Surrogacy and IVF in 2020 Associate Professor John McBain AO 21/08/2015

Thank you Mr President. I hope in the time allotted to me that I can do some justice to the task I have been put…foreseeing what Surrogacy and IVF might look like in 2020. Whatever I may conclude this evening, I am certain only that once these five years have elapsed, my vision will appear to have been not quite twenty-twenty!

There are two types of surrogacy; traditional or full surrogacy, where conception follows intercourse or artificial insemination and the more modern gestational surrogacy, where the embryo then fetus being carried is from an egg from any woman other than the surrogate...this latter requires IVF and subsequent transfer of one or more embryos to the surrogate.

Traditional surrogacy is out of favor, at least in countries where IVF is accessible and affordable. Although described and practised since antiquity, there is a modern sense of distaste surrounding it. In my King James bible, the commentary which precedes Genesis ch.16, in which the conception of Ishmael for Abram through the agency of barren Sarai's handmaiden, Hagar, are these disapproving words--'A carnal plan for children'

In Modern times, before the widespread availability of IVF, the practice of full surrogacy for financial reward seems to have been prevalent, at least in the United States. This practice seems to have ceased, or at gone underground since 1986 when, in the Superior Court of New Jersey, Judge Harvey Kotlow ruled that the contract between a Mr. Stern and his wife with a Mary Beth Whitehead for the payment of $10,000 upon her relinquishing the child she carried for them, was void. He ruled that Mr. Stern and Mrs. Whitehead were the parents of the little girl he called baby M. Mr. Stern was awarded custody of the infant and Mrs. Whitehead was allowed supervised visiting rights. Fortunately, for those hoping still to have a child through surrogacy, IVF was becoming a more successful treatment, although much of its success then depended upon the transfer of, at least in the USA, up to four and sometimes more, embryos.

Gestational surrogacy is inextricably linked with IVF so to trace the regulation by law of surrogacy in Victoria it is instructive, I believe, to return to the early days of IVF.
Projected is an old slide of the notes of my work in 1977 when I stimulated the ovaries of infertile women with FSH and hCG for laparoscopic egg retrieval at the Royal Women's Hospital in Carlton and at the Queen Victoria Medical Centre in Lonsdale St.
It can be seen that in 1977, 71 egg collections with an average yield of 4.6 oocytes were performed at The Women's and 12 collections with an average yield of 5.3 at the Queen Vic. As the Melbourne Egg Group was a collaborative research program between the two groups the process of fertilization in the human was studied on 15 fertilized eggs using electron microscopy by Dr Henry Santhananatham and 18 embryos were transferred into the uterus of infertile women, sadly for no resultant pregnancy.
This work, being unsuccessful, I believe, did not attract any attention from the State, religious bodies or the nascent feminist push.

The following year, Steptoe and Edwards announced two live births from IVF in Oldham, England; the news was met with relief that the process had been shown to work but tinged with disappointment that we were not the first group to be successful.
Robert Edwards was subsequently awarded the Nobel Prize for Medicine and Physiology: I believe there were one or two from Melbourne who ought to have shared that prize.
Australia's first baby, Candice Reid was conceived by the Women's team of Mr. Ian Johnston, Dr. Alex Lopata and Dr. Andrew Speirs in 1979. Her mother was the only successful woman of 50 whom we had treated in 1979, so by simple arithmetic the chance of having a baby

through IVF that year was two percent…and the average age of these 50 women was 28.7 years, almost a decade younger than those presenting for IVF treatment in 2015.

However, in the next two years there was an explosion of success in Melbourne mostly due to the influence and energy of Dr Alan Trounson with the next 12 babies, including twins being born. Melbourne became the world capital of IVF and doctors and scientists flocked here from all corners of the world...one success or breakthrough seemed to follow another and we were the darlings of the local press.

This success by now had attracted government attention and Attorney-General Jim Kennan QC invited Professor Louis Waller, a well-respected Monash University academic lawyer to chair a committee of enquiry into this new reproductive technology. The committee report recommended that the government regulate through legislation and in 1983 the Infertility (Medical Procedures) Act was passed in the Upper House at 2a.m., the government having secured the support of the Country Party through accepting their amendment that this medical treatment be made available only to married couples...singles and gays were not even thought of as being deserving of help to conceive and even long-term heterosexual de facto couples were excluded.

