world’s attention. The Human Fertilisation and Embryology Authority initially refused Mrs Blood the opportunity to conceive by using her deceased husband’s stored semen. No written informed consent had been obtained from her husband prior to his sudden illness and subsequent death. The English Court of Appeal reversed the Authority’s decision by way of a technicality in the law allowing her to take the sperm overseas for treatment. Following her case Mrs Blood spoke to some school children and said (Blood, 1997, p.12):

What I ask is that when you debate the ethics of my situation, you ask not what you would want to do if you were in that situation, but whether or not you think we have the right to decide for ourselves.

As with other novel aspects of assisted human reproduction, the posthumous use of a partner’s sperm challenges the orthodoxy of how we view reproduction and its significance in our lives. Whereas in the past posthumous reproduction has been primarily a result of accident or fate, the ability to freeze sperm and embryos (and the potential for use of stored ova) can make posthumous reproduction a planned and anticipated event. There is now greater control over procreation and its timing in relation to the lives of parents. The technology associated with posthumous reproduction is now commonplace but the application of these techniques posthumously creates an additional dimension to assisted human reproduction. The purpose of this thesis is to explore the assumptions underlying Diane Blood’s plea for procreative liberty and to consider who has an interest in this situation and what those interests are. The thesis provides a framework for discussion of the ethical and legal aspects of posthumous reproduction in the New Zealand setting.

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1 R v Human Fertilisation and Embryology Authority ex parte Blood [1997] 2 All ER 687.
2 Mrs Blood subsequently conceived by insemination of her deceased husband’s sperm and had a baby.
The initiative for this paper arises from the writer’s membership of the National Ethics Committee on Assisted Human Reproduction (NECAHR). With the rapid advance of technology in the area of assisted human reproduction, NECAHR was established to ethically review, at a national level, innovative proposals and research. NECAHR has received a range of requests for ethical approval for the use of gametes, including donor insemination for lesbian couples, intergenerational use of sperm, and the storage and use of sperm of a deceased person. NECAHR will be circulating guidelines for providers of fertility services on this topic. The views expressed by the writer on this topic are not necessarily those of the committee.

A Chicago scientist recently announced that he wants to try and clone humans to help infertile couples have children that are genetically their own (Reuter, 1998). Statements such as this raise fears about the weird and wonderful aspects of the new technologies associated with assisted reproduction. Despite these futuristic aspects of assisted human reproduction, this paper is more concerned with the current technology such as in vitro fertilisation (IVF) and related techniques. Its interest lies in the subtle, yet arguably insidious, developments of their application. It begins with some background to the current technology available in assisted human reproduction. The advent of cryopreservation of gametes has resulted in gametes being stored for a range of reasons. For example, it is common to store undamaged sperm from men prior to undergoing radiation or chemotherapy treatment for cancer and this is now a routine procedure. There are also techniques for “harvesting” sperm when a man is comatose or recently deceased. Four cases are presented to illustrate the varied factual situations where posthumous use of a partner’s sperm may arise and will be referred to throughout when considering the practical application of ethical and legal considerations in this context. Some analogies will be drawn with cryopreserved zygotes and embryos, but the main aim is to focus on gametes at pre-fertilisation stage which subsequently may be used posthumously.³

Posthumous reproduction raises more generic issues about the collection, storage, use and disposal of gametes but this paper will focus on a partner’s use of sperm and not gamete donation to others for use in fertility treatment, or the donation

³ See Glossary for distinction between a zygote and an embryo.
of gametes for research.\(^4\) Strictly speaking, this topic is concerned with posthumous conception by assisted means. "Posthumous reproduction" refers to the conception of a child after one of the child’s genetic parents, usually the father, dies. There will be some discussion about the current technology concerning the storage of ova, and possible future development, but it is beyond the scope of this paper to consider some of the added ethical and legal issues that the posthumous uses of ova raise. For example, ovarian grafting using foetal tissue is a distinct possibility in this context and would involve posthumous use of foetal tissue. It is also reasonably foreseeable that the technology will soon enable pregnancies through IVF using "thawed" ova or ovarian tissue (compared to the current practice of immediate donation of ova for this purpose). When considering posthumous use of ova that have been stored through cryopreservation where the provider has subsequently died, there is an added requirement of a "surrogate" uterus to achieve a pregnancy. The retrieval of ova and the risks associated with this procedure add a further dimension to posthumous reproduction in this context.

The philosophical problem posed is that the technology associated with assisted human reproduction has lead to the ability to have greater control over procreation and the timing of procreation in relation to the lives of the parents. It forces us to consider the acceptability of reproduction outside the human biological timeframe and after the death of the gamete provider. Ethical issues do not, however, arise independently of the social and cultural change brought about by such technology. They are framed by the context in which they arise and must be considered against this background. In light of this, contextual features are explored, including the reproductive experience and death, how we understand the meaning of "family" and parenthood in assisted human reproduction, the notion of kinship, and specific bicultural considerations in New Zealand.

Posthumous reproduction raises a number of ethical issues that arise in assisted human reproduction generally. An overview of the theoretical approach is

\(^4\) The expression “gamete provider” is used as a gender neutral term to make reference to that person’s own use of gametes, either sperm or ova, and not donation to others or received from others. See also Glossary.
discussed followed by a more detailed consideration of the notion of autonomy and the benefits and harms of posthumous reproduction to the parties involved. The writer emphasises the difficulty of measuring unknown or possible harms in posthumous reproduction and the limitation of reducing ethics to an individualistic consequentialist analysis. The moral weighting in this analysis is complex because of the tripartite relationships involved: the deceased father, the mother who seeks to conceive, and the child born posthumously. Simply weighing consequentialist arguments of risks versus benefits fails to provide a critical reflection of the contextual issues that arise independently of the consequences to the parties involved.

The legal control and use of gametes that have been frozen and stored, whether with the intention of posthumous reproduction or not, raises difficult problems. Whereas most Commonwealth countries have a legislative framework for assisted human reproduction generally, this is not the case in New Zealand. Specific legal questions are posed in light of existing legislation and common law, drawing on the few overseas cases which have considered questions of control and posthumous use of gametes. The Blood case will be discussed, as will the Human Fertilisation and Embryology Act 1990 (United Kingdom), which forms the basis of a private members bill currently before the New Zealand Parliament. The paper concludes with recommendations for guidelines on this topic and the way ahead in this fascinating and important area of law and ethics.
2. THE TECHNOLOGY AND SOCIAL CONTEXT

Current Technology

In 1953, the first successful human pregnancy resulted from insemination with frozen human semen. Since that time new and improved methods of freezing and storing semen by immersion in liquid nitrogen at -196.5 degrees Celsius have improved the fertilising capacity of frozen sperm (Behrman and Ackerman 1969). Frankel, writing in 1975 (p.36), said:

As a medical procedure, human semen banking must be considered an experimental technique and this has led to publicly expressed caution against its widespread use. For example, the American Public Health Association has questioned the "biologic potency and genetic adequacy" of human sperm frozen over a relatively long period of time. Moreover, the National Medical Committee of Planned Parenthood - World Population, has argued that any promise of fertility "insurance" by freezing and storing semen may mislead and persuade individuals to undergo vasectomy in a hasty manner without proper consideration of the consequences.

Whilst the technology of cryopreservation of semen and its application has undoubtedly advanced, this concern expressed in 1975 highlights the speed with which a new technique can be adopted as a routine procedure. Freezing sperm now ensures the relatively safe and effective use of sperm for insemination. Research is still being undertaken to investigate different types of freezing methods and using different types of preservatives to help decrease the damage caused by the freezing process (Koeppel, 1995, p.308). One reason for freezing semen is to allow for quarantining of sperm for the prevention of sexually transmitted diseases. Embryos are also frozen for couples undergoing IVF, either to improve the chance of conception or to allow for planned use in the future. Freezing additional embryos, (usually referred to as "spare" embryos), improves the chance of conception by allowing the replacement of an optimum number to avoid the risk of multiple birth. It also avoids the waste of discarding potentially viable embryos produced as a result of superovulation (Trounson and Mohr 1993).
To date, the primary use of frozen sperm has been for the treatment of heterosexual couples by means of donor sperm where the male partner is infertile, in which case the donor’s sperm may be used for insemination independently of time and place. In the United States an increase in demand for sperm by infertile couples is a contributing factor to the rapid growth of commercial semen banking (also known as “spermbanks”) (Frankel 1975). More recently, the use of frozen sperm has not been restricted to those who are infertile. For example, donor insemination may be undertaken by lesbian couples or a single woman wishing to conceive, often described as “social infertility”. Cryopreservation also enables men who are terminally ill and are about to undergo treatment which affects sperm production, such as chemotherapy and radiotherapy, to store sperm for later use. Sperm cryopreservation may be offered to male patients with cancer as an intervention to circumvent loss of procreation ability resulting from chemotherapy-induced infertility. Researchers have shown that patients with poor semen can successfully father children even with a diagnosis of cancer and, in any event, more patients with cancer are expected to survive their disease (Koeppel, 1995).

Only in 1984 was IVF first successfully employed in New Zealand. The introduction of gamete intrafallopian transfer (GIFT) took place a few years later (Brander, 1991). Recent technologies have improved aspects of storage and use of gametes. In men, a critical number of live, motile sperm are usually necessary to reach the egg, dissolve its outer layer and finally for one sperm to achieve fertilisation. This process can be bypassed using a technique called intra cytoplasmic sperm injection (ICSI) where low sperm counts and poorly mobile sperm can achieve conception by being directly injected into an egg. Furthermore, if a semen sample fails to yield sperm, or indeed cannot be obtained, a testicular biopsy can produce immature sperm or sperm precursors which can also be used in this process (MCART, 1994, p.17). ICSI has been hailed as the most significant advance since IVF, and the suggestion that this technique may eventually permit any man to father a child (Atkin, 1994). Certainly, men previously thought to be infertile may have an increased chance of having a child genetically their own.
As with introduction of a number of reproductive techniques, no experimental phase preceded the introduction of ICSI. NECAHR have ethically reviewed the introduction of ICSI to New Zealand on the basis that it is an innovative procedure and therefore requiring ethical review in accordance with the National Standard for Ethics Committees (Ministry of Health, 1996). Now ICSI is steadily becoming the standard method of treatment of infertility by IVF. Tens of thousands of children are said to have been born around the world since the technique was introduced. Concerns have been expressed about the potential and longterm hazards faced by offspring (de Velde & al, 1998). Bowen et al found there is an increased risk of mild delays in development at 1 year compared with children conceived by routine IVF or conceived naturally (Bowen & Gibson, 1998). The researchers recommended the ongoing developmental follow up of children conceived by ICSI to see whether there is increased risk. The increased risk to children conceived through ICSI may have wide implications as ICSI has quickly developed as the panacea in assisted human reproduction. As fewer viable sperm are necessary to achieve conception, ICSI is widely used where sperm has been cryopreserved or damaged in some way. Whether the small chance of harm to children conceived through ICSI will prevent this technique from being used is likely to be hotly debated, if not monitored closely.

A relevant aspect of this discussion is the treatment of infertility. In New Zealand the prevalence of infertility has been estimated at 10% (Brander, 1991). A definitional problem arises from the use of data as to how infertility may be defined. Infertility is commonly diagnosed if a couple have been unable to conceive after one year of unprotected intercourse. Research undertaken by the Canadian Royal Commission on New Reproductive Technologies estimated the prevalence of infertility there at 7% using a two year standard for diagnosis. The research showed that one in five couples obtained a pregnancy in the second year and the Canadian Report relied on the World Health Organisation’s two year standard for the diagnosis of infertility (Canadian Royal Commission on New Reproductive Technologies, 1993).

There has been an increase in consultations for the diagnosis and treatment of infertility in New Zealand. This is due to a combination of factors: increasing public
awareness about infertility and its treatment; the tendency to delay childbearing; the ageing of the baby boom generation; increasing pelvic sepsis and surgery; and increasing numbers of service providers (Brander, 1991). Importantly, this list does not take into account the decline in the number of children that are available for adoption (Else, 1991). There has also been an increase in the number of IVF treatments by the use of ICSI and a concomitant reduction in donor insemination. The Government currently funds $4.5 million for infertility services and individuals pay a further $4.5 million themselves (Gillett & Peek, 1997). Currently, there is considerable discussion on the degree to which public funding cover includes fertility services.

Another consideration is the increasing popularity of vasectomy as a method of contraception. With the hope of freezing their semen for use at a later time, men can view sperm banks as a way of ensuring future fertility by storing their sperm prior to vasectomy. A survey of treatment (privately and publicly funded) performed by one fertility service provider in New Zealand during 1996-7, indicated that 20 percent of ICSI was performed in couples where the cause of infertility was a vasectomy or a failed vasectomy reversal. Overall, in 18 percent of treatment cycles, including vasectomy, the cause of infertility was preventable (Peek, 1997). This survey also suggests that infertility services are not the sole domain of infertile couples. For example, 20 percent of donor insemination was performed for single women and lesbians. The scope and application of assisted reproductive techniques means increasingly both the biologically fertile and infertile population are utilising these techniques as the modus operandi of reproduction.

A consequence of the rapid increase and improvement of assisted reproductive techniques is that there are a greater number of options available to those wishing to conceive and reproduce. Women are not necessarily reliant on long-term male partners (or a male partner at all) in order to conceive and reproduce. The storage of sperm is a by-product of a number of interventions employed in assisted human reproduction. The ability to store sperm and the variety of techniques used to achieve conception means that human reproduction is no longer restricted to the uncertainty and fallibility inherent with natural procreation. Even those that employ assisted
methods of reproduction have no guarantees that they will be successful with conception and a resulting live birth. The significance lies in the increase of options available to those with unfulfilled reproductive desires and it is within this context the issue of posthumous reproduction emerges.

**Posthumous use of sperm**

Posthumous reproduction has previously been a result of accident or fate. Posthumous births have been recognised where, for instance, women died in childbirth or where the father died from illness or accident or in war after conception and pregnancy, but before the resulting birth occurred. As an "act of fate" there are few ethical and legal problems raised by posthumous births save questions of whether starting a family was prudent if death could reasonably have been anticipated. Generally speaking, the deceased will have reproduced posthumously without contemplating or intending the result. Situations also arise where people reproduce knowing that they will die during their child's infancy or early childhood. A pregnancy may be planned as an act of love in the face of death. However, reproduction in contemplation of early parental death is not posthumous reproduction per se because the birth of offspring occurs before the person reproducing has died. The cryopreservation of sperm and embryos (and the potential to cryopreserve ova), as well as the ability to sustain a comatose person, can result in posthumous reproduction being a planned and anticipated event.

Developments in cryopreservation of sperm, artificial insemination (AI), IVF, and embryo transfer (ET) have made possible use of sperm that has outlived its procreator. Posthumous reproduction by assisted means first became possible only after sperm could be frozen and used for artificial insemination after the donor was deceased. Insemination with the deceased husband's sperm might be requested by the widow to achieve a pregnancy and bear a child even if her husband died (or is comatose) before this could be achieved by traditional conception (as in the case of Diane Blood). Requests are also made to collect sperm from the terminally ill to circumvent loss of procreation ability resulting from chemotherapy-induced infertility or retrieval from newly deceased males for the same purpose. In the latter situation,
techniques such as stimulated ejaculation, micro surgical epididymal sperm aspiration (MESA) or testicular sperm extraction (TSE) can be employed for the harvesting of semen.

Sperm frozen and stored for donation (as distinct from use by the gamete provider's partner) might also be used for insemination after the donor has died. In New Zealand there is a move away from anonymous donors. The policy among providers of fertility services is that donors are accepted on the basis that they are prepared to be known to the child. (At the least, the provision to the child of information about the identity of the donor is kept open as a possibility for the future.) Removal of anonymity only guarantees the provision of information about the identity of the donor and does not necessarily result in children having contact with the donor. The donor may be willing to be known to the recipient couple or single woman (Daniels & Lewis, 1996). In this environment of openness, objections to posthumous reproduction might be made on the grounds that the child is not going to know or have the possibility of knowing their genetic father. The difference with third party donors is the child born from a deceased donor is likely to have a social father/parent. (But even this is not a certainty as recipients may be a lesbian couple or single women.) It is not within the scope of this thesis to fully consider the third party donor situation. On the criteria used here, it is not strictly posthumous reproduction since no-one - neither the donor nor the recipient - intends the conception to be posthumous or has knowledge that this may be the case. There may be a number of practical difficulties for providers of fertility services to keep track of donors for future communication with recipient couples and genetic offspring later on in life, let alone keeping apace as to whether the donor is still alive when their offspring are born.

In the above examples, the technology of cryopreservation of sperm and insemination is now commonplace, but it is the posthumous use of stored sperm that is the innovative factor. The ability to freeze and store the semen of men who are about to undergo treatment that will sterilise them may present an ethical dilemma to the fertility service involved where the planned use is for posthumous reproduction. A recent survey of service providers in the United Kingdom about posthumous use and storage of sperm and embryos illustrates the range of attitudes. Some providers of
fertility services in the United Kingdom are opposed to posthumous use of sperm and embryos in any event and refuse posthumous treatment. Patients are required to consent to this policy of no posthumous treatment in advance of storage. The survey of 117 centres licensed for treatment under the Human Fertilisation and Embryology Authority Act 1990 showed that more than a third of the centres were opposed to posthumous use; about a fifth were also opposed to transferring stored sperm or embryos to another centre for such use (Corrigan 1996). Corrigan et al saw the desire for posthumous conception as a “loving expression in memory of the lost spouse, but the offspring had no such memory”. No explanation was given to the meaning of this statement but it may point to the significance of intentionally creating a fatherless situation for the child born posthumously. They highlighted the consent provisions in the 1990 Act that contemplate posthumous insemination but interpret these as permissive, not mandatory, of treatment centres, noting that they are also required to take account of:

...the welfare of any child who may be born as the result of...treatment (including the need of that child for a father): Section 13(5).

The range of attitudes of providers of fertility services is also reflected in what the editorial of the *British Medical Journal* described as “an astonishing array of time limits and regulations for the storage of embryos that bear little relation to patients’ needs” (Boulton 1996). For example, it is argued that the introduction in Britain of a 10 year time limit for the storage of frozen embryos bears little relation to the reproductive lifespan of a woman; for those women who undergo IVF towards the end of their reproductive lifespan 10 years is too long, while for much younger women it is too short. It also overlooks the fact that after this time it can be difficult to locate the couples concerned.

The need to establish time limits raises underlying ethical issues of what is desirable given the increased range of opportunities for posthumous reproduction. Irrespective of time limits for storage, there is also the issue of the appropriateness of harvesting semen from a comatose man (who is legally “alive” but unable to give consent) or a recently deceased man. Despite the uneasiness expressed by providers,

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5 This survey predates the *Blood* case.
more women in the United States are seeking to be artificially inseminated with dead men's sperm. Researchers at the University of Pennsylvania have reported an increase in requests for sperm extraction from men who did not give prior consent (Kerr & Caplan, 1997). In a telephone survey undertaken of 273 assisted reproductive facilities in the United States and Canada, it was discovered that a total of 82 requests were received from 1990 to 1995. Half of these requests were made between 1994 and 1995. The response rate to their survey was 95.2 percent with no clinic in Canada reporting any requests at all for postmortem collection of sperm. In the American clinics the use of sperm was primarily intended for the wife of the deceased (28 percent), fiancee (1.2 percent), or girlfriend (4.9 percent). In one case a family was considering anonymous donation of the deceased relative's sperm. In the case of a 15 year old deceased, and the remaining cases (64.6 percent), the intended use of the sperm was unknown. The survey suggests the stored sperm was cryopreserved but not subsequently used for insemination purposes, raising the possibility that the opportunity was more important than the reality.

In light of the range of possibilities where posthumous use of sperm may come about, four cases are presented below to illustrate the practical possibilities of posthumous reproduction using a deceased male partner's sperm. Before considering these cases, this paper will briefly consider the future possibilities of posthumous use of ova.

**Posthumous use of ova**

Whereas the ability to freeze sperm and embryos is commonplace and an established technique, this is not so for the freezing and storage of ova. Human ova cannot yet be frozen efficiently (Trounson & Dawson, 1996). The difficulty currently lies in the “thawing” of ova. The probability of a pregnancy that has been established using thawed frozen ova going to term is 1 percent or less (Trounson & Bonggo, 1996). Although cryopreservation technology is not yet perfected, the major question now is how to use the tissue most effectively after thawing and as such, cryopreservation is still at an experimental stage (Oktay & Newton, 1998). Regardless of this fact, and as the editorial in the *British Medical Journal* has pointed out, this
has not stopped some clinics advertising egg freezing services (Trounson & Dawson, 1996). One clinic in Melbourne offers this service to young women diagnosed with cancer. The technology to store undamaged sperm from men prior to undergoing radiation or chemotherapy treatment for cancer is likely to be made available for the protection of ova as well. In the event that the donor does not recover from cancer, her ova would be stored and available for posthumous reproduction, should her partner request this. This practice may be described as experimental in view of the difficulty of thawing the frozen ova and achieving a successful pregnancy. It raises the spectre of women having false hopes about protecting their fertility through storage, given the prospect of conceiving with the few eggs collected is negligible. It also adds to the store of frozen gametes that will probably never be used.

Cryopreservation of ovarian tissue is a potential alternative or addition to cryopreservation of embryos or ova for sustaining fertility in women at risk of premature ovarian failure. The Medical Journal of Australia has reported that women at risk of infertility will soon be able to have ovarian tissue stored with the possibility of the tissue being regrafted to restore an infertile woman’s menstrual cycle, allowing a natural pregnancy to occur (Wood et al., 1997). This technique is described as a modification of the techniques already developed in egg and embryo freezing. It suggests the possibility that women who have not yet found a partner may be able to store a piece from their young ovary to have a baby later in life, without the need for donor eggs. The cited advantages of freezing ovarian tissue are that it does not require the use of fertility drugs (and associated risks) and does not raise the ethical problem of disposal of unwanted embryos. The technique would be most likely to benefit women with recurrent ovarian cysts or severe endometriosis, which put them at risk of premature menopause, and those whose ovaries fail because of genetic disease or chemotherapy for cancer. There are a number of practical problems of relying on embryo preservation, such as when it is the only option available for patients undergoing aggressive high-dose chemotherapy and bone marrow transplantation. Viable embryos cannot be guaranteed and there may not be enough time for a complete IVF cycle before cancer treatment commences. Embryo preservation may also be unacceptable to women who do not have a partner and reject donor sperm as an alternative. There are, therefore, distinct advantages in establishing a technique for
storing the unfertilised female gamete (Oktay & Newton, 1998). More speculatively, if ovarian tissue banking becomes a proven effective method, young healthy women may request storage of ovarian biopsy samples to keep their reproductive options open in midlife when ova fertility is declining.

The donation of ova for the treatment of infertility by IVF and embryo transfer, where women have ovarian failure, raises its own set of ethical issues. They are not within the purview of this paper. It is sufficient to mention that there may be cases in which the recipient conceives and gives birth to a child, while the donor (usually participating in IVF or other assisted reproductive programmes and has spare ova to donate) does not conceive. There are medical risks to the donor associated with the induction of ovulation, with the use of anaesthesia and with the surgical procedure of laparoscopy (Schenker, 1992). The woman donor is injected with extra hormones, which can have side effects such as ovarian cysts and ovarian cancer, to overstimulate the ovaries to release large numbers of eggs. The woman must undergo frequent blood tests and ultrasound scans to determine when the eggs are ready to be retrieved.

