



## ASSISTED GESTATION AND TRANSGENDER WOMEN

TIMOTHY F. MURPHY

### Keywords

assisted gestation,  
ethics,  
transgenderism,  
uterus transplantation

### ABSTRACT

*Developments in uterus transplant put assisted gestation within meaningful range of clinical success for women with uterine infertility who want to gestate children. Should this kind of transplantation prove routine and effective for those women, would there be any morally significant reason why men or transgender women should not be eligible for the same opportunity for gestation? Getting to the point of safe and effective uterus transplantation for those parties would require a focused line of research, over and above the study of uterus transplantation for non-transgender women. Some commentators object to the idea that the state has any duty to sponsor research of this kind. They would limit all publicly-funded fertility research to sex-typical ways of having children, which they construe as the basis of reproductive rights. This objection has no force against privately-funded research, of course, and in any case not all social expenditures are responses to 'rights' properly speaking. Another possible objection raised against gestation by transgender women is that it could alter the social meaning of sexed bodies. This line of argument fails, however, to substantiate a meaningful objection to gestation by transgender women because social meanings of sexed bodies do not remain constant and because the change in this case would not elicit social effects significant enough to justify closing off gestation to transgender women as a class.*

In 2002, Saudi Arabian clinicians transplanted the uterus of a living donor into a woman, but that graft failed several months later.<sup>1</sup> In 2011, Turkish clinicians transplanted the uterus of a cadaver donor into a woman. After the transplant seemed successful, the clinicians carried out embryo transfer, and the woman became pregnant in 2013.<sup>2</sup> After a time, however, the pregnancy ended in fetal death. In 2012, a Canadian research team proposed 'The Montreal Criteria for the Ethical Feasibility of Uterine Transplantation,' and in that same year,

<sup>1</sup> D. Grady. Medical First: A Transplant of a Uterus. *New York Times*, Mar. 7, 2002. There are successful models of this kind of transplantation and successful gestation in animals. See: S. Lee, Y. Wang, M. D'Silva, C.H. Yoo, P. Wolf, W.S. Chung, E. Takahashi, D.Y. Chung & R.F. Gittes. Transplantation of Reproductive Organs. *Microsurg* 1995; 16: 191–198.

<sup>2</sup> T. Brady. Woman Who Fell Pregnant after Undergoing World's First Successful Womb Transplant has Lost her IVF Baby. *MailOnline*. 2013 May 15.

Swedish clinicians carried out several living mother-to-daughter uterus transplants, and in early 2014, they carried out a series of nine such transplants.<sup>3</sup> That team then undertook several attempts at embryo transfer in order to establish a pregnancy in the women with transplanted uteruses.<sup>4</sup> Later in 2014, the team reported its first

<sup>3</sup> A. Lefkowitz, M. Edwards & J. Baylala. The Montreal Criteria for the Ethical Feasibility of Uterine Transplantation. *Transpl Int* 2012; 25: 439–447; Reuters. Sweden: First Uterus Transplants from Mother to Daughter are Reported. *New York Time*. 2012 Sept 18; see also F. Macrae. The First Babies from Womb Transplants to be 'Born Next Year'. *MailOnline*. 2014 Jan 13; Associated Press. Womb Transplants Hailed as Success in Pioneering Swedish Project: Doctor Says Nine Women have Received Wombs from Relatives and Will Soon Try to get Pregnant. *The Guardian*. 2014 Jan 13.

<sup>4</sup> A. Hodgekiss. First a Womb Transplant, Now IVF. Four Women who had Pioneering Surgery in Sweden to get a Chance at Motherhood. *MailOnline*. 2014 March 3.

Address for correspondence: Professor Timothy F. Murphy, University of Illinois College of Medicine – Medical Education m/c 591, 808 S. Wood St. Chicago Illinois 60612-7309, United States. T: 312 996 3595 F: 312 413 2048. Email: tmurphy@uic.edu

Conflict of interest statement: No conflicts declared

successful live birth of a child.<sup>5</sup> At present, then, there are both professional standards and clinical precedents in place for uterus transplant (UTx) for women with absolute uterine infertility.