This law also effectively put an end to embryo research in Melbourne by making it an offence punishable by four years imprisonment or 100 penalty units together with the IVF Center's license to perform IVF being withdrawn. This effectively killed IVF research into ways of improving embryo growth in culture...the hypocrisy of allowing the results of embryo research, performed in other jurisdictions, into Victoria for improved culture conditions did not disturb them.

One benefit of the legislation was the establishment of a donor sperm register so that anyone born from donor sperm treatment after 1987 would be able to identify their sperm donor. It was acknowledged at that time that there should be no retrospective nature to such law and assurances of anonymity to those who had donated prior to 1987 would be honored.

There is a voluntary register of donors and offspring who are willing to be contacted. On that register, there are 79 offspring and 213 donors. When one remembers that each donor had up to 10 offspring, and in the earlier days, up to 20 offspring, the mismatch between the number of donors wishing to obtain information regarding offspring and the relatively small number of offspring wishing to obtain information about donors is stark.

Recent enactment of retrospective identification of donors has also, perhaps in a spirit of equal opportunity, allowed donors to contact the offspring, many of whom will be unaware that they are the product of donor insemination.

I am reluctantly reconciled to the donors being identified by offspring who wish to have that knowledge, even or though it means breaking our promise of many years ago….at least they are aware that they were donors! I am, however, appalled at the prospect of the quiet contentment of families being perturbed by the intrusion of a request from a long forgotten donor for contact with his biological offspring, who, for the most part, are unaware of their donor origins. I cannot imagine that the politicians have considered the enormity of allowing donors such a right to initiate contact, albeit through a clinic counselor..

In 1988, under the care of Professor John Leeton, the Kirkman sisters created a moral panic amongst the Victorian legislators by Linda Kirkman acting as a surrogate for her sister Maggie with the birth of their daughter, Alice. Legislation was immediately introduced to prevent any further outrages such as this, and although an amendment appearing to permit gestational surrogacy was introduced in 1995, it was so poorly drafted that no IVF program had confidence in assisting in a gestational surrogacy arrangement. Indeed, it was not until some 23 years after the birth of Alice Clarke that the next gestational surrogacy offspring was born from a treatment conducted in Victoria.

So, what were those born without a womb, those having had a hysterectomy, or those whose health or life might become compromised were they to become pregnant, to do? They continued to go to Canberra, or Sydney if they had a locally available surrogate or, in increasing numbers, they went to the United states, then India, then Thailand. That is, their inability to receive appropriate treatment within the law in Victoria did not deter some from seeking that treatment but it must, surely, have been an insuperable barrier for those less well placed financially.

A recent publication from Surrogacy Australia posed the question to 114 members of that organization contemplating a surrogacy arrangement. The question was, “How would you respond if you were considering overseas surrogacy and lived in a state where that was a criminal offense?”. The majority, 55% responded that they would engage in commercial overseas surrogacy, given the low probability of prosecution. However, clearly, the other 45% were deterred to some degree.

Surrogacy in Victoria has been possible since 2010. The participants work within the guiding principle that the best interest of any child to be born within a surrogacy arrangement is paramount. All parties must have had a criminal and working with children check. They are unable to advertise for a surrogate. Following the birth of a child, the commissioning parents must apply to the county court for a substitute parentage order between 28 days and 6 months. The commissioning parents will then be the legal parents of the child.

The legislation requires all involved in a surrogacy arrangement to seek the approval of a Patient Review Panel, set up under the Act. This panel must be satisfied of the following;

- The commissioning parent is unlikely to become pregnant, be able to carry a pregnancy, or give birth
- The woman is likely to place her life or health or that of the baby at risk
- The surrogate’s oocytes will not be used to form the pregnancy
- The surrogate has previously carried a pregnancy and has given birth to a live child without undue complications

Counselling is mandatory and extensive, both within the ART clinic offering the treatment and, in addition, an independent psychological assessment is required of each participant. All parties are also required to seek independent legal advice.

I’m indebted to Professor Kate Stern for use of the flow chart which is projected, outlining the steps along the pathway from the commissioning parents’ first review by their fertility specialist until the woman is ready to start an egg retrieval cycle and the surrogate is ready to start medication preparing her womb for synchronized embryo implantation. There are 44 health or legal professionals who will participate in that pathway, some being involved at more than one point during the process, but around 25 individuals will be involved at some stage in the pathway. The pathway in comprehensive!