Recently, there has been a tendency for the ova of women of reproductive age to be donated to older menopausal females in order to bear a child. The ability to donate ova makes childrearing possible without the limitation of age. So too does the possibility of freezing a woman’s own ova for future use. Modern fertility treatments became the focus of much media attention in 1993, after the widely publicised case in which a 59 year old woman was able to give birth to twins by means of IVF with donated eggs and her partner’s sperm (Hope et al., 1996).

The advent of IVF and the potential for cryopreservation of ova may extend the options for posthumous reproduction to the use of cryopreserved ova, much as for using sperm for posthumous conception, but with the added requirement of a surrogate uterus for gestation to achieve a pregnancy (Ethics Committee of the American Society for Reproductive Medicine, 1997). It is foreseeable that the surrogate could be nonhuman and ectogenesis achieved through an artificial womb. Recently a Japanese scientist is reported to have developed an artificial womb capable
of incubating goat foetuses for up to three weeks, and plans eventually to do the same to human foetuses (Reuter, 1997). The artificial womb is described as:

...a rectangular clear plastic box filled with amniotic fluid at body temperature and connected to an array of vital functions and devices. The foetus lies submerged in the tank womb which replaces vital oxygen and cleans the foetus' blood with a dialysis machine connected to the umbilical cord.

Whilst the above description may appear speculative, this overview of the developments of assisted reproductive technology demonstrates the speed with which a number of these technologies are accepted. As already pointed out, in the 1970s the cryopreservation of sperm was regarded as experimental yet today cryopreservation of sperm is a routine procedure for donor insemination and related techniques. At this time, the use of cryopreserved ova and ovarian tissue is within the realm of possibility.

**Case examples of posthumous use of sperm**

The above discussion shows that there are various situations where there may be posthumous use following the collection and storage of sperm from the gamete provider or where there has been no storage at all. At this juncture, it is helpful to clarify the factual situations that may arise in this context to understand the complexities of the ethical and legal considerations. The opportunity for posthumous use of sperm by the gamete provider's partner may be categorised into the following situations:

**Case one:**

The gamete provider stores sperm with the *express intention* of posthumous use by his partner.

The intention may be by way of written informed consent at the time of collection and storage of sperm. However, an express intention is not confined to this situation, as a gamete provider may make their intentions known orally
during their lifetime or make provision in their will to bequeath sperm to others, for example their spouse. There is also the possibility that the testator’s intention may be very clear but may not be known to either the spouse or the fertility service that stores the sperm.

**Case two:**

The gamete provider stores sperm with the *express intention* the sperm is *not* to be used posthumously.

The gamete provider may have expressly stated in the consent form for storage that his sperm be disposed of on his death, but others may subsequently request the posthumous use of his sperm.

**Case three:**

The gamete provider stores sperm with *no expressed intention* for posthumous use.

The reasons for storage may include the gamete provider’s own use for treatment with their partner for IVF and related techniques, to avoid risk that sperm may be damaged in the course of the gamete provider undergoing radiotherapy and chemotherapy for cancer treatment, or where the gamete provider is undergoing vasectomy.

The purpose of storage in these situations is generally concerned with keeping the gamete provider’s options open for future procreative use during their lifetime rather than any advance intention for posthumous use.
Case four:

The gamete provider makes *no provision for storage of sperm* and does not contemplate future posthumous use.

The opportunity of procuring sperm arises while the gamete provider is comatose but on life support or within 24 hours of death. In this situation there is no possibility of informed consent, either written or oral. This was the situation in the English case of *Blood*. Mrs Blood, through her clinician, made a request to the Human Fertilisation and Embryology Authority to harvest Mr. Blood’s sperm - on 2 occasions - during the window period whilst he was still alive but comatose, with a view to posthumous insemination at a later stage.

The emphasis on the gamete provider’s intentions in the first three cases is to reflect the notion of some kind of advance directive. The use of the description of *express intention* is to convey a purposive approach. None of these situations are particularly straightforward and there may be variations of each situation and overlap between the cases. NECAHR resolved that each situation will need to be dealt with on a case by case basis. Each of the four cases will be referred to throughout this paper to exemplify the diverse realities to the different parties involved. Having considered the impact of the technology concerned with the procurement of sperm from a comatose man and the factual situations where posthumous use of gametes may come about, we now turn to consider the social and cultural context that underlies these developments.

**Contextual features of posthumous reproduction**

None of the technological developments associated with posthumous reproduction have occurred in isolation from the social and cultural environment in

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6 NECAHR minutes 17/2/98, Ministry of Health.
which they exist. Leaving aside the moral judgement of whether posthumous reproduction is a good thing or not, it is necessary to bear in mind the social consequences of introducing these procedures and what impact they have on shaping peoples thinking on these issues. Societal attitudes will inevitably change as they take into account the impact of these developments. The very existence of the possibility of conception after death affects assumptions we may have about how we wish to live and what our reproductive expectations are after an individual or their partner dies. These dimensions include not only our understanding of family and family relationships but also the effect of the reproductive technologies on cultural practice. It is within this social context that ethical reflection takes place and policy is developed.

**The reproductive experience and death**

Ordinarily, reproduction is valued because of the genetic, gestational and rearing experiences involved. Reproduction connects us with future generations and provides personal and valued experiences. Posthumous reproduction, however, shares only some of these features. Only the mother in this instance undergoes these experiences. Robertson points out there is value in the reproductive experience itself. In the posthumous reproduction situation (where the woman dies) (1994b, p.1031):

> The individual will not gestate. She will not rear. While alive she will not even know she has reproduced genetically. At most, she has the present satisfaction of knowing that genetic reproduction might occur after she has died. This [posthumous reproduction] is an extremely attenuated version of the experiences that usually make reproduction valuable and important. Indeed, it is so attenuated that one could argue it is not an important reproductive experience at all, and should not receive the high respect ordinarily granted core reproductive experiences when they collide with the interests of others.

Again, the issue lies in determining how much weight ought to be placed on this experience. The reproductive experience still remains valuable and arguably more so to the surviving partner in memory of a loving relationship in the knowledge that the gamete provider “would have wanted it this way”. In the *Blood* case, it was argued that the opportunity for Mrs Blood to conceive with her deceased husband’s sperm
and have their genetic offspring was a joint enterprise, always intended by their marriage.

There could be reason to discourage and even forbid the posthumous use of gametes if the rearing of one's children, or at least being aware of their existence, is of primary importance. Schuster argues that there is more to the reproductive experience than personal self-interests, and posthumous reproduction lacks the very values that most people find in the reproductive experience, such as giving birth and rearing children. She forcibly puts her case (1994, p.2185):

It perpetuates the myth of the "primacy of spermatozoa" that subverts the very notions of fairness and equality in reproduction. It serves neither women's interests nor the interests of the children they bear. Posthumous children are likely to be psychologically harmed by the idea that they have been conceived as orphans, and will never have the slightest hope of knowing their genetic fathers or learning more about their genetic mothers other than that they died before conception or were dead foetuses.

Expressed in another way, there appears to be an over-emphasis on the passing on of genes to future generations. Genetics assumes an importance to males out of proportion to all other possible reasons for having children. One commentator cited by Murphy expresses this genetic ideology as follows (1995, p.392):

Man's sperm is alienated (that is, separated) from him in the sex act and this alienation negates him as a parent. He has no certainty that the child born nine months later is his child... He does not actually experience a link between generations. He, therefore asserts proprietary rights to children.

This statement refers to the abdication of responsibility by the male gamete provider who misses out on the reproductive experience. However, it denies the distinction between a situation of anonymous donor compared to that of a relationship where there is a loving father. It also fails to recognise that unlike the fathering of children, mothering usually requires the physical act of gestating. The value and the meaning of the reproductive experience cannot be assessed in isolation from other parties. The deceased gamete provider is but one party to this arrangement and the nature of the relationships surrounding him, the context of his death and reproductive desires would have some bearing on the significance of not participating in the reproductive experience.
Reproduction has many meanings for people. For some, it is a way to deal with mortality. As Shakespeare noted, there is "...no defence against Time's scythe/save breed," (Sonnet 12). The question arises as to whether there is a lack of willingness for us to face up to the fact of death and our own mortality. This is exemplified in posthumous reproduction by the very fact that technology makes it possible for conception to take place after an individual dies. The existence of this reproductive option may influence views on how we perceive our fate and the prospect of death if reproduction after death becomes an accepted norm. Emotionally, reproduction and the following on of generations can be seen as part of a desire to overcome mortality. When defining 'death', modern day philosopher, John Ralston Saul says (1995, p.87):

Our growing technical sophistication seems to have had a negative effect on the reasonableness with which we face it. Where once death was treated with a certain bluntness, as part of family life, we have fallen back on childish denial. We don't die, we pass on, we decease, we are the beloved, people are sorry to hear about us. To hear what? There has never been an era in which death was such an unacceptable topic of conversation. Humans have never so planned their prolonged lives and taken so little into account their termination.

Posthumous reproduction is arguably an extension of the notion of prolonging of life by the passing on of genes to the next generation by whatever means possible.

**The concept of family and parenthood**

Assisted human reproduction challenges our concept of family and the meaning we give to this in light of the new technologies. Posthumous reproduction can intentionally create single parent families where a child never knows its father. The concept of family is now a pluralistic one and recognises the full spectrum of family models in our society. Charlesworth (1993, p.64) summarises the list of possible modes of family formation:

1. Children born from heterosexual couples in formal married unions
2. Children born from heterosexual couples in stable de facto unions
3. Children born from a previous marriage or de facto union but either in a single parent situation or reincorporated family
4. Children born in a single parent situation
5. Children adopted into another family (includes “open” adoption)
6. Children born to heterosexual couples from artificial insemination by donor
7. Children born to homosexual (lesbian) couples from artificial insemination by donor
8. Children born from the gametes of a couple through in vitro fertilisation (IVF) and embryo transfer
9. Children born from gametes of donors or donor embryos, through IVF and embryo transfer
10. Children born from surrogacy arrangements either (a) traditional kind where the biological mother contributes her ovum but cedes her role as social mother to another woman or, (b) where the social mother and father contribute gametes and the embryo is formed by IVF and transferred to another woman for gestation

Even this list provides a fairly narrow understanding of family based on the concept of a nuclear family. It takes no account of the cultural context in New Zealand and the significance of whanau, hapu and iwi, and whangai. The significance of this list is, however, that 10 years ago only half of these combinations were possible. With the rapid increase in new assisted reproductive technologies the list is likely to continue to grow. Children born from posthumous reproduction can fall within a number of the above categories. An additional category is probably warranted for the *sui generis* nature of children born as a result of posthumous reproduction, namely intentionally creating a family where at least one genetic parent is not alive at the conception and subsequent birth of the child.

Shuster (1991) says to argue that posthumous reproduction undermines traditional family structures is inappropriate and closes our eyes to the world as it exists. Multiple and non-traditional parent arrangements have changed the nature of traditional families and have become a new tradition in modern society. The new reproductive technologies have forced us to rethink the concepts of mother, father family etc. George Annas (1988) has observed:
Dependable birth control made sex without reproduction possible. Now medicine is closing the circle by offering methods of reproduction without sex; including artificial insemination by donor (AID), in vitro fertilisation (IVF) and surrogate embryo transfer (SET). As with birth control, artificial reproduction is defended as life-affirming and loving by its proponents, and denounced as unnatural by its detractors.

Adopting a biological criterion for determining what counts as family is inadequate. According to this criterion, people who are genetically related to one another constitute a family, and the type and degree of relatedness can be described in a family tree. Macklin (1995) argues that this sense of family is important and interesting for many purposes, but it does not and cannot encompass everything that is actually meant by family, nor does it reflect the broader cultural customs and kinship systems that also define family ties. The biological concept of family and the notion of biological relations is inadequate for making some critical conceptual distinctions where newly developed artificial means of reproduction are involved. For example, the capability to separate the process of producing eggs from the act of gestation makes it difficult to use the word biological to modify the word mother as both the egg donor and the woman who contributes her womb during gestation may be described as the biological mother (Macklin, 1995, p.290):

 One critical notion rendered problematic by the new technological capabilities of artificial reproduction is the once simple concept of a mother. The traditional concept is complicated by the possibility that a woman can gestate a foetus genetically unrelated to her. This prospect has implications both for public policy and our understanding of the family.

Posthumous reproduction by gamete storage and subsequent insemination or IVF is yet another example of pushing the social concept of family. Is there moral significance in intentionally bringing about a single parent family where the child is conceived posthumously and born “fatherless”? An argument against allowing sperm to be bequeathed for the purpose of posthumous reproduction is to protect the resulting children from the disadvantage of being born without a father (or more precisely, a living, natural father). Steinbock (1995) cites authority for harmful effects of single motherhood. Whereas a decade ago the prevailing view was that single motherhood had no harmful effects on children, more recent research is less optimistic with respect to the longterm outlook (McLanahan & Booth, 1989). Children of
mother-only families are more likely to be poor, to have difficulty in school, to drop out of high school, to commit delinquent acts, and to engage in drug and alcohol use than offspring from two-parent families. While the authors suggest fatherless children are statistically more likely to have problems, Steinbock points out that it is not clear whether the problems arise from not having a father, or from the particular cause of fatherlessness, for example, divorce. If it is determined that divorce and relationship breakdown cause emotional problems in children, that does not support an argument against the artificial insemination of single woman. Indeed, a recent report commissioned by the Joseph Rowntree Foundation to review more than two hundred British studies on the issue of whether children of divorced or separated parents suffer more problems casts doubt on the widely held view that it is the absence of a father figure that contributes most to problems for children. The reviewers pointed out that children whose fathers die do not exhibit as many difficulties, but children in stepfamilies do (Guardian, 1998). And, even if research shows that children of never-married single women have difficulties, it does not follow that children raised by the surviving woman partner, (the situation most analogous to posthumous reproduction), will have the same problems.

In the New Zealand context there has been more acknowledgment of intentionally created single parent families in certain circumstances. The Human Rights Commission has made it clear that a refusal to provide donor insemination services to single women would be discrimination and in breach of the Human Rights Act. The Ministerial Committee on Assisted Human Reproductive Technologies (MCART) suggested that there could be good public policy reasons for not, as a general rule, actively encouraging single parenthood, for example, where a child is born into an at-risk situation (MCART, 1994, p.56):

Where assisted reproduction is used, a child is deliberately being born into a single parent family. This does of course happen frequently by natural intercourse but whether reproductive technologies should be used to assist this is a matter of some controversy.

It could be argued that when deciding whether to have children, people should not only be concerned with their own interests in reproducing, but also with the quality of the lives their children are likely to have. The reality is a little different.
There may be many reasons for reproducing which can be entirely selfish. The decision to procreate lies with those parents and it is a perilous argument to assume judgements can be made as to who is worthy or not to be a parent. It also raises the issue of the role of the state in such circumstances. There may be situations where state intervention is justified, for example child abuse, but these interventions are more down-stream issues with respect to rearing, not bearing, of children. The responsibility of parenthood can probably be expressed no greater than this (Steinbock, 1995, p.63):

The decision not to procreate makes no one worse off, and so the decision not to procreate does not require justification. A responsible decision to procreate, however, requires thoughtful consideration of the welfare of the children one brings into the world.⁷

Murray (1996) suggests that exploring the scope and limits of parental obligations to children gives some perspective to discussions about our moral obligations to not-yet-born children. Although this discussion is in the context of a child already in utero (that is, the decision to procreate has already been acted upon), he provides some useful insight into the extent of parental responsibility. Avoiding harm is important, but are parents obliged to elevate avoiding harm to their children above all other ends (Murray, 1996, p.19)?

Parents are not expected to sacrifice all other considerations in order to protect their children from every conceivable harm. That would be too strenuous a requirement, and too narrow a view of the moral life of parents.

None of these assertions point to a moral justification for prohibiting the deliberate creation of single parent families through posthumous reproduction. What is clear is that the paradigm of what is family and the integral set of relationships involved in reproduction is evolving with the new modes of procreation.

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⁷ Steinbock cites R.M.Hare as possibly the only philosopher who thinks that the decision not to reproduce requires moral justification. From a consequentialist perspective however, every act is morally evaluable. This includes decisions to reproduce, as well as decisions not to. See also: Glover, R. Causing Death and Saving Lives pp 69-71.
Kinship

Linked to our understanding of family is the anthropological notion of kinship. Strathern (1992) says:

To talk about "kinship" is to refer to the manner in which social arrangements are based on and provide the cultural context for natural processes... In the case of kinship, what is at issue is the social construction of natural facts.

These natural processes refer to the biological and "natural" facts which are taken for granted. For example, the special place that people give to blood ties. The concept of a blood tie symbolises that relatives are seen to have a claim on one another by virtue of their genetic make-up. In kin selection theory, people are likely to favour their own "because of the biological relationship between them" (Finch, 1989). As with other aspects of assisted human reproduction, posthumous reproduction is a method of continuing genetic relatedness through blood ties. It also redefines the cultural context of reproduction by intentionally creating a fatherless family with the woman conceiving after the death of the father.

Assisted human reproduction also introduces a distinction between artificial and natural process which can create an ambiguity about what should count as natural. To what extent is the concept of naturalness a cultural construction? Technological intervention has provoked social and cultural reactions. What is seen as natural and unnatural is a basis for condemning these interventions. For example, the naturalness argument plays a key role in the Catholic condemnation of contraception, AI and IVF. The justified desire to have a child may never - according to Pius XII - be satisfied by way of "anti-natural actions" (Bayertz, 1994, p.123). The result is a

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8 There is little anthropological discussion directed specifically to issues surrounding posthumous reproduction. Interestingly, Shore (1992, p.301) observes that among patrilineal societies of sub-Saharan Africa, including the Nuer of Sudan, both ghost marriage and the practice of levirational aim at the procreation of children for a deceased man. Levirational is defined as the custom among Jews and some other nations, by which the brother or next of kin to a deceased man was bound under certain circumstances to marry the widow (The Shorter Oxford Dictionary).
dualism between, on the one hand, technological intervention in human reproduction, represented as a continuation of natural reproduction, and on the other hand, the technological control over human nature.

In Strathern’s discussion of the Warnock Report and the then Human Fertilisation and Embryology Bill, she argues that the more we give legal certainty to social parenthood, the more we cut from under our feet assumptions about the intrinsic nature of relationships themselves. Whether or not this is a good thing is uncertain, but what is certain is that it will not be without consequences for the way people think about one another. Strathern questions the prescriptive consumerism of what she calls the enterprise culture in assisted human reproduction. This is where “there is no choice but to exercise choice” and, that we ought to act by choice. This, Strathern says is the language of desire by parents to have a child (1992, p.34):

However one looks at it, procreation can now be thought about as subject to personal preference and choice in a way that has never before been conceivable. The child is literally - and in many cases, joyfully - the embodiment of the act of choice.

Strathern questions how desire will change kinship;

If till now kinship has been a symbol for everything that cannot be changed about social affairs, if biology has been a symbol for the given parameters of human existence, what will it mean for the way we construe any of our relationships with one another to think of parenting as the implementing of an option and genetic make-up as an outcome of cultural performance?

Thus, there is a subtle shift from regarding naturalness as part of the workings of physiology and human nature to attributing it to parental desire subsumed within technological control of reproduction. Put another way, assisting nature becomes assisting human desire. The discussion takes a full circle back to the meaning of these desires and the impact on how we see ourselves within relationships.

Assisted human reproduction affects assumptions not only of family life but of the very understanding of family itself and cultural practice. Strathern says (Strathern, 1992):

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9 Later enacted in the United Kingdom as the Human Fertilisation and Embryology Act 1990.
The way in which choices that assisted conception affords are formulated, will affect thinking about kinship. And the way people think about kinship will affect other ideas about relatedness between human beings.

Posthumous reproduction provides another choice and as such influences our understanding of relatedness to one another. These observations are more about interpreting the social impact of posthumous reproduction than making any moral judgment about the acceptability of this practice. An understanding of kinship provides a contextual background against which judgments about posthumous reproduction will be made. The notion of kinship includes cultural constructions in addition to a biological interpretation of reproduction and this paper now turns to consider the cultural framework for consideration of these issues in New Zealand.

**Biculturalism and assisted human reproduction**

The concept of biculturalism is probably unique to Aotearoa/New Zealand. It is based on the Treaty of Waitangi, an agreement between the Crown and Tangata Whenua. The Treaty is referred to as the founding document of New Zealand society, from which Māori rightfully give expression to their authority, responsibilities, values and expectations (MCART, 1994). Durie describes biculturalism as a continuum with a gradation of goals and a number of possible structural arrangements (Durie, 1994b, p.103). Biculturalism has had a significant impact on health policy and integral to this process is participation and representation (Manatu Maori, 1991). For example, health and disability research, and innovative procedures, must be undertaken in a culturally sensitive manner in full discussion and partnership with research participants (Ministry of Health, 1996). Similarly, ethics committees have been required to increase their Māori membership. The cultural values and needs of Māori has changed the shape of health research and it is essential that the relationships between these communities and researchers continue to evolve (Douglass & McCabe, 1996). As

10 See also: Guidelines for Researchers on Health Research Involving Māori, Health Research Council of New Zealand, 1998.
Tangata Whenua, Māori have the right to be involved in decisionmaking where assisted human reproduction is concerned.

The significance of biculturalism in this context is the requirement of a culturally safe process that ensures Māori participation in the discussions surrounding assisted human reproduction. For this reason, it is not appropriate for the writer, a non-Māori, to attempt to articulate Māori perspectives on posthumous reproduction. Furthermore, as with any community, the views on this topic may vary according to influences and there is likely to be a range of perspectives which reflect the diverse realities of Māori (Durie, 1994a, p.11). Importantly, biculturalism allows respect to be accorded to this diversity and recognition of difference. As already observed in the discussion on kinship, the rapid advance of these technologies makes it difficult to speak of “tradition” where that tradition is changing shape all the time, (and this situation is no different for Māori).

Bearing in mind the above cautionary note, when considering issues for Māori in assisted human reproduction, some themes emerge. Manatu Māori, in its Guidelines for the use of Assisted Reproductive Technology, identified the following issues (Manatu Māori, 1991): the values and tikanga inherent within whanau, hapu and iwi; the need for a process that is culturally supportive and safe; the need to protect whakapapa; the need to protect fertility, and; the need to protect individual and informed choice.

The importance of whanautanga and integrity of whanau, hapu and iwi relationships is a constant theme in writings by Māori. The ability to get pregnant and bear children is central to the health of whanau, hapu and iwi (Te Puni Kokiri, 1995). In the context of assisted human reproduction, it is important to note the possibility of whangai arrangements, where a woman who cannot have a child is

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11 The writer does however, gratefully acknowledge the opportunity to discuss these issues with Charlene Williams, (Ngati Toa) and Rose Smith (Raukawa, Ngati Whakatere, Waikato, Ngati Apakura, Ngati Werakoko).

12 For example, the whare tapa wha model compares health to the 4 walls of a house; Wairua (spiritual), Hinengaro (mental), Tinana (physical) and Whanau (extended family)(Durie, 1994b).
given a child at birth by one of her whanau as a way of dealing with infertility. Dyall says (TePuniKokiri, 1995, p.33):

With whanau, we have often shared seed with kin to enable a woman to become pregnant... The concept of "whangai" is an integral part of Māori wellbeing: whangai creates and strengthens relationships between people, recognising that an individual is always defined and seen in the context of others. Whangai is unique to Māori and should not be seen as the same as surrogacy...it is worthwhile for us to consider and promote whangai arrangements.