While these efforts all involved genetic females, UTx raises the prospect of assisted gestation for others as well. Some commentators have in the past analyzed the possibility of gestation by males on the assumption that it might take the form of intra-abdominal gestation, which occurs in some women, although rarely and with great risk.<sup>6</sup> UTx changes that assumption and puts gestation by males in a new light, especially as it would bypass the serious health threats of intra-abdominal pregnancy. UTx also raises the prospect of assisted gestation for transgender women. After all, as philosopher Robert Sparrow has pointed out, some transgender women ‘may be expected to have a strong interest in being able to fulfill the biological role of being a mother.’<sup>7</sup> Sparrow has even said that ‘the most likely motive for developing the technology necessary to realize male pregnancy is to allow male-to-female transsexuals to become (gestational) mothers.’<sup>8</sup> In fact, the first known attempt at UTx went forward in Germany in 1931 with Lili Elbe, a transgender woman who died three months after the intervention.<sup>9</sup> Recent UTx attempts have all involved non-transgender women hoping to become pregnant, but it remains true, nevertheless, that some transgender women may want the option of assisted gestation.

In my analysis here, I will ask whether the state may assume some degree of responsibility to support the development of assisted gestation for transgender women through UTx or some other means. To answer this question, I will first revisit some past consideration of gestation by males. This analysis usually stalls at the foreseeable risks involved, but safe and effective UTx may put assisted gestation within meaningful reach for men and – by extension – for transgender women through a focused program of research aimed at safe and effective

techniques.<sup>10</sup> I will evaluate in detail Sparrow’s objections to the state assuming responsibility for research to enable gestation by males. Sparrow objects to the idea that the state could have any obligation to help develop techniques of assisted gestation for men, and certainly not any obligation in relation to any supposed right on their part. Since Sparrow’s analysis functionally treats transgender women as men, his objections would also excuse the state from any responsibility in helping develop assisted gestation for them.

I will show that the ground of Sparrow’s objections – deriving rights from sexed bodies – does not succeed as a normative standard of the state’s relationship to people’s reproductive interests. In other words, the state does not need to require that its people be either male or female *simpliciter* and to respond to its people as if their reproductive interests are reducible to those typically associated with their sex. Choices about having children only exist in relationship to existing technology, and novel technologies in conception and gestation show that historically sex-typical ways of having children are themselves artifactual. In any case, not all the things a state does are responses to rights alone; the state does many things that help promote social welfare, and public funding for means of assisted gestation for transgender women could certainly be justified on grounds other than a putative right of transgender women to that kind of research. Nothing bars the state as a matter of principle from some commitment toward helping develop techniques of assisted gestation. Whether the state must make this commitment, at what level of financial investment, and with what expectation of speed in return on that investment remain open questions, to be answered only in the context of the state’s overall commitments.

## FIRST: GESTATION IN MALES

Some men say they would like to gestate a child. Since the matter is purely hypothetical, it is impossible to know how sincere or widespread that wish might be. Even so, it is reasonable to assume that some men might want to gestate. For example, a man might wish to gestate a child because his female partner is unable to do so (because of uterus incapacity or pregnancy risks to her health) or unwilling (because she is the main economic provider in the relationship and doesn’t want to lose time to pregnancy). Male gestation might appeal to male same-sex couples as a way of sharing biological parenting: One partner provides the gametes for conception while the

<sup>5</sup> M. Bränström, L. Johannesson, H. Brokstöm, N. Kvarnström, J. Mölne, P. Dahm-Kähler, et al. Live Birth after Uterus Transplantation. *The Lancet* 2014; Epublished Oct 5. At: DOI.org/10.1016/S0140-6736(14)61728-1.

<sup>6</sup> H.K. Atrash, A. Friede & C.J. Hogue. Abdominal Pregnancy in the United States: Frequency and Maternal Mortality. *Obstet Gynecol* 1987; 69: 333–337. See also J. Money. *Gay, Straight, and In-Between: The Sexology of Erotic Orientation*. New York: Oxford University Press; 1988. p. 55.

<sup>7</sup> R. Sparrow. Is It ‘Every Man’s Right to Have Babies if He Wants Them?’ Male Pregnancy and the Limits of Reproductive Liberty. *Kennedy Inst Ethic J* 2008; 8: 275–299; 283.

<sup>8</sup> Sparrow. *op. cit.* note 7, p. 283. Sparrow uses the term ‘transsexual’, but in my analysis, I will use the term ‘transgender’ unless I am quoting him directly.