The story of baby Gammy, the product of an overseas commercial surrogacy arrangement, shocked Australia. The Thai mother, who was left with the Down Syndrome baby, gained the sympathy and admiration of the public, while the parents received scathing criticism in all media.

Following this, a working party has been active earlier this year in Canberra and has reported to a parliamentary committee that an enquiry into surrogacy is required. Notable legal officers, including Justice Jennifer Coates of the Family Court and Judge John Pascoe of the Federal Court, whose professional lives are touched by such cases, have strongly recommended that compensated surrogacy be available in Australia and have emphatically declared that we must cease exporting our problems to under-resourced, poor countries and vulnerable women.

When one considers the vast resources applied to altruistic surrogacy in Victoria with the cursory information and counselling given to those in surrogacy arrangement in overseas jurisdictions, one can only come to the conclusion that these resources should be available for regulated, compensated surrogacy in Victoria. The Canberra initiative concluded that research into surrogacy was urgently required.

In Melbourne, since 2011, collaborative research between Melbourne IVF and Monash IVF has applied psychological tools to measure the following amongst those indenting to engage in an altruistic surrogacy arrangement. These couples, the commissioning couple and the surrogate and her partner are interviewed at five stages; prior to treatment, at six weeks of pregnancy, at 20 weeks of pregnancy, 36 weeks of pregnancy and after delivery, to measure;

- Personality
- Mood
- Intimate relationships
- Attachment
- Maternal and paternal fetal attachment
- Social support
- The experience of infertility

Of 60 involved, only 8 have completed this comprehensive and searching study!

So, who are the surrogates?

• Friend	18
• Sister	9
• Sister in law	7
• Online chat room	4
• Friend of a friend	3
• Mother	1
• Daughter of a friend	1

Although the analysis of this study is incomplete, a strong thread for the motivation of altruistic surrogates appeared to be the seeking of some redemption for some action in their past which they now regret.

An analysis of the results of the Melbourne IVF surrogacy program from 2011 to 2014 reveals that, of 45 couples who have received patient review panel approval and have, among them, undergone 100 IVF treatment cycles, there have been 16 births and five ongoing pregnancies, meaning that fewer than 50% who have negotiated the arduous and searching process outlined earlier will have been successful in their quest for a child.

For all its perceived faults, traditional surrogacy was much more effective and far more affordable.

Our research has identified some serious relationship breakdowns in those who have achieved a live birth, despite extensive advice and counselling both prior to and during the pregnancy. Although the child has been relinquished in each case, two very long term friendships have irretrievably broken down. This translates to a friendship rupturing rate of at least 12% if all the births were to surrogates who were friends and frighteningly higher if only half of the births were to surrogates recruited from amongst friends.

A further problem was identified from our research, where one surrogate continued to have a profound longing for the child after relinquishment, although she was fully committed to the understanding that the child was not hers.

It appears that, even with the most assiduous preparation, mismatched expectations are, to some degree, inevitable in altruistic surrogacy.

I believe that commercial surrogacy ought to be legalised in Australia. Apart from avoiding sending our problems overseas, a tight regulation of such surrogacy arrangements would include ensuring the safety of women who act as surrogate and the keeping of records so that, into the future, children can find information about all involved in their conception and birth.

Further, there would be a far greater availability of appropriately screened and motivated surrogates.

Possible initiatives which could facilitate this might include:

- A non-government, not-for-profit agency to act as a matching service between surrogates and intended parents
- Appropriate standardised financial compensation for the surrogate mother managed by a third party, which recognises her time out of the workforce, her physical discomfort and restrictions whilst pregnant and finally her labour or operative delivery and subsequent convalescence
- Community education to provide wider understanding of the characteristics needed to be a surrogate mother would assist in increasing the pool of Australian surrogates

By 2020 I hope that compensated surrogacy can meet the needs of the relatively small number of people unable to have a child other than through the participation of a gestational surrogate.

By 2020, although recognising that this might be a bridge too far, I would hope that there has at least been a discussion about the reversion to full surrogacy for male gay families. Currently, two women are required to contribute to the conception and birth of a child, doubling the number of people are exposed to some adverse outcome should such occur.