Whakapapa is the mechanism by which individual whanau members establish ascent to an eponymous ancestor. This element establishes and determines an individual’s status, and formalises their relationships with others who are able to trace their ascent to a common ancestor. The working party for Manatu Māori said (Manatu Maori, 1991):

Whakapapa can be viewed as the sum total of an individual’s cultural basket in which is contained the essential ingredients for identity, self awareness and self preservation. While the focus is often on the identity of the child born as a result of ART, this working party stresses the importance of this information for the cultural identity of future generations.

The protection of whakapapa was embodied by the Manatu Māori working party in the principle that “all children conceived and born as a result of ART have an inalienable right to full knowledge of their culture and identity”(Manatu Maori, 1991, p.3). This emphasis towards openness is already reflected to some extent by providers of fertility services advising donors and recipient parents to adopt openness about genetic origins. The reviewers of the submissions to MCART (MCART, 1994, Dyall and Keith) noted the influence Māori have had on shaping non-Māori views. Many submissions emphasised that a child born through assisted human reproduction should have the same rights as adopted children in being able to have access to information about their biological parents. Therefore, the protection of whakapapa is not only an important issue for Māori but for all New Zealanders. It is this cultural aspect that has arguably lead New Zealand to a more open attitude to knowledge of people’s genetic links than exists in some other countries.

Given the divergence of opinion on the moral status of the embryo generally, MCART took the view that a better basis to find common ground is to regard all
human tissue and body parts as tapu and sacred. This means not only an embryo but also gametes should be treated with dignity.\textsuperscript{13} It is not entirely clear what treating gametes with dignity means and whether this statement should be interpreted to include \textit{all} gametes or those which are stored for a particular purpose. Certainly, the concept of kaitiakitanga or guardianship is very strong for Māori and generally special care is taken for the protection of stored genetic material such as DNA samples, and this would apply to gametes also. Draft guidelines prepared for the collection, storage, use, and disposal of gametes (\textit{waitaatea}) emphasise respect for Tikanga Māori and safeguarding mechanisms to ensure information and whakapapa is protected. With respect to the disposal of excess gametes, it is suggested that they be offered to the wife or whanau of donor with tribal/hapu/kaumatua support counselling and that unclaimed gametes be disposed of after consultation with hapu or iwi.\textsuperscript{14} MCART also emphasised that decision-making with respect to the disposition of gametes and embryos ought to lie with the gamete providers. So, for example, when a Māori gamete provider dies, cultural practices calling for that person’s tissue to be buried with the deceased could be catered for by the parties making their own culturally appropriate choices (MCART, 1994, p.95).

Assisted human reproduction is an important health issue for Māori. The above themes highlight the importance of respecting Māori people, including individual and collective views on these issues. Attitudes to posthumous reproduction will be shaped by the cultural context in which these issues emerge. The following Māori proverb reflects what Durie describes as “the people principle”:

\begin{quote}
He aha te mea o te ao, maku e ki atu, he tangata, he tangata, he tangata. What is the most important thing in the world; it is people, people, people.
\end{quote}

A bicultural approach to addressing issues such as posthumous use of gametes can accommodate diversity and difference of opinion within and between cultures. Participation by Māori and non-Māori in this discussion is vital. New Zealand has a

\textsuperscript{13} The discussion above regarding the moral status of gametes highlights the importance of the context to back the notion of gametes being accorded dignity.

\textsuperscript{14} The draft Guidelines for the Collection, Storage, Use and Disposal of Gametes (\textit{Waitaatea}) have been prepared for the National Ethics Committee on Assisted Human Reproduction by Rose Smith.
unique opportunity to enrich the discussion by ensuring cultural considerations are taken into account.
3. ETHICAL ISSUES

Introduction to ethical issues

This chapter will discuss the ethical issues that arise in assisted human reproduction generally, and evaluate critically how they might apply to the specific situations where posthumous reproduction may arise. It will begin by considering the theoretical underpinnings from which a framework for bioethical considerations emerge. Some, not all, of the key ethical issues in this context will be considered. It is not the purpose of this thesis to establish a definitive moral theory that is best suited to the issues in assisted human reproduction. Rather, the intention is to consider the philosophical basis to some of the ethical issues raised. In the previous chapter it will have become apparent that the advent of technology associated with assisted human reproduction has lead to the ability to have greater control over procreation to dimensions previously unknown. Posthumous reproduction is but one of a number of reproductive choices we are now presented with. Reproduction in this way raises the moral issue of the desirability of this practice and wider questions such as: how do we see ourselves as a society? How do we wish to live? What are our goals? Technological advances have changed the fundamental question from, can we? to should we? This chapter will conclude with a summary of ethical considerations which characterise the ethics of posthumous reproduction.

Moral reasoning and the role of emotion

It is sometimes said that the very nature of ethical dialogue is that there is “no one right answer”. This assertion is itself controversial and the subject of philosophical debate.\(^\text{15}\) However, neither this thesis nor any public debate is expected to achieve consensus or agreement on what may or may not be desirable when

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\(^{15}\) For example, the “is/ought” distinction drawn between metaethics and normative ethics.
considering posthumous reproduction. Indeed, we could not call ourselves a pluralistic society if we reached entire agreement on moral issues which go to the core of how we see ourselves as individuals and our participation in society. More likely is that there will be a range of views, and respect needs to be accorded to that diversity. Furthermore, issues in bioethics can't be considered apart from the social, political and legal context in which they arise, hence the discussion above about the contextual features which may influence moral judgements on these issues. The chapter below will address the legal issues in posthumous reproduction, but generally the law is not concerned with matters of personal morality or, for that matter, the enforcement of morals. At best, it provides a framework within which an ethical dialogue can emerge.

This discussion would be misleading if premised on the notion that assisted human reproduction can be discussed in a fully rational way. A completely rationalist view dismisses the role of emotions and some moral philosophers argue that an ethical dilemma can only be resolved by using rational considerations alone. Thus, Feinberg (Feinberg, 1982) asserts that:

Arguments are one thing, sentiments another, and nothing fogs the mind so thoroughly as emotion.

Feinberg contends that emotions always should be subordinated to reason in the process of decision making. Whilst Feinberg is not unappreciative of moral emotions, he believes they can never serve as an ethical criterion. In contrast other philosophers have placed reliance on "sentiments" (as described by Hume) in moral argument (Hume, 1888). Callahan proposes the goal is to come to an ethical decision through a personal equilibrium in which emotion and reason are both activated and in accord (Callahan, 1995). Applying this approach, both reason and emotion play a part in moral assessments of situations.

Assisted human reproduction does raise emotional issues. This is not surprising given that it is concerned with intervening in the actual creation of life. It challenges the traditional boundaries of what is considered sacred and transforms reproduction into a process controlled by humans, which, for some, is unnatural and is "playing god". A Chicago scientist aroused considerable ire recently when he
announced that he wants to try to clone humans to help infertile couples have children that are genetically their own. The experts commentating on his proposal were said to have reacted with “immediate revulsion” (Reuter, 1998).

The rapid advances in technology will also expose intuitive resistance - that “gut” feeling that something doesn’t seem right. It is not only religious motives that condemn technological intervention such as AI and IVF. The debate can be more secular. Both AI and IVF are concerned with the creation of “normal” human beings, albeit made possible by technological intervention. Any intervention can provoke rejection, not only some of the futuristic interventions under discussion. Bayertz (Bayertz, 1994, p.82) has described this as “the great uneasiness of the technological revolution of our reproduction process”.

It is important to highlight that even the most rational evaluation of the issues will bear emotive responses and there is some merit in taking intuition and emotion into account in evaluating one’s own views. As the Danish Council of Ethics’ Report on Assisted Reproduction (Danish Council of Ethics, 1995, p.50) acknowledged (but not uncritically):

Issues of what is right and wrong, then, can be said to be so highly discretionary or emotive that there is little point trying to argue one’s way to ethical verdicts. Reproduction - the creation of life is a field ill suited to rationally derived judgments. There is, it is said, far more at stake than merely the question of whether or not couples should be assisted in having children. It is also a matter of our culture, how we approach life and the creation of it, etc. Rational reasoning is too one-dimensional to capture the many facets of these issues. That is why intuition can and must be relied upon and allowed to form the basis of one’s approach to assisted reproduction.

The purpose of this chapter is to critically assess and reflect on the ethical issues that arise in posthumous reproduction at a theoretical level. In practice, however, it would be dishonest not to acknowledge that discussion about these issues will bring to bear personal feelings when making moral judgements. The relationship between reason and emotion need not be at loggerheads and can temper each other as both have a role to play in this kind of decision making.
Theoretical Underpinnings

There are two broad strands of moral theory that underpin the discussion here. They are deontological and consequentialist theories (Beauchamp & Childress, 1989, p.25). The theories chosen are traditional overarching theories. Other theories might include, for example, the ethic of care. Deontological theories (*deon* is derived from the Greek word meaning “duty”) maintain the concepts of obligation and right are independent of the concept of good, and that right actions are not determined exclusively by the production of good consequences. The deontologist contends that even if this feature sometimes determines the rightness or wrongness of acts, it does not always do so. Other features of action may also be relevant. In contrast, consequentialism is the moral theory that actions are right or wrong according to their consequences rather than any intrinsic features they may have. The most prominent consequentialist theory is utilitarianism. Based on the premise that all human beings endeavour to find happiness and to avoid unhappiness, utilitarianism sees the maximisation of happiness and the minimisation of unhappiness as the highest principle or criterion of consequentialist evaluation. Hence, the well-known formula, it is the greatest happiness of the greatest number at stake.

A consequentialist approach is not without problems. A calculation of interests assumes the existence of a universally accepted hierarchy of values and that any differences of opinion may be settled in a quantitative and rational way. In practice, these consequences can be determined in different ways and there is not necessarily any agreement between the different proponents of consequential ethics as to what consequences are to form part of the evaluation of a particular action. As will be illustrated below, in the field of assisted human reproduction, even if consequentialism considers the consequences of all the affected parties, a consequentialist perspective may lead to different conclusions depending on which of the parties concerned is focussed on. In the example of posthumous reproduction there is a tripartite relationship: the deceased father, the mother who seeks to conceive, and the child to be. On the one hand, focus could be on the happiness and quality of life attained by the mother or, the best interests of the child born from these circumstances. Not only these consequences need to be evaluated, but also how does
one assess posthumous benefits (or harms) to the deceased father? This conundrum assumes we have an agreed list of values of the things most important to us yet this assertion is questionable as it is not simply a case of a straightforward calculation of interests. For example, in the posthumous reproduction context, how do we weigh up the consequence of intentionally creating a fatherless family? Which party has a greater interest at stake?

Bayertz suggests that utilitarians are less interested in the moral feelings with which these technologies could come into conflict and more interested in the benefit to be gained for the human being from their application (Bayertz, 1994, p.232):

If morality is not to be an abstract set of rules, but an institution which is there for us, and there to secure collective and individual interests, it seems necessary to make the goals of these technologies and especially the human needs which they are to satisfy, our primary concern, using this information as a basis for all further evaluation.

Bayertz correctly points out that it is mostly objections to assisted human reproduction which have been formulated within deontological analyses, and the potential benefits have been disregarded. An additional consideration is a move away from the consequentialist approach being viewed entirely in an individualistic fashion and taking into account consequences from a community-orientated perspective. The Danish Council on Assisted Reproduction emphasised this perspective, in which first and foremost the consequences for the community and culture is important. They said (Danish Council of Ethics, 1995, p.47):

The community-orientated consequentialist perspective is an expression of a general concern about cultural development and a desire to seek reflexively to influence the development, i.e. seek to control development to a certain extent for the sake of future generations... If regard for the community and culture is to weigh heavily, it is not for the community’s or the culture’s sake, but because in the longer term it is best for mankind to abide by specific norms and values.

This broader perspective of consequential ethics, if combined with respect for individual autonomy, provides a more embracing ethical framework in assisted human reproduction because it allows the bigger questions to be asked about how we construct our lives and what goals we set ourselves and aspire to; does posthumous reproduction challenge our ideas about relatedness between human beings? And, what implications does it have on our society for children to be born this way?
Interestingly, if community orientation is regarded as a consequentialist approach, it embodies a deontological concept of morality by emphasising that collective norms and values need be established when undertaking an evaluation of the new reproductive technologies.\textsuperscript{16} This emphasis on the “responsive community” in political and social theory has come to be known as communitarianism. Amitai Etzioni, an advocate of communitarianism, argues that “strong rights presume strong responsibilities”, and that if the 1980s were the ‘I’ decade, the 1990s must become the decade of ‘we’ (Etzioni, 1993). Communitarianism is, however, based on the premise that these social responsibilities assume peoples commitment to a given set of substantive values and is therefore distinct from consequentialist theory. When considering collective values, moral experience of a society has some relevance. As Sacks says (Sacks, 1997):

> When civilisations forget their past, they too, like individuals, become anxious stutterers in their actions as in their words. Tradition is to morality what memory is to personality, and when we lose it we become prey to a kind of collective Alzheimer’s Disease.

A community perspective also raises significant process issues about how “we” establish what “our” norms and values are as these are likely to change or at least evolve in the longer term. Just as technology in this field has advanced rapidly, arguably so have our attitudes to the use of such procedures. They are no longer the sole domain of those who are infertile. There would appear to be an assumption that these techniques are available to all regardless of fertility status. This view may not have been held at the time of their introduction but is an example of how attitudes to the new technologies have evolved. Complimentary to these moral theories, the notion of autonomy has a part to play in our understanding of the moral issues surrounding assisted human reproduction.

\textsuperscript{16} But note also the distinction between rule utilitarianism and act utilitarianism. For the rule utilitarian, an action conforming to a rule makes it right; beneficial consequences of individual acts do not alone make them right. See Beauchamp (1989).
The principle of autonomy

The principle of personal autonomy plays a central part in the analysis of these issues. Autonomy requires individual self determination be given as much scope as possible. Applied to assisted human reproduction, this means allowing reproductive choices. This is sometimes referred to as the “right to procreate”. It is not be taken as a positive right (claim right) to be able to reproduce, rather, a negative right (liberty) not to be prevented from reproducing, grounded in the principle of autonomy. Thus, there is a distinction between whether we are obliged to intervene positively to facilitate procreation on the one hand, and believing we should not intervene to prevent procreation on the other. If the right to procreate was a positive right it would imply that all who wish assisted reproductive services be given access to them until they achieved their desired outcome; an absolute position that could not be sustained for both pragmatic and moral reasons.

Assisted human reproduction provides a means by which people can reproduce where they might not otherwise be able to do so. In the past the main controversies over procreative freedom have concerned the right through contraception and abortion to avoid reproduction after conception. With the development of assisted reproductive techniques - such as IVF, cryopreservation of sperm, egg donation, and surrogate motherhood - attention is focussed on the nature and scope of the right to reproduce. A person’s interest in engaging in reproduction can therefore be seen as important as their interest in avoiding reproduction.

The concept of autonomy is derived from an analysis of moral action. According to the autonomy principle we ought to respect the choice of competent persons, whatever we happen to think of the consequences for the person themselves. The notion of autonomy has developed historically. Aristotle in his book *Nicomachean Ethics*, emphasised voluntary action. His notion of “phronesis” was centred on deciding what I must do here and now in the particular circumstances. Among others, Kant developed the idea of personal autonomy from being a fundamental condition of ethical action to being an ethical value in its own right and as such deserving of moral respect (Charlesworth, 1993, p.12). His philosophy
revolves around the idea that the moral agent is her own lawgiver and determines "categorical imperatives" or absolute obligations or duties of the moral law to be self-imposed. For Kant, the autonomous moral agent is not just the source of moral value but is intrinsically valuable herself and must be respected by others. Self-determination is violated whenever individuals are "used" and put at the disposal of others. Kant's categorical imperative says (Kant, 1949):

Now, I say, man and, in general, every rational being exists as an end in himself and not merely as a means to be arbitrarily used by this or that will. In all actions, whether they are directed to himself or to other rational beings, he must always be regarded at the same time as an end.... The practical imperative, therefore, is the following: Act so that you treat humanity, whether in your own person or in that of another, always as an end and never as a means only.

To some extent, however, the notion of autonomy is a philosophical construct since no one can really act autonomously in the sense of acting without reference to others. Acting autonomously does not mean that we operate as isolated individuals to establish our own moral codes. Yet, the moral being for Kant is by definition an autonomous being and a person who accepts no other authority than the self. Self-determination does not, however, equate to self-interest. Regard for a person's self-determination as expressed by Kant has a deontological/duty based rationale where weight is given to the freedom to make moral choices. The only condition to this premise is that no harm should be suffered by others. This is the principle enunciated by John Stuart Mill in his essay on liberty. Mill accepted restrictions of an individual's autonomy, but only to prevent clear-cut harm to assignable individuals (Mill, 1946):

The only purpose for which power can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others. His own good, either physical or moral is not sufficient warrant.

Charlesworth says although Mill and other supporters of the liberal ideal purport to justify autonomy in utilitarian terms - the principle of individual liberty leads to the net beneficial social consequences - there is no essential link between the liberal ideal and the theory of utilitarianism. Personal autonomy is an absolute value or intrinsic good regardless of any consequences it may have and it is for that reason
that a utilitarian justification of maximising good and benefit is inadequate (Charlesworth, 1993, p.6).

Robertson (Robertson, 1994a) suggests although many reproductive issues are sharply contested, most people think that personal choice in procreative matters should be strongly respected. This is the strongest argument in favour of assisted human reproduction and examples such as posthumous reproduction. The argument lies in the autonomy principle being applied to those who seek to reproduce in this manner and have the capacity to make such decisions. Robertson’s assertion is based on the premise that the law generally gives wide protection to procreative freedom. It may be true that even New Zealand law is primarily concerned with the effects of reproduction on the resulting children and not the method of procreation. However, the more specific issue here is the nature and the scope of reproduction and not whether such a right exists.

Although the notion of autonomy is sometimes seen as entirely individualistic and self-regarding to the exclusion of all else, this is an incorrect interpretation of the intent of this principle. There is no reason why an autonomous act must necessarily be self-regarding and it would seem that people may make autonomous moral decisions about their responsibilities and duties with regard to others. On this basis, an emphasis on personal autonomy is compatible with an altruistic concern for others and a recognition of collective values. Importantly, autonomy takes place within a tradition and cannot be viewed in isolation. MacIntyre (MacIntyre, 1984) argues that the idea of an “unsituated self”, free to make moral choices unencumbered by attachments, is radically incoherent because it fails to relate the nature of personal identity and its relationship to a political and moral culture.

The following discussion on the principle of autonomy applied to the various parties will demonstrate there are limits to the scope of this principle, and the notion of autonomy alone does not provide a sufficient framework to consider the ethical issues here.
Autonomy of deceased man

How does the notion of autonomy apply to the phenomenon of posthumous reproduction? Respect for autonomy requires consideration of whether the deceased man has given express directions as to what should be done with his sperm after his death. If directions were given in favour of posthumous use of his sperm then one can argue his directions should be respected and the recipient woman partner should be permitted to use his sperm posthumously, despite objections from other parties. In a practical sense, it would be most unlikely for the woman recipient to raise objections if she does not have this reproductive desire herself. The corollary of this position is that if his directions are not in favour of posthumous reproduction then likewise respect should be accorded and no posthumous use is warranted (cases one and two respectively).

Because a person reproducing posthumously is by definition dead, the question arises as to whether a person’s autonomy can survive their death and whether they should be able to determine the fate of their gametes after they have died. It is important to distinguish here between respecting the interests of the deceased compared to respecting his autonomously expressed wish to allow his sperm to be used posthumously. For example, if the provisions of a person’s will are flagrantly disregarded, then it could be a breach of the deceased’s autonomy because his freely expressed wishes were ignored. On the other hand, assuming there was no coercion, the person has acted autonomously in the sense of exercising the choice of writing a will but the subsequent disregard for his will may or may not be in his interests. Respecting the deceased’s self-determination is not even a possibility as the fact of death extinguishes autonomous decisionmaking. That is not to say that the posthumous father has no interests in reproduction after death but rather those interests cannot be evaluated from an autonomous standpoint.

If the deceased man has not indicated such wishes during his lifetime then the fact that his stored sperm is accessible or could be retrieved (case three and four respectively) is not assisted by any deference to the principle of autonomy. It would be difficult to maintain respect for a deceased person’s autonomy where they did not
indicate any wishes regarding the posthumous use of their gametes during their lifetime. To the contrary, prima facie there is arguably a presumption that by not expressing such desires during his lifetime such use was not intended and any moral choice that can be attributed to the deceased retrospectively would suggest posthumous reproduction was not desired by him.

Robertson (Robertson, 1994b, p.1031) argues that if no directions are given, then a person's procreative liberty might not be directly involved, and the interests turn to those other parties; female recipients, family, or even the state, as to what policies should apply in this kind of situation. This argument is flawed because it proceeds on the assumption that once a person is dead "that's it" and there is no moral obligation to them. Robertson is correct that in this situation the person's procreative liberty is no longer involved, but against this, there are other factors about his case that are still involved irrespective of autonomy. The deceased person's interests still have some posthumous significance.

Robertson recognises the limits of reproductive autonomy, especially to the deceased gamete provider (1994b):

The key normative issue is the reproductive importance or significance of advance directives for or against posthumous reproduction. Are they as central and significant to personal identity and meaning as other reproductive experiences are? These questions require normative questions about the premortem importance to living persons of the possibility of postmortem reproduction - an assessment that the principle of autonomy itself cannot answer.

Callahan (1996) believes that autonomy of the would-be parent in assisted reproduction situation has de facto triumphed over all moral objection. Callahan takes issue with the acceptance of anonymous sperm donation (Callahan, 1996, p.41):

To me that is a way of downgrading fatherhood, and violating a basic moral principle; through sperm donation a man is allowed to become a biological father but is not held responsible for the consequences of his act.

Callahan's moral objection may not be to sperm donation per se, but is directed more specifically to the issue of anonymity of the donor. A sperm donor gifts sperm and is not responsible for the child born from the donation. There are of many
instances where obligations of biological fathers are not fulfilled yet the man is still recognised as the father. The same objections to anonymous sperm donation may be attributed to posthumous reproduction where the desires of the father are fulfilled posthumously. In this context, the posthumous father could be said to be avoiding any ongoing responsibility to the child-to-be. The key point is, however, that any autonomy attributed to the posthumous father in expressing such desires during their lifetime cannot be considered in isolation of other parties. An autonomously expressed wish does not place any absolute obligation on the partner to take up this desire for posthumous insemination but in the absence of such a wish the possibility of posthumous insemination is precluded.
The child to be

By definition, autonomy can only apply to those that have the capacity to freely make moral choices. This automatically excludes the potential child to be born posthumously. The principle of autonomy does not focus on the relationship of the child to be with others and the responsibilities within these relationships. Autonomy cannot provide an overall picture of the interests of the respective parties, so it is already limited in its scope.

Those that advocate procreative liberty assert that women and couples ought to decide what forms of treatment and techniques are employed for themselves. In the posthumous reproduction situation this includes the father who makes his wishes known prior to death and the mother who seeks to conceive with her deceased partner’s sperm. Morally, there should be no distinction between those who reproduce naturally and those who are assisted by technology. It is argued the state should have no particular involvement with assisted human reproduction arrangements and these should simply be a matter for the parties involved. The state does, however, take some responsibility for the welfare of children who might be born, but not at the conception stage. The difference with assisted human reproduction is that health professionals are involved at the time of conception compared to normal sexual relations where only the man and woman are responsible for the child created. This raises questions about whether there are relational responsibilities to the future child that may demand limits on the autonomy principle.