<sup>9</sup> R.A. Heath. *Praeger Handbook of Transsexuality*. Westport CT: Greenwood; 2006. p. 3.

<sup>10</sup> A.L. Caplan is not optimistic about uterus transplantation enabling a man or transgender women to bear a child: ‘I don’t think so. I think the biology still is in the way. There is this fantasy that you could, kind of, put this organ anywhere – the uterus – and it will start delivering babies, but the biology does not work that way’. Quoted in

other gestates, to vary an arrangement sometimes carried out by female same-sex couples.<sup>11</sup> Single men might also want to gestate the children they wish to have, simply for the experience. Both single and coupled males might prefer assisted gestation to the moral and legal complications of reliance on surrogacy.<sup>12</sup> (The prospect of male gestation is the subject of a tongue-in-cheek website from the fictional 'RYT Hospital for Advanced Technologies'.)<sup>13</sup>

Sparrow casts no doubt on the sincerity of men wanting to gestate, but he does not like the way in which standard conceptions of reproductive liberty would 'establish a prima facie obligation of society to assist them to do so.'<sup>14</sup> In fact, Sparrow objects to the idea of treating the interest by males in gestation as any kind of right at all: 'Any argument for a right to reproductive liberty that extends as far as a man's right to become pregnant has lost contact with the facts about the biology of reproduction and its significance in a normal human life, [facts] that made it plausible to defend the existence of such a right in the first place.'<sup>15</sup> Or as he says again: 'Because pregnancy is not a reasonable expectation in men, men who wish to become pregnant are not capable of establishing that this desire should be granted the same moral weight as women's desires to become pregnant.'<sup>16</sup> If men have no presumptive right to gestation, they lack any standing to expect public support for the focused line of research that would be necessary to enable male gestation, no matter the depth of their sincerity in regard to the hope of gestation.

This rights-based analysis of assisted gestation would not cut at all against privately-funded research, since private parties are, in general, free to spend their money according to their own lights. It is therefore entirely possible that private funders could support and bring to successful completion a program of assisted gestation research for men and transgender women. Against that effort, Sparrow would presumably have no objection, although that outcome would raise an interesting question for his position: Should public funds be used to enable transgender men to use techniques of gestation once they were developed? The implications of privately-funded research for assisted gestation are not, however, my focus here. I will focus only on the issue of publicly

funded research intended to develop UTx or other mechanism of assisted gestation and defer questions of publicly supported provision of assisted gestation supported provision of assisted gestation.

In general, Sparrow makes the case that the state should not sponsor research to enable assisted gestation for non-females because he ties state responsibilities to rights, and he ties rights to experiences that are important and central to normal human lives. Sparrow specifically says that gestation is not a central experience in a normal, male human life.<sup>17</sup> It is entirely 'frivolous,' he thinks, to represent a few men's interests in gestation as expressing men's core rights in having children in general.<sup>18</sup> As he notes, we do not think of men as a class as barren because they do not and cannot gestate.<sup>19</sup> He concludes therefore that men do not have any claim on the public fisc to help develop the techniques that would make gestation possible for them: 'The importance of reproduction [to some] cannot trigger state resources to develop techniques of male gestation.'<sup>20</sup> Since the right to male gestation is not a positive right, one which the state is obliged to help secure, could we alternatively construe it as a negative right, one that men could pursue without state support but also without any expectation of interference? Sparrow does not concede even this interpretation since he believes that male gestation cannot exist except for the publicly-funded research he rejects, and any talk of a negative right of this kind is therefore not just premature but morally meaningless.<sup>21</sup>

Despite these conclusions, Sparrow notes that the development of safe mechanisms of gestation by men would, of course, 'equally allow women to become pregnant by means of an abdominal pregnancy.'<sup>22</sup> He could therefore support state assistance for assisted gestation for men if – and only if – that effort were necessary as a step toward developing assisted gestation for women. If – because of some quirk of science – researchers had to develop assisted gestation in males first in order to help women, that research would be a defensible use of public funds, but that state support would be only a means to an end, not a proper goal in and of itself. Recent clinical developments in UTx indicate, however, that a men-first approach to developing assisted gestation for women is now an entirely idle question.

