

THIS autumn, the UK government is planning to legalise two new assisted reproduction procedures, dubbed by many as "three-person IVF", which may help parents to have "children of their own" but who are not affected by some inherited forms of mitochondrial diseases. Mitochondria are very small entities found in all the cells of the human body, including the egg cells, which give them the energy to survive. But sometimes, the mitochondria in a woman's eggs are dysfunctional and it is estimated that 1 in 6,500 children are born every year in the UK with a serious mitochondrial disorder.

The first new treatment being proposed is a procedure in which the chromosomes – which contain most of the genetic material – of an unfertilised egg containing dysfunctional mitochondria of a woman wanting a child are transferred to an unfertilised donor egg of a second woman containing healthy mitochondria from which the chromosomes have previously been removed. Once this new egg is obtained it can then be fertilised through IVF with the

future child. Thus, in contrast to the donation of whole eggs, the government does not want children born from these two new procedures to be able to identify their egg donors.

This is, however, very unfortunate and seriously misunderstands the concept of causal parenthood which may be seen as very important to the resulting child, who may want to know which individuals were the actual cause of his or her existence.

Probably the best example of causal parenthood in which biological parenthood, including genetic parenthood, was seen as being less important than other considerations

his wife and filed for divorce. After a lengthy legal battle over who should pay child-support for the little girl, judges eventually decided that both John and Luanne were to be considered the legal parents even though they did not have any biological, including chromosomal, connections to her. This was because the baby girl would never have been born had not Luanne and John both agreed to have a donated egg fertilised with donate sperm implanted into

Radical leaps in scientific progress have raised some complex issues over the position of parents, says Calum MacKellar



prospect of obtaining a healthy child.

The second procedure is the same as the first but the chromosomes are transferred between fertilised eggs instead of unfertilised eggs.

These two new treatments, however, are giving rise to a number of important ethical dilemmas including the manner in which the new proposed UK legislation is considering the women donating the eggs.

At present, when women donate their whole healthy eggs – including the chromosomes – to be used in the treatment of infertile couples, their identity cannot remain a secret to any

resulting children. Indeed, the law was changed in 2005 so that any persons born as a result of a donation, after this date, are entitled to request and receive their egg donor's name once they reach the age of 18. This was because the UK parliament eventually acknowledged, amongst other reasons, that some children may benefit from knowing who brought them into existence, enabling them to develop a stronger sense of personal identity.

But with these two new procedures, the UK government is arguing that any child resulting from the procedures would not be interested in knowing the identity of his or her egg donor. This is because it is just her emptied egg, and not her chromosomes, that is being used to generate the

was reflected in the famous Californian Buzzanca case which took place in 1997. The case arose when an infertile couple, Luanne and John Buzzanca, contracted three separate adults, a sperm donor, an egg donor and a surrogate woman, to help them bring their child into existence through IVF. As a result, a baby girl was subsequently born in 1995. But before the birth took place, and after the Buzzancas signed a contract with the surrogate, John Buzzanca decided to leave

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Further research is needed to the manner in which children are born by assisted reproduction

a surrogate mother. Thus, the court found that the child's very existence was every bit as much their responsibility as if things had been done the traditional way. This decision thus acknowledged that it was the persons who were the primary cause for the child's existence who had parental priority over any other individuals who had caused the child to come into being.

This, of course, does not mean that any of the other persons who had caused Luanne and

John's daughter to exist cannot be considered as some kind of parent, such as a genetic or gestational parent.

There is a great need for further research relating to the manner in which children born from new assisted reproduction procedures consider who their parents really are and the manner in which this affects their deep sense of identity.

In this context, it is very regrettable for the UK government to enact binding legislation making sure that children, born through three-parent IVF, will never be able to contact one of the persons – the egg donors – who was a substantial cause to their very existence. It reflects a very limited understanding of who parents really are and may give rise to serious long-term psychological suffering in the prospective children. In addition, parents who specifically use these new procedures to have a child "of their own" may become very distressed in realising that their child may eventually want to share their parenthood with a third individual.

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