Autonomy of the surviving woman

Diane Blood asserted her autonomy by seeking to be inseminated with her deceased husband’s sperm. Her plea was that “we should be allowed to decide for

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17 It is beyond the scope of this paper to cover the wider issue of the role of the state although it should be noted that this issue encompasses the question of regulation of providers of these services, and whether the state has responsibilities to the children born from these arrangements and the generations that follow.
ourselves”. Who does she mean by “ourselves”? Presumably she meant people in her situation taking into account that her husband had died. Mrs Blood sought the right to make this decision on her own without interference of the Human Fertilisation and Embryology Authority which withheld her husband’s stored semen.

Recent discussion on autonomy in the bioethical context has criticised autonomy as being too individualistic and without reference to context, class, race and gender. For example, Sherwin says that by asserting the theoretical primacy of the individual, autonomy-based theories characterise social and moral obligations as essentially secondary to considerations of self-interest and ignore the fact that our sense of ourselves and our preferences is very much a product of our social history and current circumstances (Sherwin, 1996). Total deference to autonomy may also overlook vulnerable parties to assisted human reproduction in which, for example, women are bound by preconception contracts (surrogacy arrangements) to gestate the children of wealthier couples. So-called reproductive choices in a context where a woman is vulnerable to coercion place limits on the woman’s ability to truly exercise a choice (Sherwin, 1992).

It is of course possible to draw the exact opposite conclusion, namely, that if a woman is free from coercion then these reproductive choices enhance a woman’s autonomy by creating more options for her to exercise. Feminists who claim assisted human reproduction to be coercive say that a choice is illusory, because in a culture that defines a woman’s identity in terms of motherhood, the fact that women participate in the new technologies does not necessarily mean that they are truly free not to participate. Similarly, on this view, it could be said the choice to have children by natural procreation is illusory. Individual choices are embedded in a social contexts, and the context in our culture is such that “a childless woman is an unenviable social anomaly” (Lauritzen, 1995, p.318).

A distinction is made here between exercising agency (the making of a choice) and autonomy (self-governance). The feminist criticism is that agency is equated with autonomy but the two are not the same. Traditional views of autonomy fail to examine how specific decisions are embedded within a complex set of relations and policies
that constrain (or, ideally, promote) an individual’s ability to exercise autonomy with respect to any particular choice. The analysis of autonomy is often limited to the quality of an individual’s choice based on the acceptance of the prevailing social conditions and may, for example, fail to inquire why some people do not even seek health services in the first place (Sherwin, 1998, p.33).

Whilst the issue of coercion is considered here in the context of infertility per se, it has some application to the posthumous reproduction situation as a grieving widow may have her autonomy compromised by either self-imposed, family or societal pressures to conceive posthumously she should do so. If the option of posthumous conception was not available to her the potential for these expectations would not exist. The starting point could be a presumption that the surviving woman in this situation is capable of making free and voluntary decisions and her autonomy ought to be respected. This is exactly the position Diane Blood argued. This presumption could be overturned if other factors such as coercion come to bear. A wider notion of autonomy applied to the woman partner allows us to discern genuinely autonomous behaviour developed and constrained by the woman’s relationships with others and her social circumstances.

**Autonomy and the scope of this principle**

Appeals to a claim of autonomy alone will not provide general agreement on these issues. There are many examples in the field of assisted human reproduction generally that show a clear shift in ethical discussion away from the primacy of autonomy to focusing on the kind and amount of evidence sufficient to restrict individual liberties. Reproductive choices are made by more than one person and they involve decisions not just about ourselves but the resulting child and other generations. The existing paradigm of autonomy does not provide these answers and whilst respect for autonomy is a central value, individual choice will not always triumph ahead of other interests. Just as Mills qualified individual liberty, the Canadian Royal Commission said this (Canadian Royal Commission on New Reproductive Technologies, 1993):
...in a caring society, personal autonomy is not a value that trumps all others, and society may see fit to place limits on the exercise of free choice when the choice concerns an activity that society regards as fundamentally incompatible with values such as respect for human dignity and the inalienability of the person.

Determining the significance of these underlying values may assist in resolving the dilemmas in posthumous reproduction. It requires an assessment of the meaning of reproduction to individuals in a range of circumstances where the possibility of posthumous reproduction may come about. Respecting personal autonomy is an important value in its own right but it cannot be considered in isolation from the needs of others and collective values.

**Harms versus benefits**

Ethical analysis in these situations is often reduced to weighing up the harms versus benefits to the parties involved. As already discussed above, reducing arguments to a consequentialist assessment of the harms and benefits relativises the values involved and this approach has flaws. In posthumous reproduction the analysis is quite complex as there is a tripartite relationship; the deceased father, the mother wishing to conceive, and the child to be born. Each of these primary parties has the potential to benefit from posthumous reproduction and likewise may be vulnerable to harm. An assessment of harms and benefits generally requires a consideration of whether the party is worse off or better off with, rather than without, the particular intervention.

The benefits in posthumous reproduction could be considered as follows: to the deceased by achieving his wish of postmortem fatherhood; to the woman wanting to bear a child in memory of their late partner; and the child (and siblings) to continue the family line in their father’s memory. For example, dying patients may take comfort in the fact that they have children to succeed them. One can understand that if these procreative desires have not already been fulfilled then they may have some satisfaction in knowing that this is a possibility after they die. This may be seen as a benefit during their lifetime to die in the knowledge that their wishes may be fulfilled. Strictly speaking, there can be no *posthumous* benefit as such because the gamete provider will not know the outcome once he dies. However, if he wants to reproduce
in this way (that is, without parenting the child), there may be a range of reasons, such as the desire to pass on one's genes where the benefit relates to the notion of kinship, or to "gift" a child to one's partner or indeed, to share in the making (but not parenting) of a child. Any such benefits are dependent on the surviving woman partner following through with posthumous insemination.

There is a significant difference between the benefits of posthumous reproduction and situations where assisted procreative techniques are utilised to overcome infertility. Assisted human reproduction provides a therapeutic solution to infertility which cannot be overcome in any other way (other than adoption). In contrast, although posthumous reproduction could be considered as overcoming social infertility because the male partner in the relationship has died, it is really more about a lost opportunity during a lifetime. The woman partner may still have the opportunity to conceive through other relationships and the reasons for pursuing this option may not always be entirely clear. Certainly, if no express wish was expressed by the man during his lifetime it is hard to establish any posthumous benefit to him.

It should be noted that applying a consequentialist analysis of harm and benefit also has a bearing on other parties, including possible societal benefits and harms. In this context, societal harms and benefits refers to the social consequences to the community or society as a whole rather than the individual consequences to the primary parties involved. These consequences could include the financial cost of the state assisting in facilitating assisted techniques or subsequently taking responsibility in protecting the child. It is certainly a moot point as to whether these "harms" are anything over and above those associated with all children regardless of their manner of conception.

In assessing what is morally harmful, one of the difficulties is measuring the unknowns or potential harms. Steinbock in her essay, "Liberty, Responsibility and the Common Good" (Callahan, 1996) says that Mill's theory of liberty is flawed in three ways. It fails to (1) account for incremental harm; (2) recognise intangible harms as significant; and, (3) allow for the promotion of common goods. Steinbock identifies a logical and conceptual slippery slope where it is hard to distinguish between two acts:
“A” isn’t very different from “B”, so if “A” is morally permissible, why isn’t “B”. But then “B” isn’t very different from “C”, so “C” too must be permissible, and so forth until we get to “Z”, which seems clearly outrageous but can no longer be rejected.

An example of trying to avoid this kind of slippery slope is the Report of the Royal Commission in Canada, which condemned the selling of all reproductive materials and capacities. It found that no profit should be made from the selling of any reproductive materials, including eggs, sperm, or zygotes/embryos, because of its ultimately dehumanising effects (Canadian Royal Commission on New Reproductive Technologies, 1993, p.447). Steinbock argues that if the Royal Commission did not draw the line at sperm banks, they would be unable to resist conceptually the justification of surrogate motherhood. Better to issue a blanket condemnation of commercialising reproduction.

According to this slippery slope argument, individual techniques must be seen as part of a development. Assisted human reproduction involves commercial interests behind this development. Within this range of new reproductive techniques lies the concern that over the last 50 years, the human body has gradually been commodified. Kimbrell says (1996, p.20) :

In response to the demand for body materials, more and more people are selling parts of themselves - their blood, organs and reproductive components (eggs and sperm) - more often than not because of their economic circumstances, while high-tech entrepreneurs are reaping billions of dollars in profit.

Kimbrell also reports that sperm is the leading reproductive commodity currently on sale. In the United States over 11,000 doctors provide artificial insemination to about 17200 women each year. There is a “thin edge of the wedge” type argument here that despite posthumous reproduction involving relatively safe techniques such as DI and IVF, it is part of a wider development of commercialisation of the reproductive process. This is embodied in the impersonal language used, for example, the harvesting, deep-freezing and sperm-banking of sperm, and thawing of eggs. Gametes have come to be regarded as things detached from the people from which they originate.
The slippery slope argument rests on two premises. Firstly, developments in this field will lead to situations where it is not possible to set limits. Secondly, the slippery slope is morally worse as you travel its path. In answer to the first, this fear need not be sustained so long as there are adequate checks and balances that allow for well defined limits. The second premise is neither logical nor is there any evidence to support this kind of assertion that through the introduction of new applications of these technologies society is in some way worse off than it would be by closing our eyes to potential new developments. Changes are likely to occur whether we like it or not and society will inevitably be influenced by these changes.

It is beyond the scope of this paper to fully analyse the notion of societal harms save to suggest that these harms or potential harms are best addressed through agreed processes such as ethical review where the development of a new technique or procedure can undergo ethical scrutiny from health professionals and the community. It goes without saying that consideration also needs to be given to societal benefits in this context. A pluralistic society can embrace the advantages of these new technologies. The cryopreservation of sperm was initially treated with some caution but for many people undergoing assisted reproductive techniques it is now a routine safeguard to ensure adequate screening. We turn now to assess possible harms and benefits to the individual parties of the tripartite relationship.

**Posthumous fatherhood**

Can a dead person be harmed in any way by the acts of the living? Without sentient response of any kind, it would be hard to conclude that a comatose man or a deceased man is harmed by having fatherhood imposed or not imposed on him after all his bodily functions have ceased. Likewise, psychological harm to deceased persons has little meaning in this context. Commentators have said that it may be possible to argue in the narrow sense that the dead may be harmed by insults just as they may be dignified by praise regardless of whether or not they could know about it (Mohr, 1992). Feinberg has argued that although death is the total and final end of the person, one may still be harmed or have his interests invaded after his death through such iniquities as the abrogation of his will, the voiding of contracts, the breaching of
promises, or the spreading of false rumours (Feinberg, 1977). Feinberg also acknowledged that the issue of posthumous interests and posthumous harms presents “a hard case” for disputants on either side of this issue.

The most famous doctrine of posthumous harms and benefits is in Aristotle’s *Nichomachean Ethics* where Aristotle argued both sides of the question, finally settling for the conclusion that, while posthumous events affect us for better or worse, the effects are relatively minor (Aristotle, 1976). When considering the question, “Is it only when his life is completed that a man can rightly be called happy?” he said:

....if we deny that a dead man is happy - if Solon’s words mean something else, namely that only when a man is dead can one safely congratulate him on being immune from evil and misfortune - even this admits of some dispute; for it is popularly believed that some good and evil - such as honours and dishonours, and successes and disasters of his children and descendants generally - can happen to a dead man, inasmuch as they can happen to a live one without his being aware of them...but it would also be absurd for the experiences of the descendants to have no effect, even for a limited period, upon their ancestors.
(Nicomachean Ethics, 110a10-34)

Aristotle does not reach any particular conclusion on this issue. As to the question, ‘Are the dead affected by the fortunes of those who survive them?’, he says:

The notion that the dead are not affected at all by the fortunes of their descendants or any of those whom they love seems unduly heartless and contrary to accepted beliefs...... So it appears that the dead are affected to some extent by the good fortunes of those whom they love, and similarly by their misfortunes; but that the effects are not of such a kind or so great as to make the happy unhappy, or to produce any such other result.
(Nicomachean Ethics, 1101a20-b9)

Whilst Aristotle may be correct in his assumption that the dead are affected by the fortunes or misfortunes of their descendants, such affect does not, in the writer’s view, reach the threshold of a moral requirement to satisfy the desires of the dead at all costs. There is more likely to be a neutral position of neither a harm nor a benefit. The only exception to this position might be where the deceased in his lifetime

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18 Interestingly, the law prevents an action for defamation on behalf of a deceased person. The tort of defamation protects only the reputation of the living. Even if the defamation took place in the lifetime of a person now deceased, no action can be brought or continued after their death by their personal representatives: Law Reform Act 1936, section 3(1).
expressly shows this desire of posthumous fatherhood and can be said to benefit from the knowledge of this possibility. Only then is there any moral weight to be attributed to that expressed wish to avoid the notion of any possible harm.

One philosophical underpinning to the concept of posthumous benefits and harms is the utilitarian argument in favour of the experience requirement. This requires that a state of affairs can make one better off only if, in one way or another, it enters or affects a person's experience. Griffin asserts that there are posthumous harms and benefits and therefore the experience requirement is false (Griffin, 1986). In contrast, Sumner, when considering a theory of welfare, argues in favour of the experience requirement and cites posthumous cases as the most dramatic instances in which the fulfilment of a desire fails to benefit us because it has no impact, direct or indirect, on our experience (1996, p.127):

The issue of whether posthumously satisfied desires can benefit their erstwhile holders is a hotly debated one. Some people find it just obvious that the dead can be neither benefited nor harmed, while others find it equally obvious that lives are capable of retroactive prudential improvement.

Griffin rejects the experience requirement in an attempt to restrict what he calls "the informed-desire account". Whilst Griffin finds that a lot of the desires of the dead do count morally, this is because they affect the living. If the desire of a dead man does count morally it does not in any event count towards that individual's wellbeing (Griffin, 1986). It would be hard to justify the experience requirement as a precondition to posthumous birth. Unless the deceased has procreated during his lifetime, it goes without saying they cannot have the experience of fatherhood themselves once dead. The relevance of the reproductive experience in this context is to highlight its normative value on its own, which cannot be realised once dead.

Having considered the deceased's wish may be taken into account, it should be noted that this is but one factor (and one voice) to be considered in the decision to reproduce posthumously. There may be a range of reasons why this wish may not be carried out and it would not, for example, create a positive obligation to use reproductive technology to fulfil these desires. But, because the reason for leaving stored gametes behind after death is the wish to secure children, an explicit or
testamentary wish for their use by the partner during her reproductive life should, if
she wants to conceive in that way, be respected. Important in this consideration is the
fact that there has been an express wish communicated to others, particularly the
deceased’s partner. The deceased can be said to benefit during his lifetime from the
knowledge that his wishes may be fulfilled after he dies (case one). The corollary of
this position is there ought to be respect accorded to the wishes of men who when
alive do not wish to become fathers posthumously (case two).

In the situation where the gamete provider’s sperm is already stored for other
reasons, (case three), the harms and benefits to the gamete provider are not morally
significant enough to justify preventing posthumous insemination where it can be
established that there would have been no positive objection; the onus being on those
surviving to establish that this was the case. Justification for reproducing
posthumously is not extended to the situation of harvesting of sperm from a comatose
or recently deceased man where there has been no contemplation by him during his
lifetime to reproduce posthumously (case four). This position is contrary to that of one
commentator who advocates that all men shall be presumed to consent to this
procedure should they lapse into a braindead condition, subject to a prima facie
obligation to honour any wishes expressed by men prior to brain death that such
harvesting does not occur (Murphy, 1995, p.395). This stance, the writer submits,
would come as a surprise to most men and is likely to be controversial. To the
contrary, a prima facie presumption operates in the opposite way, namely, that where
there is no prior contemplation of posthumous reproduction by the gamete provider,
retrieval of sperm without their consent is morally unacceptable. In addition, the
retrieval of sperm is a physical intervention on the comatose or deceased man and
constitutes a physical harm (or at least, an unwarranted intervention). The deceased in
this situation cannot be said to have benefited as he had no knowledge of this
possibility during his lifetime. Without consent for retrieval of sperm there is a
physical harm as well as possible moral harm to him.

Finally, it should be noted that even if the position is found to be that
posthumous harms and benefits to the deceased have a morally neutral effect, then
there is no positive obligation to intervene. A cautious approach would be that the
status quo is the starting point, and if the deceased has made no provision for storing his sperm or at least indicating this intention then it would be hard to conclude that the actions of retrieval would have been condoned by him.

**Child-to-be**

A common thread of arguments in assisted human reproduction give primacy to the best interests of the child. This is really a legal principle but also represents the moral principle of beneficence; not only should we treat persons autonomously and refrain from harming them, but also there is a requirement that we contribute to their welfare (Beauchamp & Childress, 1989). As we have already established, the child has no say in reproduction and is not an autonomous moral agent. Nobody has a right to be created and born, or not to be created or born, regardless of the method of conception. Therefore, there is no weight to be attached to the idea that it is better to be born than not at all, as this requires us to determine whether no existence is more desirable than an existence without a father.

Until recently it was thought that the utilisation of assisted reproductive techniques creates no greater physical risks to the foetus than those risks attached to the techniques themselves. (This can include the risks associated with multiple births). The recent report of possible greater risk of developmental delay in children born through ICSI may throw some doubt on this (Bowen & Gibson, 1998). If research leads to heightened concerns over ICSI there will be significant safety implications on use of ICSI as a method for posthumous conception. If empirical research showed actual physical harm or confirmed developmental delays to children then such risks would shift the ethical debate considerably over applying ICSI in the posthumous reproduction situation and the physical risks would outweigh the possible benefits. This would not necessarily prevent other safer techniques such as IVF being utilised, but as already observed ICSI has certain advantages because few motile sperm are needed for the technique to succeed.

In addition to possible physical risks are the possible psycho-social harms on these children born by ICSI. These harms may include genealogical bewilderment
about their origins. However, the bewilderment may not be in issue to the same extent as in situations of anonymous donors. In the posthumous reproduction situation, the child is most likely to know who their father was but will be born fatherless. Posthumous reproduction does, however, challenge our idea of family and endorses the acceptance of single parenthood. Even if it were established that there are significant psychological consequences to children born through assisted reproductive technologies, it does not necessarily follow that posthumous reproduction should not take place and consideration would need to be given to explaining to the child the circumstances of their birth.

The best interests of the child may justify a more restrictive approach due to the difficulty of measuring unknown or possible harms. Until any empirical assessment is undertaken there is considerable difficulty in making any assessment on this ground unless one argues that the fact of the unknown harm itself presents an unjustifiable risk. When considering possible harms to children, the Ethics Committee of the American Society for Reproductive Medicine recently stated that the burden to a child of being a product of posthumous reproduction is not completely known (Ethics Committee of the American Society for Reproductive Medicine, 1997):

When reproduction takes place as a consequence of a loving relationship in which both partners were desirous of children, but a pregnancy is frustrated by the death of one partner, posthumous reproduction ordinarily would be well accepted both socially and culturally. The psychological impact on the child should be minimal and within the range of experiences that occurs with posthumous births over the years. There is less certainty of the impact on the child and more caution should be exercised for posthumous reproduction that occurs with the use of donated gametes from unrelated individuals who are not living and may have been deceased for several years, as may occur with the use of commercial banks as a source for sperm, frozen embryos, or ova.

These words of caution are directed specifically at the third party donor situation rather than the posthumous use of a deceased partner’s gametes. In either case this Committee described the child at birth “... to be subject to the burden of having lost one genetic parent”.

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19 See discussion above on the concept of family and parenthood on page 22.
If the Kantian categorical imperative is applied then children should be an end in themselves rather than a means to someone else’s ends. This imperative is concerned with the way we treat people. In this context it would mean that the child so born should not, for example, be sold or commodified in any way. The desire to conceive a child genetically related to a deceased partner may dominate the motive for proceeding with posthumous reproduction. A longed for child such as this would not contravene Kant’s dictum. It is hard to raise any moral significance to this desire because parental desire to have children in normal circumstances may also be for reasons of self-interest. Although possible and unknown harms are suggested, the result is an unsatisfactory position of not being able to make an accurate assessment of the impact of posthumous reproduction on children.

**Surviving woman wishing to conceive**

While philosophers have argued for and against posthumous benefits and harms to the deceased, little is said about the impact of possible harms on the woman partner that seeks to conceive. For example, the statement on posthumous reproduction developed by the American Society for Reproductive Medicine’s Ethics Committee makes no mention of the surviving woman partner. There is only reference to the gestating woman in the case of a widower wanting to use frozen embryos or ova for posthumous reproduction after his wife has died (Ethics Committee of the American Society for Reproductive Medicine, 1997). It is hard to avoid the fact that such desires affect parties other than the deceased and it is the likely impact on the living that should have some weight. In addition to considering possible harms to the child-to-be, it is the potential harm and benefit to the surviving woman which have more significance in the context of posthumous reproduction. After all, it is she that is left living with the consequences of her deceased partner’s desires. An express wish of the deceased partner or lack of the same as in the Blood case does not, however, oblige her to comply, and leaves her to decide whether or not to exercise this reproductive choice.

An initial appraisal could suggest that this practice is entirely favourable to women who, as in Mrs. Blood’s case, would be otherwise deprived of the opportunity
for a child fathered by a man whom she loved. The practice could be said to enhance their freedom to reproduce, having lost the opportunity during their partner’s lifetime. But the desire to undertake what is possible through the new reproductive technologies is arguably yet another way that the practice of medicine exerts considerable hegemony over the lives of women. Such dependence on medicine, particularly in the therapeutic context, can be beneficial, as modern medicine has enabled life saving-interventions and interventions that can enhance the quality of life. Even Murphy, who argues in favour of post-mortem fatherhood, acknowledges that medicine in the form of these new technologies is devising yet new ways to extend dependency of women on its services (Murphy, 1995). Access to post-mortem fatherhood may prove an ambiguous benefit for women if it does in fact increase their dependence on medical technology when they might in usual circumstances reproduce without any technological assistance at all.

A potential harm for women is coercion operating at a societal level. As already observed in the discussion on autonomy, the relationship between autonomy and altruism is an interesting one; altruism emphasises the interdependency of relationships which the notion of autonomy does not necessarily take into account. A grieving woman faced with the gift of sperm from a deceased partner, may feel morally and psychologically obligated to accept such a gift and bear a posthumous child. The motive of the widow, family relations and others seeking to either harvest sperm from a braindead man or to preserve a woman’s ova are likely to draw from the entire range of human incentive to have children. Similarly, the deceased woman may gifts her ova for use by her husband and a surrogate partner. Murphy questions (1995): “...to what extent the request is emotional ephemera, transient artefacts of grief and therefore not worthy of consideration.”

An altruistic ethic in these circumstances can create problems. For example, those critical of commercial surrogacy often contrast it to non-commercial or altruistic surrogacy. But feminist literature has criticised altruism as one of the most effective blocks to women’s self-awareness and demand for self-determination. Raymond describes altruism as (1995, p.306):
...an instrument structuring social organization (sic) and patterns of relationship in women's lives. The social relations set up altruism and the giving of self have been among the most powerful forces that bind woman to cultural roles and expectations.