Even apart from the question of funding, Sparrow treads cautiously about gestation by males. He builds no case per se against male gestation, but he does, in fact,

A.M. Tremonti. The Current: The Ethics of Uterus Transplants & Doctor-Assisted Pregnancy [podcast]. 2013 Mar 12. At: <http://www.cbc.ca/thecurrent/episode/2010/12/17/assisted-reproduction/>

<sup>11</sup> T.F. Murphy. Lesbian Mothers and Genetic Choices. *Ethics and Behavior* 1993; 3: 220–222.

<sup>12</sup> C. Overall. *Ethics and Human Reproduction*. Winchester, MA: Allen & Unwin; 1987.

<sup>13</sup> At: [www.malepregnancy.com](http://www.malepregnancy.com)

<sup>14</sup> Sparrow. *op. cit.* note 7, p. 283.

<sup>15</sup> *Ibid*: 286.

<sup>16</sup> *Ibid*: 288.

<sup>17</sup> *Ibid*: 286.

<sup>18</sup> *Ibid*: 287, 288.

<sup>19</sup> *Ibid*: 290–291.

<sup>20</sup> *Ibid*: 288.

<sup>21</sup> As I have noted, however, private funding is certainly capable of producing options in assisted gestation, should the money be forthcoming to do so and on a scale equal to the task.

<sup>22</sup> Sparrow. 2008, *op. cit.*, note 7, p. 295n14, 295n18.

identify a criterion that could be used to build a case against male gestation no matter who paid for its development.<sup>23</sup> He says male gestation would involve ‘changes in the social meaning and expectations of sexed bodies.’<sup>24</sup> If male gestation ever occurs, it will have to be judged on its social effects this way, no matter how the techniques came into existence and no matter if it were entirely safe and wholly effective for individuals. It is at least possible that the effects of male gestation could be harmful enough in their social ramifications to justify closing off the development of the option or stopping it after it became available. As I say, this is not an argument proper against male gestation, but it is the pathway to one, depending on how the effects of male gestation fall out.

## NEXT: GESTATION IN TRANSGENDER WOMEN

While Sparrow describes transgender women as the likely driving force behind interest in assisted gestation, he makes only one further mention of them for purposes of his analysis of the ethics of the practice, in the context of possible objections to the idea of male gestation. One possible objection is that men simply do not need gestation as a way of having children. Fertile men have other options available to them, for example, by relying on the conventional pregnancy of a female spouse, girlfriend, or surrogate. Sparrow says that, by contrast, transgender women would not be fertile in those same ways if they had their testes removed as part of that gender transition.<sup>25</sup> Transgender women otherwise disappear from further consideration. By framing his analysis this way, by representing transgender women as a kind of male *manqué* and by failing to consider their reproductive interests as women, I submit that Sparrow treats transgender women for all moral intents and purposes as men, albeit men who assert a female identity.

If transgender women are men for moral purposes, then Sparrow’s objections to the development of assisted gestation for that class of people applies: Their interest in gestation does not translate into a right to publicly funded assistance. To be sure, nothing in Sparrow’s argument suggests that transwomen should not be respected regarding their psychological interest in gestation, it’s just that there is no obvious right by which transwomen could claim assistance from the state toward achieving that outcome. It is worth stating, too, that on Sparrow’s analysis neither would transgender women have a nega-

tive right to assisted gestation because no such right is conceptually meaningful before the development of the relevant techniques. Moreover, the caution he raises about the social effects of male gestation would also apply here as well: If assisted gestation in transwomen led to some objectionable outcome, as measured by harm in wake of changes in the social meaning of sexed bodies, one would have a basis for objecting to the practice, even if the gestation were otherwise safe for individual transwomen and their children.

The stakes of the analysis change significantly, I submit, if we treat transgender women as women in the full moral sense. It is not simply ‘frivolous’ for transwomen to assert an interest in gestation. Gestation can play a key role in expressing and consolidating a female identity. This is not to say that gestation is either a necessary or sufficient condition of female identity, only that some women understand it as important that way. For all anyone knows about this poorly studied area, many (most?) transwomen might want the option of gestation.<sup>26</sup> If so, why would that desire not count as a core interest of transgender women as a class, namely as the kind of interest that Sparrow uses as the very basis for framing reproductive rights in relationship to state responsibilities?