IVF in 2020

IVF technology is now a successful treatment for those within the normal reproductive age range. Those under 36 may approach IVF with confidence of a favourable outcome, those between 36 and 40 will probably be successful if they try often enough, whilst those older than 40 will have to be lucky or seek egg donation from a younger, fertile donor.

In Australia, there are almost 14,000 births following IVF treatment each year. Our research, published two years ago, of the outcome of young adult, IVF-conceived people from Melbourne IVF and Monash IVF shows a healthy, optimistic cohort who are glad that they were born.

As I mentioned a short time ago, the age-related reduction in fertility is a source of distress to many women. An often heard refrain is “I wish I had known about this earlier.”.
Some women who wish to take every step to preserve their fertility against the passing of years have chosen to freeze their eggs in the hope that they will find an appropriate partner in the years to come. At Melbourne IVF, 10 people froze eggs in 2005 and 55 used egg freezing in 2013.

Our research into the now 190 women who have frozen eggs for social reasons over the past 15 years reveals that the average age at egg freezing is 38 years and the average number of eggs collected and frozen per cycle was eight.

Surprisingly, only 16 out of the 190 who have frozen their eggs have returned for the eggs to be thawed.

We have written to all women who used egg freezing with the question, “you froze your eggs x years ago. What happened after that?”.

The dogma around egg freezing identifies a career-focussed woman, who is selfishly setting childbearing aside to pursue her career. The responses from those who returned our questionnaire paint a different picture. Eighty two percent of these women say that they froze their eggs because there was no partner or no partner who would commit to having a child although these women felt ready to have a baby at the time of egg freezing.

Without exploring this lack of willing partner in any depth, I would point to the growing phenomenon of prolonged male adolescence with so many single men still living in the parental home although employment uncertainty and other disincentives to start a family must also play a part in their reluctance to commit.
There are many commentators who believe that the real beneficiaries of effective female contraception are men.

The Australian bureau of statistics predicts that by 2031 couples without children (43%) will outnumber those with children (38%) and those will increasingly have only one child…the remainder will be uncoupled.

I believe that, by 2020, community education initiatives will see the age at which women freeze their eggs to be closer to the low 30s and that this option will be taken up by increasing numbers in the hope of retaining their fertility until circumstances and partnering permit childbearing.

The trend is already discernible. By 2020, IVF will have increasingly moved towards the transfer of a single extended-culture embryo which was been biopsied and frozen, awaiting the biopsy result prior to transfer in a fresh, unstimulated cycle.

Biopsy will allow exclusion of chromosomally abnormal embryos and the selection of embryos unaffected by monogenic recessive, dominant and sex-linked conditions, which cause a profound burden of ill health in children. This happens already but the introduction, hopefully soon, of a Medicare rebate for this area of IVF will increase the number who can contemplate IVF treatment and embryo selection rather than antenatal testing and pregnancy termination.

The human genome project lasted 13 years and cost three billion dollars for the decoding of the first human genome. In 2015, this cost per human genome had fallen to around $4000. This fall in cost and rising efficiency of decoding has vastly outstripped Moore’s law for semiconductor and microprocessor capacity.

An American company, 23andMe, has been ordered by the FDA to stop advertising third party measurement of genomes from the general public because of the panic and confusion which resulted from unqualified or even skilled attempts to interpret the genomic findings.
It is known that, on average, each of us carries a recessive gene which could lead to a serious childhood medical condition.

The American college of medical genetics recognises 595 childhood recessive diseases, most of which are ultra rare disorders.

Currently, those who have testing for these rare genetic disorders are members of an unfortunate club of couples who have given birth to a child which is the result of the unfortunate combination of their parents’ genes.

How much better would it be if, by 2020, there were sufficiently well developed computational algorithms to make sense of the vast amount of currently confusing data from genome testing.

In five years’ time, couples may be consulting their GP armed with the results of their genomic testing on their iPad requesting referral to a medical geneticist to advise them on the risk of genotypic mal-pairing, translating to a phenotypically affected newborn…I would urge those present this evening to do whatever part they may to avoid this future boon to families and indeed the State coffers, for the cost of each affected life is high, from being hijacked by those who will trivialise it as a search for a designer child.

Mr President, I thank you once more for the invitation to address our society and I would happily take any questions that members or their guests might have.