Furthermore, altruistic reproductive exchanges leave intact the status of women as what Raymond calls the "breeder class". The Royal Commission of Canada considered altruistic egg donation by women willing to undergo ovulation induction and egg retrieval in order to donate eggs retrieved for use in an unknown recipient. The Commission did not believe that it is ethical to permit such an invasive surgical procedure, with its attendant risks, on an otherwise healthy woman for the benefit of someone else, particularly in the absence of information about the longterm effects of these procedures. The Commission concluded that eggs for donation be obtained only from women already undergoing surgical procedures or egg retrieval as part of their own treatment and that egg retrieval exclusively for the purposes of donation should not be permissible. The Commission queried what is meant by altruism in this situation (Canadian Royal Commission on New Reproductive Technologies, 1993, p.592):

It is essential to ask, for example with respect to oocyte donation and contract motherhood, what is altruism? What kinds of altruism are good, and what kinds may be problematic for those, primarily women, who are expected to be altruistic? Why should there not be more emphasis on male altruism in reproduction? C.Overall, Reviewer of research volumes of the Commission, 1992.

Whilst altruism is an admirable trait, it can be a double edged sword. In posthumous reproduction, overbearing expectations imposed by family and the woman herself could lead her to the position of having an invidious sense of duty to carry out the deceased partner's wishes or that of the family. Once again, it is difficult to justify on a moral basis any question of motive, and an attempt to quantify such possible harm is fraught. Such pressures may exist in ordinary family relationships regardless of the specific considerations in posthumous reproduction.

Concerns raised about coercion would not in the writer's view, on their own, prevent the woman partner from exercising posthumous use of her partner's sperm. However, an assessment of the possible impact on the woman partner requires all the protections one would expect in obtaining her informed consent for any medical procedure, including a suitable timeframe for decisionmaking free from coercion, and
in this instance, the opportunity for implications counselling. Whether or not a time limit should be put on how long after death such gametes might be used is problematic. A stand-down period to avoid immediate use may be appropriate. For example, a request by a widow to reproduce with her deceased husband’s sperm was made to a fertility provider. The request was subsequently withdrawn as she was in a new relationship. It is not clear whether the interval between death and gamete use would affect the woman’s wishes and the outcome, but the general presumption may be that such use should occur within an interval of no more that a few years (Ethics Committee of the American Society for Reproductive Medicine, 1997).

Having considered the application of the ethical principles of autonomy and the benefits and harms to the parties involved, this paper will next discuss whether any moral status can be attributed to gametes and briefly draw some comparisons with organ donation.

The moral status of gametes

According to the Chairperson of the Warnock Commission, the most important issue raised by reproductive technologies is when a developing entity acquires a distinct moral status and how we ought to treat it as a result (Warnock, 1984, p. xvi). The question of status is often considered under the philosophical distinction of person or non-person; the significance of declaring someone or something a person, is to include them in the moral community and confer upon them all moral rights, including the right not to be killed (Holm, 1996).

Gametes are not fertilised and therefore, unlike zygotes and embryos have not begun the path of creation to become a person. Even so, there is much debate over the point at which the human embryo achieves moral status. When considering the moral status of the zygote or embryo, the Canadian Report considered the complexity of the processes involved. An embryo cannot be seen simply as a function of its potentiality

\[20\] NECAHR minutes 17 February 1998.
due to the continuous process by which human life develops. Its potentiality begins before fertilisation and, “zygotes are connected to the human community by their past and their present, not only their future” (Canadian Royal Commission on New Reproductive Technologies, 1993, p.635). The approach taken by the MCART report on this point is that there is great value in acknowledging that all tissue has mana. This means that not only the embryo but also gametes should be accorded dignity (MCART, 1994, p.29). This perspective implies there are inherent features of gametes (and tissue) for what they are rather than trying to draw any comparative status between fertilised and non-fertilised genetic material.

Much of the discussion in this area centres around the potentiality of the “thing” or genetic entity. It is the information that gametes contain and their capacity for genetic expression that is significant. That potential is lost on many occasions when sperm and ova are disposed of as human waste without a thought for the consequences. In practical terms, they are not useable and will not be mixed with other gametes to produce a new individual. Biologically speaking, a significant proportion of sperm are lost in the natural course of procreation despite the possibility of successful fertilisation of one or more ovum (just as ova are expelled through menstruation). The moral significance of gametes lies in their uniqueness and their potential to create human life. If the intention to utilise that potential is not there their significance is lost. The storage of gametes by the gamete provider is one way in which the probability of potential fertilisation is increased. For gametes to be accorded dignity as suggested by MCART, account needs to be taken of the context in which their potentiality is recognised. The potentiality argument is weaker at the pre-fertilisation stage as their potential is contingent on fertilisation. A logical extension of this line of argument is if moral status grows with the developing human being then gametes have less moral status than embryos. This is not to say there is no moral status at all attributed to gametes, but relatively less than embryos.

Jansen (1985) discusses what is it about sperm and ova that is different from the use of body parts and tissue where there is no firm dominion over the right of ownership or legally-enforceable control over the separated parts. He points out that
with gamete donation there is donation of genetic information and it is this special attribute that the reproductive tissues, the germ cells, do not share with other tissues.

Even though these other tissues contain millions of living cells, each carrying all the genetic information needed to code for the synthesis of a person, the specific difference is that the genetic information carried by sperm and ova is useable. It is this single fact that makes the gametes so special.

This observation may already be outmoded with the advances of gene technology as tissue can be used by means of cloning. However, as an example, DNA in body tissue is much less readily useable genetic material than gametes. Despite this, DNA technology is protected legally through patents. Jansen relates this substantial potential of gametes to ownership by the gamete provider. He says, the potential should always remain the responsibility, the provenance, the dominion and perhaps the property of the donor (1985, p.125):

Some of the debated issues would be clarified by acknowledging that this area of human dominion, namely control over genetic expression among offspring, is still important after sperm, ova or embryos are parted with.

Commentators have debated whether gametes may be considered property. For example, Steinbock argues, whilst parents have the right to control virtually every aspect of their children's lives, they do not own their children and children are not property (Steinbock, 1995, p.62). As a fundamental principle people are not property. An example of this is the general ban on baby selling in most jurisdictions. Baby-sellng is regarded as potentially harmful to children, since if they are regarded as commodities, it is unlikely that their best interests will be considered. Steinbock therefore queries the analogy of equating ownership with control on the basis that it ignores the moral question whether sperm is the sort of thing that should be donated, stored, sold and bequeathed by will. A better approach advocated by Steinbock is to first determine what may permissibly be done with sperm. If there is a strong moral, legal, or policy argument against allowing individuals to store sperm for the purposes of posthumous reproduction, then sperm should not be considered property for that purpose. In the absence of a compelling argument against posthumous reproduction, individual autonomy should prevail, and sperm is correctly regarded as property that can be bequeathed by will (Steinbock, 1995, p.66).
A similar distinction between ownership and control is supported by Munzer who uses the bundle metaphor. He contrasts the popular conception of property as "things" with the sophisticated conception of property as a "bundle" of normative incidents. Therefore rights in relation to control - use, manage, dispose of, transfer exclude others from, and so on of a body - should be seen as limited property rights rather than ownership (Munzer, 1990). It has been suggested that the distinction between ownership and control really lies between people treating their own bodies as property (and having dispositional control) rather than their bodies being treated as property by others (for example, ownership of others through slavery). It is the latter approach that raises fears, justifiably so, in the context of organ tissue donation, particularly when considering the sale of body parts. Andrews argues not that people be treated by others as property, but only that they have autonomy to treat their own parts as property, particularly their regenerative parts (blood, cell lines, urine, semen) (Andrews, 1995). While a call to autonomy of decision making as regards to the disposition of gametes is desirable, this analogy with property yet again fails to take account of the intrinsic and special nature of gametes.

The writer suggests that rather than use the concept of property, a less exclusive proprietary right is a better moral stance to take in relation to the status of gametes. The expression "dispositional authority" goes some way to convey control without blanket ownership and exclusive rights generally associated with the legal concept of property. The moral issue here is that to restrict the interpretation of gametes to a "thing" fails to take into account of the contextual features and the relationships involved. A sperm can't do much on its own in isolation from an egg. It is only the possibility of fertilisation and genetic expression that raises its status. The moral status of gametes lies more in their intended use and potential for life than simply regarding them as something that can be transacted or sold.

An analogy with organ donation?

It would seem dangerous to draw too close an analogy between live organ donation and gamete donation for the purposes of posthumous reproduction. In the former situation organ donation is life-prolonging, compared to semen harvesting and
egg retrieval where the purpose is life-creating. The same imperative to gift or donate gametes is not as compelling as actually saving the life of an organ recipient. Arguments for organ donation are based on the benefits to the organ recipient where there may be obligations (perceived or real) placed upon the donor. The significant difference with organ donation is the altruistic imperative to save the life of the organ recipient. The recipient who benefits in the posthumous reproduction context would be the woman partner seeking to conceive. Against this, live organ donation places sometimes significant physical risks on the donor whilst alive. The same physical risks cannot be compared to sperm retrieval, although egg retrieval for the purposes of ova donation has significant risks where women are subject to invasive surgical procedures and drugs for ovulation induction.

This next-of-kin veto in organ donation may be a helpful model for decision making by the family of the deceased gamete provider where no express wish for posthumous reproduction has been given during their lifetime or possibly even where the family wish is contrary to the express wishes of the dead person. The right of veto would not necessarily place any obligation on the surviving woman partner to use the sperm, but would allow her to decide whether the deceased’s sperm should continue to be stored, destroyed, or even retrieved for reproductive purposes. (Even this proxy decision making authority may be fraught where there is more than one woman who has an interest in being the recipient of the deceased’s sperm!) The analogy of family decision making in organ donation with posthumous reproduction still might not hold, as all the objections previously raised with respect to possible harms to the deceased could negate any proxy decision making on the deceased’s behalf and the permissible use of the procured or stored semen.

The involvement of family in the decision making concerned with organ donation may be a helpful model where there is no possibility of obtaining consent from the gamete provider for posthumous reproduction (cases 3 and 4). The use of this model for posthumous reproduction may still be limited by the moral objections of possible harms to the deceased gamete provider previously raised. Even if it could be said that there is no moral significance of harms to the dead (which Aristotle implies), the analogy with organ donation is flawed because the use of sperm may
lead to the creation of another human being. This is quite a different situation to that of organ donation where the organ donor and relatives have no moral responsibility to the donated organs. There is also less imperative to proceed with posthumous reproduction as it is a life-creating situation as opposed to the life-prolonging significance of organ donation.

Summary of the ethical considerations in posthumous reproduction

The principle of autonomy applied to posthumous reproduction means allowing reproductive choices. An emphasis on personal autonomy can be compatible with an altruistic concern for others and a recognition of collective values. Determining the significance of these values may assist in resolving the dilemmas in posthumous reproduction. Appeals to self-determination alone will not resolve these issues. Autonomy is limited in its scope as applied to the primary parties for the following reasons:

- children born from posthumous conception are excluded;
- self-determination of the deceased gamete provider is not a possibility as the fact of death extinguishes autonomous decision making. Respect may be accorded to the gamete provider's wishes expressed during their lifetime but if no such wish was indicated then there is a prima facie presumption that the gamete provider did not intend posthumous use of their gametes;
- the woman partner has the best opportunity to exercise autonomy. There is a tension between enhancing autonomy by posthumous reproduction creating more options for her, and, an illusory choice if there are no safeguards to ensure voluntary and informed decisions are made by her.

At the beginning of this chapter, reservations were expressed about reducing ethics to a consequentialist analysis of harms and benefits. The difficulty of using this approach has become very apparent as it proceeds on the assumption that there is a mechanism for prioritisation of values that can be measured and pitted against one
another to determine whether each party is worse or better off. The following questions arise concerning attempts to measure values:

- Can the dead be harmed in any way by the acts of the living?
- Should we value the desires of the dead ahead of those of the living?
- In the absence of clear directives from the gamete provider, can there be implied consent and what considerations are important?
- Does the possibility of coercion on the woman partner and societal pressures to engage in reproduction justify restricting posthumous reproduction?
- How do we measure the likely impact on children of knowing they were conceived using sperm from a deceased father?
- Is it possible to determine whether no existence of the child is more desirable than an existence without a father?

In addition to weighing the values themselves, lies the problem of comparative interests of the parties. Questions here include:

- Should the interests of the child prevail over those of their parents and if so, does the possibility of harm or unknown harm to the child rule out posthumous reproduction in all situations?
- How do we rank posthumous harm (if that is possible) to the deceased gamete provider?
- Should the surviving partner's interest prevail in total disregard to the deceased's wishes?

Not only does a consequentialist approach restricted to narrow considerations of immediate parties raise these problems, it is also not sufficient to address the ethical issues that arise independently of the consequences to the parties involved. A broader framework for consideration of these issues highlights a number of social and cultural themes that have emerged:

- The value and meaning of the gamete provider not participating in the reproductive experience cannot be assessed in isolation from other parties: the nature of the
relationships surrounding the gamete provider, the context of his death and reproductive desires.

- The phenomenon of posthumous reproduction may underlie a basic human reluctance to acknowledge finiteness and mortality.

- The moral status of gametes is contingent on the context in which their potentiality is recognised - the fact of storage increases that potential as does fertilisation and the creation of embryos.

- Attempts to define gametes in terms of property defines the relationship between the gamete provider and sperm in terms of ownership rather than addressing the moral question of whether gametes should be stored and used for posthumous reproduction and what may be permissibly done with them.

- There are distinguishing features between organ donation (life-prolonging) and gamete donation (life-creating) for the purpose of posthumous reproduction. Gamete donation does not have the same beneficial imperative as organ donation yet there is greater moral responsibility because the use of sperm may lead to the creation of another human being. Organ donation may provide a useful model for involving family in decision-making.

- Assisted human reproduction challenges our concept of family and relatedness to one another. Posthumous reproduction involves intentionally creating a family where one genetic parent is not alive at conception of the child. However, there is no moral justification per se for prohibiting the deliberate creation of a single parent family.

- Kinship theory is concerned with the cultural constructions of biology and may assist in our understanding of the impact of posthumous reproduction on family formation and the subtle shift towards consumerism and parental desires.

- A bicultural approach to posthumous reproduction allows recognition of difference and diversity, within and between cultures. Principles for Māori (which may influence non-Māori) include the protection of whakapapa, values inherent within whanau, hapu and iwi (including recognising the practice of whangai), and informed consent and culturally safe processes for consideration of these issues.

None of the above propositions alone will determine the acceptability or otherwise of posthumous reproduction. What is required is consideration of these
themes in their totality as a basis for critical reflection of the ethical issues involved. Each of the four factual cases raised earlier place a slightly different slant on the application of these themes and within each case there will be factual variations. It is for this reason that it is crucial that there is an appropriate process for determining each situation on a case by case basis to determine whether posthumous reproduction should proceed. Whilst there may not be compelling moral reasons for prohibiting posthumous reproduction, there may be reasons for not actively assisting with it. The writer recommends a framework for assessing the ethics of these cases at the conclusion of this paper.\textsuperscript{21}

\textsuperscript{21} See recommendations for guidelines on posthumous reproduction in Chapter 5
4. LEGAL CONSIDERATIONS IN NEW ZEALAND

Introduction

As with many issues concerning assisted reproductive technologies in New Zealand, there is no specific legislation addressing the collection, storage, use and disposal of gametes. This chapter will consider the current law in New Zealand as it affects posthumous reproduction bearing in mind developments internationally. There will be a discussion of whether gametes may be regarded as property and the law of succession as it affects posthumous reproduction. Current New Zealand legislation relevant to this area will also be discussed. The four specific factual scenarios raised earlier will be considered from a legal perspective.

It is not within the scope of this chapter to address the legal position of specific countries, but given New Zealand’s dearth of legislation and case law on these issues, decisions of Commonwealth Courts would be influential in this country. It must be remembered also that other national perspectives reflect the legislative framework and cultural considerations from which they operate. Even the recent case of R v Human Fertilisation and Embryology Authority, ex parte Blood\(^{22}\) which has attracted interest in New Zealand for its implications for posthumous insemination is largely concerned with the interpretation of the Human Fertilisation Embryology Authority Act 1990 in the United Kingdom and the requirements of “effective consent”. New Zealand currently has no equivalent legislation. Furthermore, much of the overseas case law is concerned primarily with the use and disposition of zygotes and embryos, that is, after the egg has been fertilised, rather than gametes at pre-fertilisation stage (Perry & Schneider, 1992). This chapter begins with consideration of a series of questions relevant to the legal issues surrounding posthumous use of gametes.

\(^{22}\)[1997] 2 All ER 687.
Can gametes be “owned”? As genetic material, what form of property are they?

This Section will consider the legal concept of property and discuss the problems associated with the property analysis, in particular its incompatibility with the way the law treats body products. Next there will be an overview of the way the courts overseas have used the property analysis and what might apply in New Zealand.

(i) Gametes as property

Traditionally, it is said (Kamenka & Tay, 1988):

*Property is that which is owned. Ownership is prima facie ultimate power and right to use, control, enjoy and exclude others. It is a relationship both to the item owned and to other people.*

Kamenka and Tay argue that there is a plurality of meanings of property in contemporary society. Today, absolutist concepts of property and associated rights have given way to a more instrumentalist approach and property is seen as being no more than a label to be attached to achieve a desired end. In this context personal, moral and cultural aims are often mixed up with distributional ones (Hammond, 1992, p.111).

Issues of legal status are more problematic as far as the present law applies to embryos. The position with respect to gametes is arguably more clearcut as gametes are derived from one source, not two, as in the case of embryos. There is much legal debate over the dichotomy between the “property” versus “person” approach to embryos. It has been suggested that an embryo carries its own legal status, that is, it is *sui generis*. In the well-known decision of the Supreme Court of Tennessee, *Davis v Davis* 23 there was a dispute between a divorcing husband and wife. At least initially, the wife wished to have control over the embryos in order that they could be implanted in her. She later changed her mind and wished that they be donated to a

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23 (1992) 842 SW 2d 588.
childless couple. The husband was opposed to having another child by his estranged wife. The Supreme Court held that the seven frozen pre-embryos were neither person nor property, rather they occupy an “interim category that entitles them to special respect because of their potential for human life”. The Court concluded that gamete providers have dispositional control over embryos produced from gametes although the decision did not resolve the dispute on the facts.

Concern over the property analysis stems from the consequences: if an embryo is an item of property it ought to be able to be bought and sold, could be the subject of matrimonial property division, and even testamentary provision. All of these consequences equally apply to gametes - except there is no dual claim to the possession of them as there is with disputes over stored embryos. Kennedy and Grubb (1994, p.805) suggest in comparison to embryos, the position may be different regarding eggs or sperm in that it could be argued that they are property in the same way as it could be said that blood and other tissue is property, once separated from the individual. In New Zealand there are prohibitions on the use of certain body products. For example, it is illegal to trade blood and blood products. Despite these prohibitions on public policy grounds, blood could still be legally regarded as the property of the donor as it is capable of being gifted to another. Once donation has taken place the donor loses any further right of possession and control and therefore loses any future proprietary interest in their donated blood.

In New Zealand gametes are likely to be regarded as property for legal purposes. The property analysis is not, however, particularly helpful in this context and there may be good reasons for a court to explore other grounds for protecting the interests of the gamete provider. If the status of gametes were categorised as being sui generis rather than personal property (as with embryos in the Davis case), the notion of dispositional authority goes some way to recognise the gamete provider’s control over the destiny of their gametes and the special characteristics of genetic material. At times, however, the legal analysis of dispositional authority compared to strict property rights is confused. Whereas the Court in Davis emphasised that the parents’

24 Ibid, p597.
25 Section 92B Health Act 1956 (amended 1993).
interest was "not a true property interest" but rather decisionmaking authority, limited by policy considerations, some commentators equate them as one and the same. For example, Robertson says (1994b, p. 1038):

Yet a property interest in gametes must exist, regardless of whether an action for conversion will lie. The term "property" merely designates the locus of dispositional control over the object of matter in question. The scope of that control is a separate matter and will depend upon what bundle of dispositional rights exist with regard to that object.

The legal status of gametes is not likely to get caught up in the "person v property" dichotomy that arises with embryos. In the absence of a statutory framework, common law analysis is relevant.

(ii) Property analysis - case law

Few of the overseas cases specifically address the legal status of gametes and most focus on disputes arising from frozen embryos, which raise quite different and arguably more difficult issues.

In Hecht v Superior Ct of the County of Los Angeles and W.E. Kane, a California Court addressed the issue of whether the ownership or control of frozen sperm could be transferred from one person to another by the execution of a will, like the other possessions in the deceased's estate. In a suicide note to his girlfriend, Kane expressed a dying wish: "I hope you have our child". To fulfil this wish, Kane left her fifteen vials of his sperm. Kane wanted her to conceive his child by artificial insemination. In his will he bequeathed "all right, title, and interest the [he] may have in any specimens of [his] sperm stored with any sperm bank or similar facility for storage to Deborah Ellen Hecht". Kane's children claimed the California probate court should order the sperm destroyed. They argued the court should prevent the birth of a child who would never know its father and prevent further emotional stress on Kane’s family members. Kane’s children also feared the possibility of an heir who could lay claim to some of Kane’s $1 million estate (Kramer, 1992). The trial court

ordered the sperm destroyed but the California Court of Appeals vacated the order. The appellate court held Kane could bequeath an interest in the sperm, just as he could bequeath an interest in stock.\textsuperscript{27} Despite this, the court remanded the case to the probate court to determine the validity of Kane’s will. There was no obligation on Hecht to use the sperm in the intended way, but the court’s decision gave her power to use the sperm in terms of the bequest. The court also held that there was no public policy against artificial insemination of unmarried women.

The \textit{Hecht} decision is significant because it was the first time the North American courts addressed the issue of whether to recognise property rights in sperm. Before \textit{Hecht} two decisions considered property claims to frozen embryos. One court found embryos subject to property interests, and the other did not.\textsuperscript{28} Jennifer Collins argues the best way to protect parties who use sperm is by recognising a property interest. The stated reasons for recognising a property interest in sperm are (Collins, 1994):

\begin{enumerate}
\item The notion that sperm is property is reconcilable with existing statutory law;
\item Medical professionals already treat sperm as property for purposes of sperm donation and artificial insemination;
\item No danger of a flood of conversion claims exist;
\item Property rights provide better and more enforceable remedies for injured parties.
\end{enumerate}

These propositions must be viewed in the North American context, especially with reference to their existing property law (Collins, 1994, p.673).\textsuperscript{29} Only three years before the \textit{Hecht} decision, in \textit{Moore v Regents of the University of California},\textsuperscript{30} the California Supreme Court refused to recognise property rights in human cells. Even though \textit{Moore} involved spleen cells, not reproductive cells, the property issues in the two cases are similar. Doctors diagnosed Moore with hairy-cell leukemia in 1976. With Moore’s consent, surgeons removed his spleen as part of his treatment. Using Moore’s spleen cells, researchers created a billion dollar cell-line, which they

\textsuperscript{27} Ibid at 283

\textsuperscript{28} \textit{York v Jones} 717 F. Supp.421 (E.D. Va. 1989) and \textit{Davis} (above) respectively.

patented. Moore sued his physician and the biotechnology company for conversion of his biopsied tissue and for breach of disclosure obligations. The California Supreme Court reversed the lower court’s decision, finding that Moore did not retain a property interest in his cells and could only state a claim for breach of informed consent. It was held that to give Moore a property right to his tissue would impede progress and “destroy the economic incentive to conduct medical research”.