For the sake of completeness, let me also mention that the possibility Sparrow raises about putting men first in the line of research for assisted gestation could – as a matter of moral principle – apply here as well. If some quirk of science required it, researchers could focus on assisted gestation in transwomen as a way to perfect assisted gestation for non-transwomen, and the state would presumably have a rationale for funding research proceeding that way, no matter that transwomen were not theorized as the intended beneficiaries of the research but only as the means to an end. Given clinical success in achieving live births involving uterus transplantation in genetic females, this prospect seems only an idle question, but it is at least as imaginable as Sparrow’s example of putting men first as the pathway to assisted gestation for women. As a matter of their core interests or if research requires their participation, therefore, transgender women would cross the thresholds that Sparrow sets out as the boundaries of state responsibility for research bearing on fertility medicine.

## TECHNOLOGY AND SEX BEFORE THE STATE

Even apart from question of whether transgender women are simulacra of women or women in the full moral sense

<sup>23</sup> Ibid: 291.

<sup>24</sup> Ibid: 295n17.

<sup>25</sup> P. De Sutter. Gender Reassignment and Assisted Reproduction: Present and Future Reproductive Options for Transsexual People. *Hum Repro* 2001; 16: 612–614.

<sup>26</sup> One transwoman of my acquaintance has said she would like UTx just for its own sake, not as a way to have (more) children. That interest would have to be tempered, of course, against the risks and costs involved.

and apart from the question of whether the interest in gestation constitutes a core right of transgender women, an equally important moral question is at stake here: How are we to understand the sex of people in relation to their interests in having children as a moral matter? It is, I think, important to resist any quick-and-easy equation between the sex of bodies, reproductive interests, and responsibilities of the state. As far as I can tell, it is generally of no concern to Sparrow whether a male (or female) lives in a way that exhibits female-typical (or male-typical, respectively) behavior or whether people assert cross-sex identities. Yet he treats the descriptive account of human bodies as either male or female as also a normative standard of the state's responsibilities. According to Sparrow, sexed bodies have normative implications relative to 'the normal context of reproduction.'<sup>27</sup> To say it another way, 'normal species functioning' grounds 'intuitions' about the nature and extent of reproductive rights.<sup>28</sup> The alleged core intuition seems to be this: Males and females have sex-typical ways of having children, and those sex-typical ways define reasonable (and unreasonable) expectations of assistance from the state when infertility intrudes. For Sparrow, these standard expectations excuse the state from responsibility not only for male gestation but also for asexual reproduction (cloning) and post-menopausal child-bearing.<sup>29</sup> I will continue to focus here only on the matter of assisted gestation, but for all these issues the question at hand is to what extent 'normal' matters. Can the putative normality of sex-typical interests function as a meaningful criterion for sorting through claims for assistance in having children in technologically innovative ways?

All people, however sexed in body, have interests one way or another about whether to have children and about how to have them. Not only do those interests vary widely, the interests will in some measure be artifacts of the technologies available. I understand 'technology' to refer not only to material devices but also to the 'set of structured forms of action by which we inevitably exercise power over ourselves.'<sup>30</sup> I mean to say, therefore, that human beings express their interests in having children relative to available technologies in both senses. That is, they will typically imagine having children through the

means available for doing so, even if they hope those means do not always remain the only means of doing so.

In order to have children, some women seek a male partner and become pregnant through intercourse. They then gestate those pregnancies and deliver children transvaginally or by Caesarian-delivery. By contrast, some women adopt children. Other women turn to IVF and embryo transfer to conceive and implant embryos. Some couples turn to intracytoplasmic sperm injection in order to conceive. In order to preserve the possibility of genetically related children later on, some parents arrange to store gonad tissue from their prepubescent children, in order to avoid its destruction by various medical treatments.<sup>31</sup> People turn to all these technologies to become parents, yes, but their choices also involve becoming parents according to their own self-understandings of what it means to be a parent. For example, some people may not want to adopt children because they would not find that a fulfilling sense of parenthood; they would rather remain childless if they cannot have genetically related children of their own. In similar ways, transgender woman will express their interest in children relative to the available ways of becoming a parent. Some will be happy to adopt, for example, while others will hope for other kinds of possibilities, such as assisted gestation or, for others, extracorporeal gestation. These hoped-for technologies would be, in a sense, just other technologies through which people express their identities as parents. Neither would we have to understand people turning to the emerging technologies to become parents as any less sincere in their interests simply because the means involved – or the effects on identities – are novel.

With this understanding of technology in hand, let me take a step back even further and look at the foundation of state responsibility for funding fertility research according to people's sex. According to Sparrow, the state can have responsibilities to help its citizens have children according to their sex-typical interests. Yet despite the importance he assigns to sexed bodies, it is not clear why anatomy (e.g., the presence of a phallus) or genetics (XX karyotype) – or whatever marker of sex one chooses – ought alone to define the state's responsibility toward people in regard to assistance in having children. Some countries have, in fact, walked away from 'sexing' their citizens according to physical typologies. That is, they have untethered sex identity from male- and female-typical traits. For example, the Netherlands allows adults to change their legally assigned sex according to their preference, without requiring *any* body modifications; someone's interest in asserting a particular gender

<sup>27</sup> Sparrow. *op. cit.* note 7, p. 290.

<sup>28</sup> Ibid: 288. Sparrow uses 'intuition' in a conventional philosophical sense, namely that an intuition captures (or expresses) moral claims that seem true on their face. True they might be, but they're not true by reason of some kind of privileged insight. In the sense used by most philosophers, intuitions really are – and I think should be defended and otherwise treated only as – judgments, but I will not take up that issue here.

<sup>29</sup> Sparrow. *op. cit.* note 7, p. 289.

<sup>30</sup> P.-P. Verbeek. *Moralizing Technology: Understanding and Designing the Morality of Things*. Chicago: University of Chicago Press; 2011. pp. 67–68 (quoting Jim Gerrie).

<sup>31</sup> Ethics Committee of the American Society for Reproductive Medicine. Fertility Preservation and Reproduction in Patients Facing Gonadotoxic Therapies: A Committee Opinion. *Fertil Steril* 2013; 100: 1224–1231.

identity is sufficient as the basis for change in legal identification.<sup>32</sup> One need not have certain bioanatomical traits in order to qualify as male or female as far as that country is concerned; self-identification is enough. Australia even provides options for its citizens to be recognized as ‘intersex’ or even ‘indeterminate,’ which is to prescind altogether from the requirement that a state must know its citizens as male or female.<sup>33</sup>

One key rationale for the state’s typing its citizens by sex is, of course, to be able to identify them. Treating people as sexed ‘male’ or ‘female’ helps that way, but the state can still identify its citizens through other means, such as biomarkers, without presuming their sex as immutably given across a lifetime. In a sense, the state can be indifferent to the sex of its citizens, so long as it has some mechanism of knowing who they are for purposes of sending them to school, protecting them, taxing them, and otherwise respecting their rights and ensuring that they meet their civic duties. I take these outcomes to mean that the state has no inherent need as a matter of civic theory to understand its citizens’ sex identity as an immutable property of their bodies.

If people may express gender identities for reasons meaningful to them, why should the state theorize its responsibilities to people’s reproductive interests only in terms of a sex assigned at birth? Let me try and bolster this line of questioning by reference to the prospect of synthetic gametes, namely the derivation of functional gametes from somatic or embryonic stem cells.<sup>34</sup> Synthetic gametes would mean that genetic males could be the source of ova, and genetic females could become the source of sperm. This outcome has already been achieved with laboratory animals: Live offspring have been born using ova developed from genetically male stem cells and sperm developed from genetically female stem cells.<sup>35</sup> Research in deriving human gametes – sperm and ova – from people, no matter their sex, is underway.<sup>36</sup> Cer-

tainly, right now, producing *both* sperm and ova and being *both* the genetic father and genetic mother to children are not central experiences in the normal life of any human being. Sparrow might therefore want to argue that the state has no responsibility in regard to this research intended to perfect human gamete synthesis except possibly in overcoming certain kinds of infertility, to help develop sperm from males and ova from females. To make this case, he could deploy the same kind of skepticism he deployed against assisted gestation for men, namely that we do not consider men as deprived (as ‘barren’) because they do not gestate. Neither do we look at men and think ‘what a shame that they cannot be genetic mothers to (some of) their children.’ Neither do we look at women and think ‘what a shame that they cannot be genetic fathers to (some of) their children.’ In this light, Sparrow could acknowledge that new technologies may come along in both senses – material devices and practices constitutive of identity – but that it should be a matter of indifference to the state that they do; the state should focus simply on helping men and women have children in characteristic ways and only offer that help as a matter of meeting an actual obligation. To judge from what he has to say about assisted gestation for men, Sparrow would have the state act only in that reproductive way, supporting research to overcome infertility, so long as the research involves sex-typical ways of having children, by which can only be meant in ways characteristic to this point in history.