In *Hecht* the court found *Moore* to be distinguishable, reasoning that while Moore could not expect to retain a property interest in his cells after they were excised from his body, Kane retained an interest in his sperm. This basis for distinguishing the facts is weak. If the person is still alive after the removal of body parts, as in Moore’s case, there should be no impediment to recognising an ongoing interest in those body parts. This could include at the very least an implied recognition they be disposed of in an appropriate way. Moreover, it could be argued that a living person has a greater property interest in their body parts than a dead person. In *Hecht*, the court relied on Kane’s contract with the sperm bank, which provided for the release of his sperm to Hecht after his death. The court found the contract evidenced Kane’s intent to retain control of his sperm after he deposited the sperm in the bank (Collins, 1994, p.669).

At this juncture it is important to point out the legal distinction between gifts *inter vivos* (between living persons) and *post mortem* gifts (after death). When one person makes a tissue gift to another, an *inter vivos* gift as opposed to a gift that takes effect *post mortem*, the intended or designated recipient acquires a legal interest in the tissue only when it has been delivered to him or her, and accepted as a gift, and the donor’s intent is adequately evidenced. Such an inter vivos gift may also be made by one living person to another in contemplation of death, similar to the concept of a testamentary gift; the gift is finalised post mortem (Dickens, 1990). Thus, the woman partner does not acquire an interest in her partner’s stored sperm until she takes possession of the sperm subject to the gamete provider’s intention being established. A gift of property intended to take effect on death must normally be in the legal form of a will. However, the *Moore* case raises the question whether tissues (which could include gametes) are considered property transferable *inter vivos* that can be

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271 Cal. Rptr. 146 (1990)
bequeathed by will. The *Hecht* case answers this point in the affirmative although the reasoning of the Court did not rely on a property interest; rather that the gamete provider’s contract with the sperm bank evidenced his intent to release his sperm to his wife after his death.

Prior to *Moore* and *Hecht*, *York v Jones* was the only decision to allow a property right in human cells. In *York* a couple sought to transfer their embryos to another clinic after three unsuccessful attempts at IVF. The Jones Institute refused to release the embryos, arguing that the Yorks had agreed to thawing and implantation of the embryos at the Jones clinic. The Court held that the cryopreservation agreement created a bailor/bailee relationship requiring the bailee to return the subject matter of the bailment when the purpose of the bailment was terminated. In finding a bailment relationship the Court, by implication, found the Yorks had property in the embryos. The Court also relied on an American Fertility Society report which stated that in an IVF situation gametes and concepti are the property of the donor (Collins, 1994, p.666). While the *York* case arguably provides some basis for a property right in embryos, it is more limited to a dispute between the gamete providers and the clinic. As with the *Davis* case, neither Court analysed whether individuals have property rights in gametes.

Also of note are two French decisions which came to opposite conclusions on similar facts. In *Parpalaix v. CECOS,* Alain Parpalaix arranged to have sperm stored before beginning treatment for testicular cancer. After his death, his widow asked for the sperm for the purposes of attempting insemination, a request which was refused by the Director of Central d’Etude et de Conservation des Oeufs et du Sperme (CECOS). This refusal was based on the assertion that sperm was an indivisible part of the body and could not be heritable property in the absence of specific instructions from the person with whom CECOS had the contract. The Tribunal held that Mr Parpalaix’s intentions were clear, and awarded the sperm to his widow. At a later date the Court of Toulouse rejected a similar demand, giving as its motives that the contract with the CECOS stipulated that the sperm be used only with the consent of the husband and that the rights of the intended child required that he/she not be

\[31\] Tribunal de Grande Instance de Creteil (1 Ch. Cir) August 1, 1984.
procreated under these confused circumstances.\textsuperscript{32} Subsequently French law was enacted prohibiting the use of gametes after death (Memeteau, 1997).

(iii) Application of the property analysis

It is apparent that in these cases the respective courts were looking for something more than a property interest per se to enforce the recognition of the tissue or gamete provider's control over their body. Applying the instrumentalist approach suggested, a New Zealand court could find a property interest in gametes. Even if the court avoided the issue of the legal status of gametes, \textit{Hecht} is likely to be persuasive authority as it follows a more purposive approach and weight is given to the gamete provider's intentions.

The usefulness of such a legal concept is questionable given its potentially broad interpretation and application to body products and body parts. At one level, gametes are capable of being owned by a gamete provider who is living and has the capacity to consent. For example, a gamete provider who wished to donate sperm to others or freeze sperm for later use would have control over its disposition. In this situation the gametes may be regarded as the property of the gamete provider. The concept is more difficult to analyse however, if the gamete provider's own dispositional control is lost. This is the case where the gamete provider is still alive but cannot consent to parting with their gametes because of their comatose state, or if the gamete provider has died.

An analogy with property does little to resolve who, if anyone, has decision making authority on the gamete provider's behalf. In addition, and as we have already observed, the property analysis does little to address the moral issue of whether sperm is the sort of thing that should be considered as property (Steinbock, 1995).\textsuperscript{33} The courts should approach the question of whether gametes may be regarded as property in the same way as they approach other genetic material, by assigning the special meaning of dispositional authority to the gamete provider and to give effect to

\textsuperscript{32} Tribunal de Grande Instance de Toulouse (4 Ch.cir) March 26, 1991.

\textsuperscript{33} See discussion on the moral status of gametes at page 61.
this. The full extent of disposal rights remains unclear. In any event it would be subject to public policy considerations - including the extent to which there should be property rights in a person’s genetic material.

Retrieval of gametes from a living person unable to give consent

(i) Common law

The question arises as to who if anyone has legal authority to request retrieval of the gamete provider’s sperm when the provider is alive but unable to give consent. Contrary to sometimes popular belief, there is no general doctrine whereby a spouse or near relative is empowered to give a legally effective consent to medical procedures to be carried out on an adult incapable of consenting themselves (Skegg, 1988, p. 90). There are some situations where it may be lawful to proceed without consent, such as the doctrine of necessity, but in the absence of consent or some other legal justification, a doctor may be liable for the tort or crime of assault and battery if they proceed with a medical procedure without effective consent.

Section 11 of the New Zealand Bill of Rights Act 1990 provides:

Everyone has the right to refuse to undergo any medical treatment.

“Everyone” in this context means everyone who is competent to do so, and if persons are incompetent then in certain cases consent can be given on behalf of that person by the court. A consent on this basis is given in exercise of the parens patriae jurisdiction of the court, that is, the court has a residual power to act on behalf of an incompetent person in protecting his or her best interests. In these circumstances, the emphasis shifts from self determination and autonomy and becomes one about how and on what grounds appropriate decisions may be taken for the incompetent person. The parens patriae jurisdiction does not apply where death has occurred. The

34 For example: criminal assault section 196 of the Crimes Act 1961.
35 Re S [1992] 1 NZLR 363, 373 per Barker J.
36 Section 17 of the Judicature Act 1908.
approach taken by the court is to apply the “best interests” test in which decisions must be made by the medical team in consultation with those closest to the patient. This was the principle applied by the House of Lords in Airedale AHS Trust v Bland [1993] AC 789. In that case Tony Bland was an injured soccer fan who had been in a persistent vegetative state for three years due to suffering a severe crushed chest injury and irreversible damage to the higher functions of the brain. The health authority responsible for his care applied to the court for declarations that the responsible physicians could lawfully discontinue all life-sustaining treatment and medical support measures. The Bland case and other relevant judgments were reviewed in New Zealand by Justice Fraser in Re G, where the court adopted the best interests test and gave weight to the likely wishes of the patient and the views of the patient’s family and carers. The concept of best interests is by no means straightforward as it may be difficult to determine what such best interests are and how they are to be assessed.

These cases may be distinguished from the situation of retrieval of sperm because they are concerned with the withdrawal of treatment to hasten death in a dignified manner and to alleviate pain and suffering for someone who is in a persistent vegetative state. Similarly, the best interests of an individual may render life saving therapy as being lawful. The retrieval of sperm from someone in a comatose condition cannot be said to fall within the same class of case. There is no therapeutic value to the gamete provider undergoing the procedure; it neither alleviates the dying process nor benefits (in a clinical sense) the person. Its purpose is aimed at meeting the needs and desires of others, specifically the surviving partner, rather than providing any medical benefit to the gamete provider. The extraction of sperm by electro-ejaculation or related techniques is an invasive procedure, although the risks are minimal. Moreover, Maclean has suggested that whilst an “obscure” case may be made out for the court to authorise removal of gametes, it could not authorise

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37 Bland did not involve the parens patriae jurisdiction, such jurisdiction having been lost in England.
38 [1997] NZFLR 362. See also Auckland Area Health Board v Attorney General [1993] 1 NZLR 235, per Thomas J.
39 Note also the test of “substituted judgment” favoured in the United States.
storage and subsequent use. Whether or not removal of gametes might be lawful is, in the author's view, unclear (MacLean, 1997, p.58).

The retrieval of sperm without consent occurred in the Blood case. The collection of Mr Blood's sperm while in a coma prior to his death was glossed over to some extent in the High Court judgment. Two samples were recovered and held by an infertility research trust; the first while Mr. Blood was in a coma and the second sample was taken shortly before he was certified clinically dead.\(^{40}\) It was initially argued by the Authority that the doctors committed an assault and trespass on Mr Blood when they obtained the sperm. Mrs. Blood's counsel argued that the collection of Mr Blood's sperm at his wife's request fitted within the broader interpretation of the best interests of a dying man. (Reference was made to the Bland decision.) Counsel for Mrs Blood argued that Mr. Blood's "seed should be able to be used to produce his biological child, to be born to, and brought up by, the wife whom he leaves behind, ... in accordance with his wishes". This was described as "a final act of life".

There was no discussion in either judgment of the legal difference between the taking of the first semen sample, when Mr. Blood was still in a comatose state, and the following day, when he may already have been dead, even though he had not been certified as such. On the first occasion he was unconscious but not yet dead. Had insemination taken place there would have been no legal impediment as treatment of a couple whilst alive requires no written consent. Mrs Blood thought, however, at the time she was already bearing his child.

The Court went on to consider whether the retrieval of the sperm amounted to treatment services which were being provided to Mr. and Mrs. Blood together in the sense to which section 4(1)(b) of the Human Fertilisation and Embryology Authority Act 1990 refers. Section 4(1) provides:

\[\text{No person shall-}\]

\(^{40}\) Lord Woolf [1997] 2 All ER 687, 690. It is not clear from the judgment whether Mr. Blood was already dead, but not certified as such.
(a) store any gametes, or 
(b) in the course of providing treatment services for any woman, use sperm of any 
man unless the services are being provided for the woman and man together...
except in pursuance of a licence.

Therefore, if Mr Blood had survived and the sperm had been used as part of a 
course of treatment for himself and his wife while still alive, then the exception to the 
requirement of a licence for his treatment under s 4(1)(b) would apply. Furthermore, 
as it would not be necessary for the treatment to be in pursuance of a licence there 
would not be the statutory requirements for Mr Blood’s written consent because 
treatment would be outside statutory control.

The Court of Appeal raised the question of the lawfulness of the taking of the 
sperm from Mr. Blood as he lay unconscious. Lord Woolf said:

..the propriety of treatment involved in taking the sperm in this case is governed by 
common law principles relating to patient consent to the electro-ejaculation....

Applying the common law principles discussed above, it would appear that 
there was no legal justification for retrieving the sperm without Mr. Blood’s consent. 
The point was not argued before either Court, yet Mr Blood gave neither express nor 
arguably implied consent to the taking of his sperm. The Court of Appeal held that, 
although understandable, technically an offence was committed by the licence holder 
for storing the sperm. Somewhat optimistically, Lord Woolf went on to say that this 
factual situation could never arise again because of the statutory requirement for 
written consent.

There is no legal justification for undertaking this procedure without the 
consent of the individual concerned. In Blood, the actions of the doctors in retrieving 
Mr. Blood’s sperm (at Mrs Blood’s request), were arguably illegal and contrary to the 
common law principles. There was no therapeutic justification for this action to fall 
within the best interests test. At common law there is no general requirement that 
consent be in writing. There are a number of reasons for preferring written consent. 
As MacLean points out (1997, p.11):

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41 At page 690.
It would seem, therefore, that in matters of significant risk or particular sensitivity it is a pragmatic, if not legal rule that consent is given in writing. Although not challengeable, it nonetheless remains best evidence that an agreement was actually provided, and therefore the doctor's actions are \textit{prima facie} lawful.

The same principles apply in the New Zealand context with the added requirement of compliance with the Code of Health and Disability Services Consumers' Rights.

\textbf{(ii) Code of Health and Disability Services Consumers' Rights}

The provisions of the Code of Health and Disability Consumers' Rights 1996 (Code of Rights) are relevant when considering the requirements for informed consent. Right 7 provides for the right to make an informed choice and give informed consent. In particular, Right 7(4) is concerned with the provision of health services to a "consumer" who is not competent to make an informed choice.\footnote{A "health consumer" includes any person on or in respect of whom any healthcare procedure is carried out: Section 2 of the Health and Disability Commissioner Act 1994. For the purposes of interpretation here it would also be necessary to establish that retrieval of gametes is a "health care procedure" defined as "any treatment, health examination... administered to or carried out on or in respect of any person by any health care provider".} Right 7(4) provides:

\begin{quote}
(4) Where a consumer is not competent to make an informed choice and give informed consent, and no person entitled to consent on behalf of the consumer is available, the provider may provide services where -
(a) It is in the best interests of the consumer; and
(b) Reasonable steps have been taken to ascertain the views of the consumer; and
(c) Either, -
\begin{enumerate}
\item If the consumer's views have been ascertained, and having regard to those views, the provider believes, on reasonable grounds, that the provision of the services is consistent with the informed choice the consumer would make if he or she were competent; or
\item If the consumer's views have not been ascertained, the provider takes into account the views of other suitable persons who are interested in the welfare of the consumer and available to advise the provider.
\end{enumerate}
\end{quote}

When considering the application of this right to retrieval of gametes without the gamete provider's consent it is necessary to consider the definition of "service"
which includes “fertility services”. Importantly, the application of this right would require establishing when, if at all, retrieval of gametes from an incompetent person is in their “best interests”. As discussed above, it would be very difficult to establish that a procedure such as this was in the person’s best interests unless there is some evidence to support a previously expressed desire for reproduction in these circumstances. Just because someone wished to have children during their lifetime, it does not necessarily follow that this desire continues in the event of them becoming permanently incompetent whilst alive, or after their death. While Right 7(4) prevents liability for breach of the Code, it does not alter the general law of the land and a health professional could be found in breach of the criminal law, such as the crime of assault and battery.

Right 7(5) provides for use of an advance directive “in accordance with the common law”. Thus, if a gamete provider made an advance directive in relation to the collection, storage and subsequent use of gametes in the circumstances which have arisen then such express wish may have some legal force but only while they are still alive. The purpose of an advance directive is to make choices about future health care procedures to be effective when the person is not competent. An advance directive may have some force in establishing the gamete provider’s best interests if incompetent as set out in Right 7(4).

Of note is Right 7(9) and (10):

(9) Every consumer has the right to make a decision about the return or disposal of any body parts or bodily substances removed or obtained in the course of a health care procedure.

(10) Any body parts or bodily substances removed or obtained in the course of a health care procedure may be stored, preserved, or utilised only with the informed consent of the consumer.

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44 See the definition of “advance directive” in clause 4 of the Code of Health and Disability Services Consumers’ Rights.
Assuming the retrieval of sperm and subsequent insemination falls within the broad definition of a "health care procedure", at the very least the requirements of informed consent by the gamete provider must be made out at the time of storage of the sperm. Furthermore, informed consent to a healthcare procedure must be in writing, inter alia, if there is "a significant risk of adverse effects on the consumer". For example, it is standard practice for written consent to be obtained for surgical interventions. Once again, any right associated with a decision about body parts or substances is based on the premise of the consumer being alive. Right 7(9) does not apply to things done after the death of the consumer. Complying with the Code of Rights may generally present some difficulties when a person is unable to consent to procedures. In addition, a provider need only take reasonable actions in the circumstances to give effect to these rights. So long as a provider is able to prove they took reasonable actions in the circumstances to give effect to the rights, and comply with the duties, they will not be in breach of the Code of Rights.

There would appear to be good reasons, both at common law and in order to comply with the Code of Rights, for a provider taking a very cautious approach in considering when, if at all, there is justification in retrieving gametes from a living person who is unable to give or refuse consent.

Retrieval of gametes from a deceased person

(i) Common law and the "no property rule" in dead bodies

The generally accepted definition of death is where brain death has occurred. Brain death occurs when all functions of the brain have permanently and irreversibly

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45 Section 3 of the Health and Disability Commissioner Act 1994.
46 Right 7(6)(d).
47 The definition of "health consumer" includes any "person" on or in respect of whom any "health care procedure" is carried out: section 3 of the health and Disability Consumer Act 1994. A health care procedure cannot be carried out on a deceased person and this definition implies that a health consumer must be alive for this to be done.
48 Clause 3.
ceased (Skegg, 1988, p.189-190). It is also suggested that bodies of people who have
died, and which are being maintained on ventilators, will be regarded as “dead
bodies” by New Zealand courts.49 Thus, those dead bodies of people who have
died, but which are being “kept alive” postmortem by artificial ventilation would fall within
the definition of death.

The relevance of property rights to gametes for posthumous reproduction is
demonstrated in the situation where attempts are made to retrieve sperm following the
death of the gamete provider. If the gametes have already been removed from the
body with consent and prior to death the same issues do not arise and there would
generally be no difficulty in establishing legal control over them subject to the law of
succession. The same cannot be said where the sperm has not been retrieved at the
time of death of the gamete provider. There are now a variety of procedures for
obtaining sperm postmortem. Regardless of the procedure used, retrieval must be
attempted within 24 hours of death to have any chance of retrieving viable semen
(Kerr & Caplan, 1997).50 Leaving aside the issue of whether sperm from a deceased
man should ever be obtained without his consent, there is the issue of whether there
are property rights in a dead body.

It is well established there is no general right of property in a dead body. One
consequence of this rule is that, at common law, a dead body cannot be the subject of
theft.51 The law does recognise as incident to the duty to dispose of a body, rights to
the possession of the body for that purpose.52 Executors or administrators, or other
persons charged by law with the duty of interring the body, have a right to the custody
and possession of it until it is properly buried or cremated. A coroner has the right to
possession of a dead body where they are required to inquire into the cause of death if
it is unknown.

49 Professor Peter Skegg in an opinion to NECAHR on gamete removal dated 4 November 1998.
50 If the body is being maintained on a ventilator after brain death is established the 24 hour limit would
apply at the cessation of respiration and circulation.
51 R v Sharpes (1857) 26 LJMC 47 at 48 per Erle J.
52 Williams v Williams (1882) 20 ChD 659 at 664 per Kay J.
In *Dobson v. North Tyneside Health Authority*, the English Court of Appeal confirmed the principle that there is no legal right to the possession of the deceased’s brain because the plaintiff administratrix, who was charged in law with the duty of disposing of the body, had not been appointed until after the burial of the remainder of the deceased’s body. Similarly, it was suggested that there was no duty of interment or disposal (and hence, no right to possession of the body or any part of it) on the deceased’s next of kin (Pawlowski, 1996). In New Zealand, the administrators’ rights to possess a dead person’s body in order to bury it were upheld in *Tapora and Anor v Tapora* where a dispute arose with a family as to where the deceased should be buried. In a defamation case involving the “body snatching” of deceased celebrity Billy T James, Justice Hammond stated that “at common law a person does not ‘own’ his or her body”. This statement seems to have been provided as an explanation for why it was not important to determine what the deceased would have wanted done with his body following death. As Skegg points out however, there is no necessary connection between whether one owns one’s body during one’s lifetime and whether one can determine what is to be done with one’s body after death. At common law, it is not possible to give binding directions about the disposal of one’s body following death. This power rests with the executor who may or may not follow the deceased’s wishes in the will (Skegg, 1997).

None of the above authorities lend any assistance to the issue of whether sperm can legally be retrieved from a dead person. It follows that the previously expressed wishes of the deceased for his sperm to be retrieved posthumously do not bind the person charged with the disposal of the body (compared to sperm retrieved while alive and stored for posthumous use). The legal significance of the sperm being live when retrieved from a dead body and therefore viable for storage and subsequent insemination is unclear. The closest analogous situation is the removal of live organs for transplant authorised for therapeutic purposes under the Human Tissue Act 1964 but there are problems with this analogy as discussed below.

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54 CA 206/96, 28 August 1996.
55 *Awa v Independent News Auckland Limited* [1995] 3 NZLR 701, 710
(ii) Statutory authority and the Human Tissue Act 1964

There is no specific statutory authority that deals with the issue of removal and use of gametes from a dead person. There is however, the possibility of criminal liability being imposed on a person involved (likely to be a urologist) with the retrieval of sperm from a deceased person. Section 150 Crimes Act 1961 provides:

S.150. Misconduct in respect of human remains - Everyone is liable to imprisonment for a term not exceeding 2 years who -

(b) Improperly or indecently interferes with or offers any indignity to any dead human body or human remains, whether buried or not.

The retrieval of sperm from a deceased person could be considered an "improper interference" with a body. If during their lifetime the gamete provider has expressed an intention for postmortem retrieval (which is most unlikely), or a prior intention to store sperm for posthumous use, then a possible defence of justification may be made out.

The Human Tissue Act 1964 is concerned with the removal and use of parts of dead bodies for therapeutic purposes or purposes of medical education and research. The scheme of the Act is to allow the person lawfully in possession of the body (generally, the person in charge of a hospital), to follow the express wishes of the deceased and authorise the removal of body part(s). Section 3(1) provides (emphasis added):

(1) If any person, either in writing at any time or orally in the presence of 2 or more witnesses during his last illness, has expressed a request that his body or any specified part of his body be used after his death for therapeutic purposes or for purposes of medical education or research, the person lawfully in possession of his body after his death may, unless he has reason to believe that the request was subsequently withdrawn, authorise the removal from the body part of any part or as the case may be, the specified part, for use in accordance with the request.

In the absence of such a previously expressed request by the deceased, body parts may be used subject to reasonable inquiry of the surviving spouse or any

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56 Section 2(2) Human Tissue Act 1964.
surviving relative. Section 3 (1) of the Human Tissue Act is subject to the exceptions in Section 3 (2) which provides:

(2) Without limiting subsection (1) of this section, it is hereby declared that the person lawfully in possession of the body of a deceased person may authorise the removal of any part from the body for use for the said purposes if, having made such reasonable inquiry as may be practicable, he has no reason to believe-

(a) That the deceased person has expressed an objection to his or her body being so dealt with after death, and had not withdrawn it; or

(b) That the surviving spouse or any surviving relative of the deceased person objects to the body being so dealt with.

Thus, the family do not have rights to require removal or use of parts although they have an effective veto, as does the deceased person if they have previously expressed an objection to such use and not withdrawn it. Moreover, the terms of the Human Tissue Act do not give authority for the deceased (verbally or in writing) to leave organs for specific individuals (although neither do they exclude this). The partner of the gamete provider would have no right to the gametes if they could lawfully be removed under this Act.