What moral standard, however, requires, a state to freeze its responsibilities at a given moment in the technologies of reproduction? New technologies open up new possibilities, and some novel means of conception and gestation might be morally desirable in their own right. For example, suppose a transgender man stores ova frozen prior to the body modifications he undertakes to express a male identity.<sup>37</sup> After body modifications that leave him incapable of producing new gametes, he could use the stored ova to have genetically related children via IVF using sperm from a donor or clinic, but he would do so as the genetic mother of the children for whom he would be the social father. This may or may not be appealing to him; he might well prefer to use synthetic gametes – sperm derived from his somatic cells – to align his gametic role (male) in parenthood with his social role (father). If the technology were available, why should this transgender man not be able to pursue this kind of fatherhood? The interest in being the gametic father of their

Human Germ Cell Differentiation from Fetal- and Adult-Derived Induced Pluripotent Stem Cells. *Hum Mol Gen* 2011; 20: 752–762.

<sup>37</sup> S.A. Wallace, K.L. Blough & L.A. Kondapalli. Fertility Preservation in the Transgender Patient: Expanding Oncofertility Care beyond Cancer. *Gynecological Endocrinology* 2014; Sept. 25, epublished ahead of print. DOI: 10.3109/09513590.2014.920005.

<sup>32</sup> M.K. Lavers. Dutch Senate Approves Transgender Rights Bill. *Washington Blade*, 2013 Dec. 19. At: <http://www.washingtonblade.com/2013/12/19/dutch-senate-approves-transgender-rights-bill/>.

<sup>33</sup> *Australia Government Guidelines on the Recognition of Sex and Gender*, July 2013. At: [http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CD0QFjAD&url=http%3A%2F%2Fwww.ag.gov.au%2FPublications%2FDocuments%2FAustralianGovernmentGuidelinesontheRecognitionofSexandGender.doc&ei=y\\_wxU-DbEsfuyAH89YHQCA&usq=AFQjCNFMbV5NzxxrmUyCv7LwwftLkACGA&bvm=bv.63587204,d.aWc](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CD0QFjAD&url=http%3A%2F%2Fwww.ag.gov.au%2FPublications%2FDocuments%2FAustralianGovernmentGuidelinesontheRecognitionofSexandGender.doc&ei=y_wxU-DbEsfuyAH89YHQCA&usq=AFQjCNFMbV5NzxxrmUyCv7LwwftLkACGA&bvm=bv.63587204,d.aWc).

<sup>34</sup> D.J.H. Mathews, P.J. Donovan, J. Harris, R. Lovell-Badge, J. Savulescu & R. Faden. Pluripotent Stem Cell-Derived Gametes: Truth and (Potential) Consequences. *Cell Stem Cell* 2009; 5: 11–14.

<sup>35</sup> For an example of synthetic gametes in mice, see J.M. Deng, K. Satoh, H. Wang, H. Chang, H.Z. Zhang, M.D. Stewart, A.J. Cooney & R.R. Behringer. Generation of Viable Male and Female Mice from Two Fathers. *Biol Reprod* 2010; 84: 613–618.

<sup>36</sup> S. Panula, J.V. Medrano, K. Kee, R. Bergström, H.N. Nguyen, B. Byers, K.D. Wilson, J.C. Wu, C. Simon, O. Hovata & R.A. Reijo Pera.

children is, after all, broadly shared by men and qualifies therefore as a male-typical trait.

One possible reason that Sparrow could bring forward to defend his normative theory of state responsibility is that the state requires some mechanism to sort claims on public funds. By his account, the state can give a green light to those research priorities that advance the sex-typical reproductive interests of females and males and it can decline those that venture into novel territory. Without this kind of criterion the state would have no principled way to adjudicate claims, so the argument would go, and the state would have to treat frivolous projects and important claims alike.