Section 3 specifically refers to removal of body parts from a deceased person. It could not be interpreted to cover the situation where gametes have been collected and stored while the individual was still alive, for example, in a coma. The limiting aspect of this Act therefore, is the requirement for the removal of body parts from a deceased individual. Where sperm are retrieved from a man who is legally dead, the sperm themselves, are not dead and are recovered live for cryopreservation. They can be used at a later stage to achieve conception and the creation of life. Organs retrieved from a recently deceased person, such as heart, lungs etc are likewise kept alive for the purpose of transplanting them to a live person. Although the person is legally dead their body parts are still alive. As such, they are retrieved for the purpose of prolonging life (compared to creating life in the posthumous reproduction situation).

Interestingly, there is no definition of “human tissue” in the Act yet human tissue arguably has a closer association with genetic material than the removal of organs and body parts. Blood and skin might be interpreted as “part” of a body but, as with gametes, they would more generally fall within the definition of tissue rather
than body parts such as organs. Sperm (or testicular tissue that contain the developing sperm) could possibly be considered part of the body as, like tissue or organs, they comprise an aspect of the make up of a body. However, gametes are not themselves likely to be regarded as a part of the body because the purpose for which authorisation of removal is permissible. The Human Tissue Act is concerned with the retrieval of body parts for *therapeutic purposes*. The retrieval of semen from a dead man for posthumous insemination could not be interpreted as being a therapeutic purpose. Again, there is no definition of “therapeutic purpose” and section 3 is concerned with the removal of body parts, usually organs for live transplant to another person.

There is also the question of whether removal of human tissue can be lawfully authorised apart from the provisions of the Human Tissue Act. Section 3(7) provides:

(7) Nothing in this section shall be construed as rendering unlawful any dealing with, or with any part of the body of a deceased person which is lawful apart from this Act.

When interpreting the equivalent English provision Skegg suggested that a prior authorisation of the deceased or authorisation by the person responsible for the disposal of the corpse could prevent certain *interferences* with a corpse for medical purposes from amounting to some crimes or torts. For example, in the case of a doctor being prosecuted or sued for interfering with a corpse by complying with the deceased’s previously expressed request that he sever a small blood vessel to ensure death had occurred. However, in practice the statutory provision for authorisation makes such authorisation outside the Human Tissue Act less likely (Skegg, 1978). To date, section 3 (7) has created the theoretical possibility of common law authorisation for use of body parts of a deceased person beyond the statutory requirements, but it has not been relied on in practice.

The Justice Department submission to the Report of the Ministerial Committee on Assisted Reproductive Technologies (MCART, 1994) suggested that the underlying policy of the rules in the Human Tissue Act is to give pre-eminence to the wishes of the provider of the body parts. By analogy, MCART suggested that priority should be given to the wishes of the gamete provider. Whilst giving effect to the

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57 Section 1(8) Human Tissue Act 1961 (UK).
wishes of the gamete provider is a desirable starting point, the key issue is whether section 3 of the Human Tissue Act could be interpreted to include gametes within the meaning of “part” of the body for the purposes of the Act. In the writer’s view, the retrieval of gametes from a deceased person is not contemplated by the Act. Moreover, it would be contrary to public policy to invoke these provisions to justify such removal because it would allow health professionals to authorise retrieval of gametes for sperm banks and donor insemination purposes. It is also most unlikely that the deceased person has either objected to such retrieval of sperm or planned for this event during his lifetime. If posthumous reproduction were contemplated he is more likely to have made provision for storage of his sperm during his lifetime. A better approach is to take a more restrictive view of the Human Tissue Act of what is contemplated by a “part” of the body and the kind of therapeutic purposes for which it has been used to date.

**How does the law of succession apply to the disposition of gametes?**

There is no impediment to gametes being the subject of testamentary disposition and provision for them being made in a will - so long as they have been removed from the body prior to death. As there are no property rights in a dead body, one cannot bequeath one’s own body (or part of it) to someone else. It is unclear what effect frozen gametes (or embryos) will have on the rule against perpetuities and whether a testator will be able to bind property by relation to the birth of a child from a fertilised ovum in cryopreservation, *en ventre sa frigidaire* as opposed to *en ventre sa mere* (Morgan & Lee, 1991, p.32). If a man died leaving his estate to children yet to be conceived and born and the widowed partner insisted that she be impregnated with his semen after he dies, the question arises as to whether the posthumous child could inherit according to his will or displace claims by other potential beneficiaries.

The paternity provisions of the Status of Children Act 1969 are relevant to the law of succession as it applies to posthumous reproduction. The stated purpose of the Act is to “remove the legal disabilities of children born out of wedlock” and it does not contemplate a situation such as posthumous insemination. The difficulty lies in the fact that legally death dissolves the marriage, so that posthumous conception after
death of the father will result in a child born out of wedlock, exactly what this legislation purports to prevent. Section 5 (1) provides:

A child born to a woman during her marriage, or within 10 months after the marriage has been dissolved by death or otherwise shall, in the absence of evidence to the contrary be presumed to be the child of its mother and her husband, or former husband, as the case may be.

Section 5 (1) would appear to be more concerned with establishing legal parentage where a child is already conceived but not yet born at the time of the father’s death. Thus, if a widow moved quickly with posthumous insemination with her deceased husband’s sperm, a child born within ten months of her husband’s death could be regarded legally as the child of her husband. The woman who gives birth to the child is the legal mother of the child. Once paternity is established the child has all the legal rights of a child born within marriage and may inherit from the father and his relatives. It would not be necessary to prove the pregnancy began before the husband’s death, only that the child was born before the expiry of the 10 month period. This situation is also dependant on the widow having neither remarried nor living in a de facto relationship at the time of the child’s birth. The anomaly lies in children born outside the 10 month period (likely to be the great majority of cases in posthumous conception), as they cannot bring a declaration of paternity to recognise their predeceased biological father.

The same anomaly would not arise where retrieval of sperm was undertaken from a comatose father who continues to be on lifesupport for a period of time. Strictly speaking, this situation is not posthumous reproduction because the gamete provider remains alive. If retrieval of sperm is lawful (and the writer has expressed doubts about this), then there is not the same difficulty with establishing legal parentage. The lawfulness of the procedure is not, however, a precondition for establishing legal parentage and the status of the child.

Another difficulty may lie in the recognition of the relationship of father and child for any purpose related to the interpretation of a will or testamentary claims. Sections 7 and 10 of the Act provide for a procedure whereby a declaration as to paternity may be obtained after the death of the father. The relevant wording of
section 10 is that certain persons may apply to the High Court for a declaration for paternity,

...if it is proved to the satisfaction of the Court that the relationship exists the Court may make a declaration of paternity whether or not the father or the child or both of them are living or dead.

Section 7 is concerned with evidential factors which may assist the court in establishing paternity has been admitted, expressly or by implication, but yet again proceeds on the assumption that such admission was during the father’s lifetime. Executors and trustees of a deceased person’s estate are required to make reasonable inquiries for the purposes of this Act “as to the existence of any claim to an interest in the estate”. Likewise, reasonable inquiries must be made prior to any distribution of any estate or property held. It is unclear what obligations this would place on an administrator to check whether the testator’s “issue” such as gametes (and embryos) lies in storage. Currently, there is no restriction on the length of storage of gametes in New Zealand.

The Administration Act 1950 places no time limit on distribution of an estate where a claim is made through intestacy provisions. The Family Protection Act 1955 specifies a time limit of 12 months (or 2 years in the case of a minor). The court may grant an extension as long as the estate has not been finally distributed. Sections 21 and 22 of the Limitation Act 1950 result in there being no fear of inchoate rights of a child subsequently born through posthumous insemination remaining forever. There is, however, no immediate prospect of succession law addressing the inheritance issues of gametes. In the proposed Succession (Adjustment) Act by the Law Commission, section 26 defines who may make a child support claim against the estate of a deceased person. A child of a deceased person is defined as:

59 The law of succession as it applies to gametes and embryos was not considered in the consultation paper published by the Law Commission, What should happen to your property when you die? (1996).
a person of any age and includes a person who was accepted by the deceased as his
or her child, the deceased having assumed on a continuing and enduring basis the
responsibilities of parent of that child.

Children include children born as result of assisted reproductive technologies
to the extent that this is provided for in the Status of Children Amendment Act 1987,
but the section proceeds on the basis that the deceased acquired responsibility for the
child prior to death, that is, the child was in existence at the time of death. This
provision therefore precludes any claims by a child of the deceased born
posthumously.

The issue of whether a frozen embryo could subsequently have a right of
inheritance in the deceased father’s estate was considered by the Supreme Court of
Tasmania and is relevant to whether such inheritance rights could be extended to
frozen gametes prior to fertilisation. In the estate of K61 it was held that an in vitro
child, born posthumously, is at birth the biological child of the father and mother,
irrespective of the date of implantation and is identical to a child en ventre sa mere.
A child born en ventre sa mere is not regarded as living (in terms of law) but has a
contingent interest dependent on birth with entitlement to inheritance. If applied to
gametes, the potential for testamentary claims by gametes that are subsequently
fertilised, implanted and then born has far-reaching implications and could create
infinite uncertainty as to the final distribution of the deceased father’s estate.62 The
point was not discussed in this case but it raises the possibility that a widow as a
beneficiary of her husband’s estate (including dispositional control over his semen),
could ultimately carry his child who may subsequently have an interest in the father’s
estate, subject to the limitations of the Status of Children Act 1969 described above.

An explicit exclusion of paternity in these circumstances is provided in the
English legislation. Section 28(6)(b) Human Fertilisation and Embryology Act 1990
provides that when:

... the sperm of a man, or any embryo the creation of which was brought about with
his sperm, was used after his death, he is not to be treated as the father of the child.

This will be the case whether the woman becoming pregnant is using her deceased husband's frozen sperm in accordance with his express consent (under Schedule 3, para 2(2)(b)) or that of an unknown donor. 63 Given that death ends the marriage, this provision may be interpreted to mean that the child will be born not only fatherless, but also illegitimate (unless the woman has remarried prior to insemination, in which case the new husband will be treated as the child's father). 64 Although the status of illegitimacy is losing its social and legal stigma, Morgan and Lee have criticised this policy and said (Morgan & Lee, 1991, p.157):

> The policy behind these sections is clearly to discourage posthumous pregnancies. But the instrument which is used is that of punishing the child for what are seen as the sins of its mother.

By comparison, New Zealand has no policy on this particular aspect of succession law. The Status of Children Act 1969 operates by default and places restrictions on children born posthumously claiming any inheritance rights against their predeceased father. The ten month time limit after death for recognising paternity raises the spectre of a bereaved widow seeking insemination of her deceased husband's sperm at the earliest opportunity after her husband's death in order to establish legal parentage of the father to the child born posthumously. This is a most unlikely scenario as few people would be aware of this legal anomaly. There is the possibility of obtaining a paternity declaration after the death of the father but the requirements of the Act do not contemplate posthumous conception, as is the situation in posthumous reproduction. Realistically, posthumous children will not be recognised by existing and proposed succession law in New Zealand and their inheritance rights are those attached to their birth mother and subsequent father if she remarries. Such an anomaly runs counter to the child-centred approach of family law legislation.

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63 Compared with Blood where there was no express consent.
64 Section 28(2) and (5) of the Human Fertilisation and Embryology Act 1990.
What is the legal status of the parent-child relationship if gametes are used posthumously?

The only legislation in New Zealand that specifically refers to assisted human reproduction is the Status of Children Amendment Act 1987, but it has little direct application in the posthumous reproduction situation which is concerned with conception after the death of one partner and not donor sperm used for this purpose. This Act is concerned with the donation of egg and sperm and defining the legal relationships of the child born to the intending parents. It is designed to address issues of paternity and maternity arising through the use of donated sperm, ova and embryos, using the techniques of DI, IVF and GIFT. Section 5 deals with the legal status of children born to a couple who used donor insemination to overcome the male partner’s infertility (Trapski, 1997, para 4.3.05). The Act is, however, generally concerned with DI where the semen is produced by a man other than the women’s husband (a donor) but also contemplates a mixture of semen part of which is produced by the husband.65

Where the mother is a married woman and her husband has consented to the insemination, she and her husband are deemed to be the legal parents of the child.66 Section 5(1)(b) specifically states that a sperm donor other than the husband is not the father of the child. If there has been explicit consent to donor insemination by the husband prior to his death, then arguably, the child so born is the child of its deceased father. By comparison, if the same married woman becomes pregnant by artificial insemination donor without her husband’s consent, for legal purposes, the child is fatherless.67 The terms “married woman” and “husband of a married woman” in the Act also refers to couples living in a relationship in the nature of marriage.68 The Act is silent as to whether a widow would still be considered a “married woman” for these purposes. As noted earlier, the Status of Children Act 1969 operates when

65 Section 4 of the Status of Children Amendment Act 1987.
67 Section 5(2) of the Status of Children Amendment Act 1987.
68 Section 2 of the Status of Children Amendment Act 1987.
determining parenthood where a marriage has been terminated by death.\(^69\) The paternity declaration procedures would have to be used to establish paternity and the outcome would by no means be certain.

The significance of legally having a father through these procedures is that there are rights and liabilities associated with parenthood.\(^70\) This could include the right to inheritance by the child born as discussed above. Neither the Status of Children Act 1969 nor the Status of Children Amendment Act 1987 contemplates posthumous reproduction and the legal status of children born in this manner.

**Human Rights Act 1993**

The major relevance of the Human Rights Act 1993 is with respect to access to assisted human reproduction services. Refusal by an ART provider to allow a single woman access to their service may form the basis of a complaint under the Human Rights Act 1993. Marital status is one of the grounds for discrimination in section 21 of the Act. “Marital status” is defined to cover single, married but separated, divorced, widowed people and people living in de facto relationships (possibly including same-sex relationships). The Human Rights Commission, in its submission to MCART(1994),\(^71\) noted that:

> The shift in current legislation and judicial thinking reflects the reality that family composition is New Zealand society is becoming more diverse and single parenthood is becoming increasingly common.

Thus, a widow seeking donor insemination could bring a complaint against a provider who refuses to provide this service to a single or widowed person. The woman would need to establish that she has control over her husband’s sperm to make such a request. If the gamete provider has made provision for storage of his sperm during his lifetime and contemplated posthumous insemination by his partner there

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\(^{69}\) Section 5 of the Status of Children Act 1969.

\(^{70}\) Section 7(2) of the Status of Children Act 1969.

\(^{71}\) Submission of the Human Rights Commission to the Ministerial Committee on ART, April 1994.
would be no difficulties. As already observed, if retrieval has not already taken place the woman has no ability to authorise retrieval from her deceased husband or in circumstances where he is alive but has no capacity to consent.

Section 97 of the Human Rights Act gives the Complaints Review Tribunal (not the Human Rights Commission itself) power to declare "any act, omission, practice, requirement, or condition" otherwise unlawful to be lawful if there is "genuine justification" for it. This section is seen as a safety-net provision for providers to avoid unreasonableness of the application of the Act without exception and allow deviations from the Act where there is genuine justification for doing so. There is no experience of relying on this provision to date. It relies on the service providers themselves to make judgements on these issues. If a complaint arises from the provider's decision to refuse services then the decision would lie with the Complaints Review Tribunal. To date there have been no decisions of the Tribunal involving assisted human reproduction.

The freedom from discrimination provisions of the Human Rights Act are imported into the New Zealand Bill of Rights Act 1990. Similarly, section 5 of the Bill of Rights has a justified limitation provision. Case law has developed (including reference to the Canadian decisions on the Canadian Bill of Rights), which although not determinative of New Zealand law may provide valuable insights and influence a New Zealand court on how it might apply the genuine justification provision to a complaint of discrimination in this context.

**Legal considerations applied to specific factual situations**

Having considered the applicable common law and legislation in New Zealand, this Section now turns to consider the legal implications of the four factual scenarios presented earlier. The factual situations focus on the intentions or otherwise

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72 Personal communication from a solicitor at the Human Rights Commission.
73 Section 19 of the New Zealand Bill of Rights Act 1990.
74 See obiter comments of Richardson P in Jeffries [1994] 1 NZLR 290, 293.
of the father. In the discussion of ethical issues, it was pointed out that as with many examples of assisted human reproduction, there is a tripartite relationship operating. In an ethical analysis due consideration can be given to the interests of each party: the deceased father, the mother who seeks to conceive, and the child-to-be. A legal analysis is far more restricted. In assisted human reproduction there is potential conflict between the desires of women and men to be parents, and the interests of the children they wish to create. There may also be conflicting interests of others who might otherwise inherit through their father’s estate. Yet the child to be conceived and born has no legal rights. Any child-centred approach, such as paramountcy of the child’s welfare, operates after the child is born and has no bearing on the decision to conceive and reproduce posthumously. As demonstrated above, the interests of prospective parents are protected by the anti-discrimination provisions of Human Rights law. There is also the possibility that the interests of the mother wishing to conceive the father’s child posthumously may come into conflict with the previously expressed interests of the deceased father. The legal analysis below is therefore restricted to the operation of the present legal framework, namely, existing legislation and common law which is not expressed in a way that takes into account the more complex ethical issues that arise from posthumous reproduction.

Storage of gametes prior to death - express intention regarding posthumous use (case 1 and 2)

Applying the property analysis, gametes are likely, for legal purposes, to be regarded as property which gives rights of control and use over them. These rights are extinguished upon the death of the gamete provider. An exception may be where the gametes have previously been gifted inter vivos, that is, during the lifetime of the gamete provider (for example, sperm provided for a DI programme). Even so, once gifted the gamete provider loses legal right over them.

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75 See, for example, section 23 of the Guardianship Act 1968.

76 See discussion at page 43 regarding the ethical issue of whether a deceased person has interests that survive his death.
Gametes are capable of being bequeathed in a will subject to the rule against perpetuities and possible testamentary claims. Although not a Commonwealth case, the Californian decision of Hecht, in which Kane's testamentary wish to bequeath his sperm to his girlfriend was upheld, may be persuasive in New Zealand. A property analysis does little to resolve who, if anyone, has decision making authority on the gamete provider's behalf. However, if gametes are the property of the gamete provider then any stored gametes would form part of the estate of that person unless bequeathed to a specific person.

A prior expressed intention by way of a consent form for storage of gametes delegating authority to another or a directive in a will is the best starting point for the gamete provider's intentions to be fulfilled, but there is no legal requirement placed on that person to carry out the gamete provider's intentions. In any event, posthumous insemination will not take place unless the gamete provider's partner intends to have his child. A difficulty may arise if the gamete provider has not given any prior indication of his posthumous wishes during his lifetime and they may not be known to either his partner or the fertility service that stores them.

Whereas there is likely to be no legal objection to a prior written intention, a previously expressed oral intention by the gamete provider is more difficult. In applying the Code of Rights careful examination will be needed to establish what kind of express intention by the gamete provider would be sufficient to meet the informed consent requirements. The form in which consent is expressed is largely irrelevant save written consent gives prima facie evidence that agreement was in fact given. The writer has expressed the view that the Code of Rights does not apply to things done after the death of the consumer. Such steps would be ultra vires the Code of Rights, and the Code of Rights applies only during the lifetime of the gamete provider in the context of health care procedures.

A declaratory order may be necessary to establish the fertility service is acting lawfully in facilitating the posthumous use of the deceased gamete provider’s sperm without prior written consent. There would be an evidential onus on establishing the

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77 See note 26.
78 This procedure is available under the Declaratory Judgments Act 1908.
actual intention of the deceased. It could be argued that a person who has made provision for the storage of their gametes during their lifetime, but without reference to the possibility of posthumous use, has not shown the necessary intention. In effect, without an express intention there would be a presumption that no such use was intended.

A New Zealand court would not be restricted by the requirement of “effective” or written consent as in the Blood case. It would, however, be unlikely for a court to rely on oral evidence alone. The court may require corroborative evidence to back the assertion that, despite no written indication by the deceased, this was indeed the deceased’s wish during his lifetime.

Gamete provider stores sperm with no express intention for posthumous use (case3)

In this situation, the storage of semen is coincidental to the primary purpose for which the sperm is stored in the first place (for example, cancer treatment or vasectomy). Nothing is known about the deceased person’s wishes but the partner or family are desirous of their use. Although written informed consent has been obtained from the gamete provider for the purpose of storage, there has been no anticipatory statement in the consent for storage form regarding posthumous use. More ambiguous situations include the situation where the gamete provider simply states that on his death the stored semen are to be made available to a designated person, for example his widow. Even this situation could not be interpreted as an advance directive or permission for posthumous use per se. Simply relinquishing authority to another may not be sufficient evidence to establish an implied intention that posthumous insemination should proceed, subject to the widow’s own decision to proceed. The deceased may, for example, have intended that his partner dispose of his semen on his death in a culturally appropriate manner such as burial of his semen with his body.

79 See note 22. Schedule 3: para 1 of the Human Fertilisation and Embryology Act 1990 provides: “A consent under this Schedule must be given in writing and, in this Schedule, effective consent’ means a consent under this Schedule which has not been withdrawn".
The notion of implied consent is sometimes relied upon, especially with minor procedures (for example, where a patient holds out an arm for an injection). The validity of any decision depends on adequate information disclosure. The fact that someone stores gametes for one purpose such as during cancer treatment does not imply that the person knew about or contemplated subsequent posthumous use of their gametes. The notion of implied consent cannot operate where there is ambiguity as to the gamete provider’s wishes.

There is no legal impediment to proceeding with posthumous insemination where there is no express intention by the gamete provider for such use so long as the gamete provider has given dispositional authority to another. In some situations this authority will continue after the death of the gamete provider. The same difficulties of establishing the gamete provider’s intention arise where no written consent has been given despite taking steps to store gametes for other purposes.

**Gamete provider makes no provision for storage of sperm (case 4)**

There are two situations that may lead to a request for retrieval of sperm where the gamete provider has made no prior provision for storage of his sperm and is not able to consent or to refuse consent. Firstly, a request may be made for the retrieval of sperm from the gamete provider where he is in a coma or persistent vegetative state. In these circumstances the gamete provider remains alive but can take no part in the decision making. A relative or spouse has no authority to make decisions on the gamete provider’s behalf. Common law authority such as the Bland decision relies on application of the best interests test. The writer has argued that no therapeutic benefit can be made out to the gamete provider in this situation. This may be a debatable point, but even if a case could be made out for the court to authorise retrieval of gametes, it does not necessarily follow that it could authorise storage and subsequent use of them. In addition, the Code of Rights places a similar threshold in situations where the gamete provider is not competent to give informed consent. The health professionals may have reasonable grounds to decline such a request.

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The second situation is where the gamete provider has made no provision for storage of his sperm during his lifetime and the only possibility of achieving posthumous reproduction is for the retrieval of his sperm when brain death has occurred or within 24 hours of death. Again, the gamete provider has no capacity to consent to the procedures of either the retrieval of his sperm or its subsequent use. It is not possible to give binding directions about the disposal of one’s body following death. The writer has argued that the Human Tissue Act 1964 has no application in that gametes are not contemplated as a part of the body and retrieval of gametes for posthumous use is not a therapeutic purpose in terms of this Act.
5. POSTHUMOUS REPRODUCTION - THE WAY AHEAD

Current practice in New Zealand

The mechanism for monitoring assisted human reproduction in New Zealand is largely dependent upon professional self-regulation. All providers of assisted human reproduction services in New Zealand are accredited by the Fertility Society of Australia’s Reproductive Technologies Accreditation Committee (RTAC). Since 1992 all New Zealand clinics have been voluntarily accredited. In addition, and as the fertility clinics in New Zealand now operate under RTAC guidelines, they must also apply to NECAHR for ethical review of any new or innovative procedures and any human research carried out by them. This would include posthumous insemination, given its innovative nature. The most recent draft Code of Practice for Centres using Assisted Reproductive Technology (revised March 1997) includes guidelines for the storage and use of gametes and embryos. These guidelines do not specifically contemplate posthumous reproduction.

Clause 7 of these guidelines provides:

7. Anyone consenting to the storage of their gametes, or of embryos produced from them must:
   7.1 Specify the maximum period of storage (if this is to be less than a statutory storage period),
   7.2 State what is to be done with the gametes or embryos if he or she dies, or becomes incapable of varying or revoking his or her consent.

There is no statutory period of storage in New Zealand. Therefore, clause 7.1 has no effect as the maximum period of storage need only be specified if less than the prescribed statutory period. The directive in clause 7.2 stating “what is to be done with the gametes” could include a range of options available to the gamete provider upon their death.
In addition, clause 9 of the Guidelines also provides that if the donated gametes are to be used for treatment and the donor is married or has a long-term partner, centres should encourage donors to ask their partner to consent in writing to the use of gametes for treatment. There is no specific reference to the possibility of posthumous use by the gamete provider’s partner but the RTAC Guidelines for Consent Forms also provide:

In the case of cryopreservation of gametes and embryos, a record of the options consented to for their fate and the conditions of storage, including the wishes of the couple in the event of their death, separation and divorce. Following a major lapse of time, a further consultation should be offered to the couple in case there may be a change of their wishes.

In response to a request from NECAHR, three fertility services outlined their current practice with respect to storage for posthumous use of semen.\(^81\) One service has stored semen for oncology patients for many years. They pointed out that because of the advent of micromanipulation technologies any sperm, no matter what the number, has the potential to achieve a pregnancy. Because of this, men who previously would not have been considered for sperm freezing due to poor quality ejaculates are being offered storage.

Consent forms vary on the issue of disposition of gametes once the provider dies. One fertility service has a consent form that specifies that if the gamete provider dies his semen will be disposed of. Despite this, the same provider has had a number of men who were dying who subsequently requested that their semen not be disposed of when they die, although there has been no request from the partner to be inseminated after the gamete provider’s death. Another fertility service’s practice is that consent to sperm storage (for example, before vasectomy or during treatment cycles as back-up), includes an indication of whether the sperm should be discarded or made available to a nominated person should the patient die. Consent to sperm storage before cancer therapy has a similar option.

At present, consent forms for ova donation do not address the possibility of posthumous use, since storage of ova is not contemplated, as sperm are added to the

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\(^{81}\) NECAHR wrote to fertility services on 4 September 1996 and again in 1998.
ova within six to eight hours of collection. In contrast, consent forms for embryo storage (after IVF, GIFT, donor ova) have several contingency clauses covering death and separation. The consent forms do not guarantee that the clinic will undertake to carry out insemination at a later date. Thus, there is a default provision leaving the final decision making on issues such as posthumous use with the fertility service, who, under the RTAC guidelines, would be obliged to seek advice from NECAHR. The consent forms do not indicate that such use may be dependent on ethical approval.

Fertility services also reported to NECAHR that private patients (unlike publicly funded patients) pay an annual storage fee in the range of $120 - $150 which helps patients come to a decision about ongoing storage. Patients are asked whether they want storage to continue or embryos and gametes to be destroyed or donated.

In light of this background, it would appear that whilst fertility services broadly meet the RTAC requirements for consent to collection and storage of gametes, there is little consistency on the specific issue of posthumous use of sperm where storage of sperm is undertaken. The issue of storage of ova and its subsequent use is also not addressed. Indeed, the fertility services that responded to NECAHR requested that the Committee produce New Zealand-wide guidelines on how to approach requests for posthumous use of sperm, and requests for harvesting sperm, if the man is unable to give his consent.
Proposed legislation for assisted human reproduction

In many countries governments have developed social policy and legal responses to assisted human reproduction. This has not been done in New Zealand (Caldwell & Daniels, 1992). The most recent report to the Minister of Justice on assisted human reproduction recommended a legislative response was not necessary (MCART, 1994). When considering issues such as the posthumous use of gametes, the key role of legislation would be to provide a statutory framework for decision making to address the legal, ethical and cultural issues as they arise. In this respect it is the process that counts and the ability to move beyond the issue of regulation of infertility services and to involve the public in discussion and comment on these important issues.

There is danger in legislation being too prescriptive. It is simply not possible to foresee every possibility that may come about in this field. Similarly, there is a danger in legislation simply prohibiting certain practices without the flexibility of being able to take account of evolving values and societal attitudes. One of the ironies of the Blood case was the view expressed by Baroness Warnock, Chair of the original UK inquiry into Human Fertilisation and Embryology which provided guidelines for the 1990 Act. When discussing artificial insemination by a husband, The Warnock Report canvassed the possibility of posthumous insemination (Warnock, 1984):

...Nevertheless we have grave misgivings about AIH in one type of situation. A man who has placed semen in a semen bank may die and his widow may then seek to be inseminated. This may give rise to profound psychological problems for the child and mother.

...The use by a widow of her dead husband's semen for AIH is a practice which we feel should actively be discouraged.

Yet in the course of the Blood case Baroness Warnock published a statement cited in support of Mrs Blood's application:

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82 It is beyond the scope of this thesis to debate the role of the state and legislation in regulating assisted human reproduction.

83 1 October 1996.
I see no ethical or public policy objections to allowing the woman to proceed with a pregnancy, using the frozen sperm of her late husband...

And with reference to her earlier report:

In the case of posthumous birth, we envisaged that, as a general rule, sperm would have been frozen with a view to pregnancy before a man became ill, or at the onset of his illness and that therefore agreement would be presumed, the couple being treated as one.

The particular facts relating to retrieval of semen from a braindead man were not even considered by the Warnock Commission in 1984, and the concept of posthumous reproduction without express agreement of the parties was considered to be problematic. Soon after the High Court judgment of the Blood case was delivered, an editorial of The Lancet entitled “A role model of rigidity”, said (Lancet, 1996):

Another lesson - and more relevant to future bioethical commissions - is that legislation should not wrap a straitjacket around the statutory body it sets up.

New Zealand is currently at the other end of the legislative spectrum as there is no overarching statutory body to oversee regulation and developments in this field. To a large extent, this broader role beyond ethical review of research and innovative treatments has been carried out by NECAHR. NECAHR was established in 1993 to replace the Interim National Ethics Committee on Assisted Reproductive Technologies (INECART). It reports to the Minister of Health and is required to review new or untried ART proposals to ensure that: ethical aspects are considered; rights of patients, donors and resulting children and participants of research are protected; and to develop protocols and guidelines to assist regional ethics committees to review assisted reproductive proposals. NECAHR has however, operated in “an environment of moral uncertainty, absence of policy, and pressures from interest groups”.84

In 1996 the Labour MP Dianne Yates introduced as a private member the Human Assisted Reproductive Technology Bill (“the Yates Bill”). This Bill seeks to: establish a nine-member Authority to license and monitor clinics; establish a central register for children born through ART; prohibit human cloning; ban commercial

84 NECAHR’s submission on the Human Assisted Reproductive Technology Bill, 1 July 1997.
surrogacy and the sale of human sperm, ova, embryos and babies. The second reading of the Bill was in 1997 but has not progressed since then. The Yates Bill has drawn heavily on the Human Fertilisation and Embryology Act 1990 (UK) but in quite a piecemeal way. It has both a prohibitive approach to certain practices and regulatory emphasis through the licensing of activities. For example, Part II of the Second Schedule requires a licence for storage of gametes and embryos. The Storage Licence Conditions in the Third Schedule provide for a storage period of gametes and embryos not exceeding 2 and 5 years respectively. These short periods of storage received sharp public reaction on the grounds that there is already a shortage of sperm and egg donors and this relatively short period does not take into account the 6 month quarantine period for testing sperm donation. In contrast, the statutory storage period in respect of gametes and embryos in the United Kingdom is 10 years and 5 years respectively.\(^{85}\)

There is not the same requirement for “effective” consent as in the Human Fertilisation and Embryology Act 1990 (which was the stumbling block in the *Blood* case). The Storage Licence Conditions simply require:

(d) That such information as the Authority may specify to the persons whose consent is required under this Act, the terms of their consent and circumstances of the storage and as to such other matters as the Authority may specify in directions shall be included in the records maintained in pursuance of the licence;

Although rather clumsy drafting, this condition may be interpreted as meaning that the consent requirements for storage will depend on directions of the Authority.

In response to the Yates Bill, the Minister of Justice introduced into parliament the Assisted Reproduction Bill.\(^{86}\) It provides for a few prohibitive practices mentioned by the MCART report and for statutory recognition of NECAHR. If there is provision for an ethics committee such as NECAHR, there is a need to be specific about its role and the terms of reference, given the indication that there is to be no overseeing body

\(^{85}\) Section 14 (3) and (4) of the Human Fertilisation and Embryology Act 1990.

\(^{86}\) This Bill was introduced to the house on 29 September 1998 and at the time of writing was not available for comment.
with a broader regulatory function as proposed in the Yates Bill. Ethical review is distinct from practice aspects which a Licensing Authority would oversee. It should also be noted that New Zealand has experience of setting up statutory bodies that can formulate and review codes of practice. Examples include the Code of Health and Disability Consumers’ Rights and the Health Information Privacy Code, both of which were promulgated under their respective governing legislation.\(^\text{87}\)

The need to establish guidelines for clinics on issues such as posthumous use of gametes does not, in itself, dictate a particular legislative response. What is important is an adequate framework to address these issues in a timely manner, and public accountability in this process. Legislation can provide an appropriate framework so long as it is flexible enough to allow for the benefits of new and developing technologies to be assessed and appropriately applied.

**Posthumous reproduction - recommendations**

As noted earlier, the issues surrounding posthumous reproduction fall within the broader framework of the collection, storage, use and disposal of human gametes. In developing guidelines NECAHR will need to be mindful of practical implications, such as the proposed term of storage, as well as any possible future developments, including the use of stored ova. As such, a method of review of the guidelines will be an important consideration to keep current thinking in line with the situations that fertility service providers are likely to face.\(^\text{88}\)

This thesis has provided a framework for discussion of the ethical and legal considerations relevant to posthumous reproduction. The discussion of the four case scenarios shows the complexity of some of these situations and no clearcut rules are likely to be acceptable to all. From a legal perspective, New Zealand has little

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87 Section 19 of the Health and Disability Commissioner Act 1994 and section 46 of the Privacy Act 1993.

88 NECAHR has prepared draft guidelines for circulation on this topic entitled “Collection, storage, use and disposal of sperm from a deceased person”, November 1998.
common law or legislative experience to draw from and some of the legal problems raised will not be resolved without legislative action or judicial decision. Even then, issues could arise as to what extent a particular court judgment has precedential effect on other cases that follow. The importance of the recommendations here lie in framing the issues to take into account the diverse factual situations and plurality of views on the topic.

There should be a process of ethical review for difficult cases, without casting any definitive view on the likely outcomes. One of the practical difficulties lies in being able to predict the possible factual permutations that may come about. It is for this reason that NECAHR considers each situation on a case by case basis.89

In less ambiguous situations, where the gamete provider has made clear their intentions for posthumous reproduction (cases one and two), there are no ethical or legal objections to giving effect to the gamete provider’s intentions. This may not necessarily result in posthumous insemination taking place, but the starting point is to give effect to those clear intentions. None of the social or cultural themes raised present a moral objection to posthumous reproduction in this situation. In situations where the gamete provider’s consent has not and cannot be obtained (cases three and four) a presumption against posthumous use should operate and the case should be referred for consideration by NECAHR. In these more complex cases there are greater philosophical arguments to address on how these situations may be viewed. An ethics committee would primarily be concerned with the ethical issues but there may be some situations where legal issues, such as the lawfulness of retrieval of sperm from a comatose man, may dominate the discussion. If there is any legal doubt about such procedures it may be necessary to seek a declaratory order from the court to authorise (or not) the procedure. In such situations an opinion from an ethics committee should

89 It is also beyond the scope of this paper to debate the policy considerations concerned with the role and practice of ethics committees. The writer has previously researched the role and structure of ethics committees. See Douglass, A J. “Ethics committees: the role and structure of ethics committees in the New Zealand health system”, 1993 LLM research paper, Law Faculty, Victoria University of Wellington.
be sought in any event.⁹⁰ The overriding position is that in all situations where there is any doubt or ambiguity, or potential or actual conflict, the fertility service provider should refer the matter to NECAHR.

Key issues for determination when considering the guidelines on posthumous use of a partner's gametes, include the following six points -

1. **A time limit for storage of gametes.**

A time limit for storage is relevant to the wider consideration of storage of gametes generally, regardless of their subsequent use. The effect of imposing a finite period of storage would create a positive obligation on fertility services to review the storage arrangements (already carried out with private patients who pay a storage fee on an annual basis). A relatively short period of one or two years is suggested but with a clause which gives the gamete provider the ability to renew consent to storage for a further period. The fertility services would only be expected to take reasonable steps to trace the gamete provider if, for example, there has been a change of address without informing the clinic concerned. Once the notice period (say, six months) has expired then the fertility service should discard the gametes according to an agreed protocol on the basis that the gamete provider cannot be contacted. This contingency should be provided for in the original consent form. A related issue here is whether there should be a maximum period of storage after death of the gamete provider. This issue may be resolved in a practical sense by the requirement to pay storage fees.

2. **Posthumous use - Stand-down period.**

Linked to the issue of the length of storage is the question of whether there ought to be a waiting period after the gamete provider's death. The stand-down period would allow time for the woman partner to address the grieving process and undertake implications counselling about posthumous reproduction. It is a debatable point

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⁹⁰ Auckland Area Health Board v Attorney General [1993] 1 NZLR 235, at page 255 per Thomas J. This approach was followed in Re G [1997] NZFLR 362, Fraser J.
whether a stand-down period of, for example two years, would have the effect of discouraging posthumous insemination. A requirement of implications counselling may be the best way to address the question of a suitable timeframe to allow for considered decision making.

3. Informed Consent for posthumous reproduction

It is the responsibility of clinics to facilitate full disclosure to all parties potentially involved with posthumous reproduction. This includes not only the gamete provider at the time of storage, but also the woman seeking to be inseminated after her partner's death. Implications counselling is appropriate for the woman seeking to undergo posthumous insemination. Consent forms should also indicate that in some situations posthumous insemination is contingent on the clinic obtaining ethical approval from NECAHR.

4. Informed Consent of gamete provider (case 1 and 2)

Ideally, the possibility of posthumous reproduction should be addressed at the time of collection and storage of gametes. This would allow for the express intentions of the gamete provider to be given, either in favour of this possibility (case 1), or not (case 2). Consent forms will need to deal specifically with what is to be done with the sperm on the gamete provider's death. Options include:

a) discarding and disposing the sperm in a culturally appropriate manner (for example, in the case of a Māori gamete provider, the sperm may be returned to whanau);
b) delegation of authority to a nominated person (spouse/partner), or persons (executors and trustees), in contemplation of the specific possibility of posthumous reproduction;
c) storage for a further specified period or maximum period of storage;
d) donation to other nominated recipients for donor insemination (where the gamete provider is already donating to recipient couples);
e) donation for research.
Renewal of consent in consent forms should assist in preventing the gamete provider’s directives from becoming stale. In any event, the consent form should state that the gamete provider can at any time vary or withdraw their consent.

5. No express intention by gamete provider (case 3)

Where the gamete provider stores sperm with no express contemplation of posthumous use, an ethical presumption should operate that the gamete provider did not intend posthumous reproduction. The examples given include situations where the gamete provider stores sperm prior to undergoing medical treatment for cancer or vasectomy or simply has stored sperm for treatment with his partner during his lifetime.

In these situations there would be no legal impediment to a person with dispositional authority over the sperm (such as the gamete provider’s partner or executor) allowing for its posthumous use, but without an unequivocal directive from the gamete provider there may be ethical objections to this course of action. This ethical presumption should be rebuttable. There may be justification for proceeding with posthumous insemination. For example, while the gamete provider may not have given written consent for posthumous use there may be sufficient evidence from others that posthumous reproduction was indeed contemplated and desired by him in the event of his death.

Requests for posthumous insemination in this class of case should be referred to NECAHR for ethical approval, applying the ethical framework set out in this paper.91

91 See pages 66 to 68.
6. Requests for retrieving sperm from gamete provider unable to give consent
(case 4)

Where there has been no provision for storage, the opportunity of retrieval of sperm is very limited in the case of sudden death. In practical terms, there would be insufficient time to consult an ethics committee. If the gamete provider is permanently unconscious there would be greater opportunity for ethical advice to be sought. In the writer's view however, in either situation there is no legal justification for undertaking these procedures without the consent of the individual concerned and such action may be unlawful. An ethical presumption operates against retrieval of sperm for posthumous use. Despite there being both legal and ethical reservations about retrieval of sperm in these situations, retrieval of sperm may occur (arguably) unlawfully in any event (such as in the Blood case). A decision will need to be made by an ethics committee whether posthumous use would be permissible.

Requests for retrieval of sperm from a recently deceased or permanently unconscious gamete provider and possible posthumous use should be referred to NECAHR for consideration of both the legal and ethical aspects discussed in this paper.92

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92 Ibid. Legal considerations for case 4 are set out on pages 101 to 102.
6. CONCLUSION

Advances in the techniques involving assisted human reproduction raise many complex and sensitive ethical and legal issues. The posthumous use of frozen sperm to attempt to achieve a pregnancy has been available for cancer patients since the advent of sperm cryopreservation in 1953. Retrieval of sperm posthumously was first reported in 1980 (Kerr & Caplan, 1997). Although donor insemination with frozen sperm has become relatively commonplace, posthumous reproduction by assisted means is an example where the technical capacity to achieve conception and pregnancies has developed ahead of any moral consensus. To achieve moral consensus on this topic may be overly optimistic but an agreed approach taking into account pluralistic views is desirable.

A central point of this paper is that by simply reducing the ethics of these situations to a consequentialist analysis of harms and benefits to the various parties involved fails to take account of the ethical issues that arise independently of the consequences to the parties. A consequentialist approach is far from straightforward as it requires moral prioritisation of the values and a comparison of the interests of the parties at stake. One of the key difficulties is assessing whether there is possible disadvantage or unknown harm to the child to be born. This is a vexing question that only future sociological research, and possibly the benefit of hindsight, is likely to address.

The writer has proposed a broader framework which considers the social and cultural contexts within which the ethical issues are embedded. This framework takes into account fundamentally important values such as the notion of autonomy but also attempts to shift the discussion from “can we?” to “should we?” These searching issues require us to consider the significance we place on the reproductive experience and how we view death, whether any special status can be attributed to genetic material such as gametes, and the societal implications of how we form families and our goals in this respect. A bicultural society such as New Zealand has an advantage
because it can benefit from the experience and insights of more than one culture in addressing these issues.

The four cases presented and discussed illustrate the complexity of the legal issues. Overseas cases and consideration of gametes in terms of "property" does little to address the moral issue of whether genetic material, such as gametes, are the sort of thing that should be regarded as property. The rights and interests of the gamete provider and partner take precedence over any consideration of the welfare and interests of a child yet to be conceived. An analogy with property also does not resolve, who, if anyone, has decision making authority on the gamete provider's behalf in situations where they are not competent to consent or refuse consent. Emphasis is likely to be placed on the gamete provider's intentions and where it is not possible to establish these, in the case of gametes stored for other purposes or, where the gamete provider is comatose or recently deceased, a court is unlikely to condone retrieval and use of sperm for posthumous insemination of the woman partner. A declaratory order may be necessary to establish the fertility service is acting lawfully in facilitating the posthumous use of the deceased gamete provider's sperm without prior written consent. A court would be assisted by the opinion of an ethics committee in reaching its decision.

The *Blood* case is a good example where the rigidity of the law did not address the moral issues at stake. New Zealand is at the permissive end of the legislative spectrum. The writer argues that legislation to provide a framework for ethical debate and, where necessary, decision making is essential for New Zealand to progress in this area. In the near future there will be related issues in posthumous reproduction which require critical discussion, such as the cryopreservation of ova and posthumous use of foetal tissue. Our diverse communities, and society generally, would benefit from participating in this very important discussion within a legally recognised framework.

Practical recommendations have been made for guidelines on this topic. Where there is any doubt or ambiguity in these situations, the fertility service provider should refer the matter to an ethics committee. The recommendations also raise wider
issues which are yet to be addressed in New Zealand, such as whether there should be a time limit for the storage of gametes and the informed consent process when gametes are stored for a range of purposes.

Posthumous conception by assisted means is just one of a raft of issues that arise in assisted human reproduction generally. It is worthy of greater attention and discussion because it is a good example where technology has lead to greater control over procreation and its timing in relation to the lives of parents. With the rapid acceptance of the benefits of procedures such as DI, IVF, and ICSI, it is easy to lose sight of the ethical and societal implications arising from their application. The challenge lies in keeping the moral debate apace with the technological advances.
GLOSSARY OF ABBREVIATIONS AND TERMS

AI
Artificial Insemination.

Cryopreservation
Preservation of tissues such as sperm, ova or embryos by freezing them at extremely low temperatures in liquid nitrogen.

Endometriosis
The presence of endometrial tissue (mucus membrane) in abdominal locations such as the fallopian tubes, ovaries and peritoneal cavity.

Embryo
The product of fertilisation of egg by a sperm usually referring to the organism after implanting into the uterus but commonly used in IVF to mean the early product of conception.

ET
Embryo Transfer. Involves the transfer of the embryo to the uterus.

Fertilisation
Union of an egg and a sperm to produce a zygote, which may then develop further to the embryo stage.

Gamete
The mature male or female reproductive cell (sperm or ova).

Gamete Provider
Expression used in this paper to refer to a person - male or female’s own use of their gametes and not for donation to others.
**GIFT**
Gamete Intra-Fallopian Transfer. Eggs are retrieved and then the egg and sperm are transferred directly into the fallopian tube so that fertilisation takes place within the woman’s body rather than in the laboratory as with IVF.

**ICSI**
Intra Cytoplasmic Sperm Injection. A technique whereby a single sperm is injected into an egg.

**INECART**

**IVF**
In Vitro Fertilisation. An egg from a woman’s body is fertilised in a laboratory dish by sperm provided by her partner or donor. The fertilised egg, once it starts to divide, is then transferred back to the woman’s uterus or it may be transferred to another woman.

**Laparoscopy**
A surgical investigation utilising a telescopic instrument (a laproscope) to view the pelvic organs. Laparoscopic procedure is used to visualise the eggs and recover them by a special needle fitted with a suction apparatus.

**MCART**
The two person Ministerial Committee on Assisted Reproductive Technologies that reported in 1994 to the Minister of Justice. The Report is entitled “Navigating Our Future”.

**Motile**
Mobile, referring to sperm
NECAHR
National Ethics Committee on Assisted Reproduction. NECAHR was established in 1995 (replacing INECART), and is a ministerial committee under Section 46 of the Health and Disability Services Act 1993.

Oocyte
An immature ova, egg.

Ova
Plural of ovum, an egg.

Ovaries
Female glands within the pelvic cavity which produce the hormones oestrogen and progesterone and in which the ova are developed.

RTAC
Reproductive Technology Accreditation Committee, The Fertility Society of Australia.

Semen
The fluid containing sperm and seminal secretions which is ejaculated during intercourse or masturbation.

Sperm
The male reproductive cell produced in the testis.

Vasectomy
An operation in men for surgical sterilisation by dividing and tying the duct (vas deferens) along which sperm are transported from the testis into the ejaculate.

Zygote
The fertilised ovum before further cell division.
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