But paralysis in setting research priorities is not necessarily the outcome here. The state could still set a research agenda even if it looked past the core reproductive interests that supposedly attach normatively to sexed bodies. For the sake of the argument, let me stipulate that men and transgender women have some positive right to gestation. In other words, these parties have a legitimate expectation of some publicly supported assistance in their quest to gestate children. Even so, the state will also have other competing claims on the public fisc, and it will have to make hard decisions when finances are not available to meet all claims. Ideally, the state should follow some principled mechanism for sorting these claims. For example, the state may find that research into life-saving treatments for disorders for which there are no good treatments is more important than developing techniques of assisted gestation, no matter that researchers in both camps have some claim to research support grounded in rights.<sup>38</sup> A *prima facie* expectation of support for non-life-threatening conditions, such as the inability to gestate children, may have to wait for times in which the state is flush with money, so long as other legitimate expectations of the state take precedence. Reproductive interests, for the reasons I have mentioned, are by their very nature expansive; they emerge in relationship to novel technologies. Any expenditures for the ever-increasing domain of reproductive innovation will therefore have to be balanced against available funds in a principled way, but – even so – there is nothing about assisted gestation that – if treated as in some measure a responsibility of the state – would render the state paralyzed in its ability to frame research priorities.

It is also worth mentioning that the state may spend public money for reasons that do not constitute duties in relation to rights properly speaking. For example, most states spend money to protect their citizens from monopolistic trade practices, but it is not clear that the

state does so because people have a ‘right’ to pay the lowest possible price for the goods and services they hope for, courtesy of competitive markets. Do people have a *right* to be protected against monopolies, or is it simply better for the general welfare that the state fund anti-trust efforts to protect competition in the marketplace? The state also spends taxpayer money for beautification projects and cultural services. Must we understand these expenditures as duties exercised in relation to rights? The state may, in other words, make its decisions for reasons of social beneficence. By the logic of expenditures made for reasons other than to respect rights, nothing about assisted gestation in transgender women marks it as ineligible for public support, provided a convincing case connects the funding to social well-being.

## CONCLUSIONS

Male gestation comes and goes as a topic of discussion, both fanciful and serious. Will UTx put gestation within the reach of men who want that experience? Only a focused line of research could answer that question, after the evidence becomes clearer about what UTx can do for non-transgender women with absolute uterine infertility. Transgender women would also stand to benefit from a focused program of research on assisted gestation. Not all transgender women will want to gestate a child any more than all non-transgendered women do, but some will.<sup>39</sup> Attention to fertility preservation is, moreover, becoming a standard feature in the clinical care of transgender women, and this attention – alongside developments in UTx research – could invigorate interest in assisted gestation.<sup>40</sup>

Robert Sparrow makes a case that the state may legitimately decline to support the development of assisted gestation techniques for men, on the grounds that men have no rightful expectation of this kind. Gestation by males – and their transgender variants, as he sees matters – does not count as the kind of sex-typical interest that could ground an expectation of social assistance. To the

<sup>38</sup> L. Fleck has argued that research priorities ought to be set for diseases and disorders that have the least good options for treatment: *Just Genetics: A Problem Agenda*. In: Murphy TF, Lappé MA, eds. *Justice and the Human Genome Project*. Berkeley: University of California Press; 1994. pp. 133–152.

<sup>39</sup> Some transgender people who have modified their bodies in ways that render them infertile have expressed regret about not being able to have genetically related children. (See K. Wierckx, E. Van Caenegem, G. Pennings, E. Elaut, D. Dedeker, F. Van de Peer, S. Weyers, P. De Sutter & G. T’Sjoen. Reproductive Wish in Transsexual Men. *Hum Repro* 2012; 27: 483–487). It would not be surprising to see transgender women express regret about the inability to gestate, even if they could have genetically related children because of various fertility preservation methods.

<sup>40</sup> The World Professional Association for Transgender Health recommends counsel about fertility preservation for all transgender patients. See E. Coleman, W. Bockting, M. Botzer, P. Cohen-Kettenis, G. DeCuypere, J. Feldman, et al. Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People’ Version 7. *Int J Transgenderism* 2011; 13: 165–232.

extent he assigns the state any responsibility in regard to security fertility for its people, it is only to help mitigate obstructions to male-typical and female-typical ways of having children. This account presupposes, however, a static sexing of human beings that Sparrow uses as a normative standard of state responsibility: Human beings are male and female *simpliciter*. If your interests in having children involve techniques that are uncharacteristic for your sex, then you are on your own. It is unclear, however, why the state must establish its duties toward its citizens only through the presumption of a determinate sex and determinate sex-typical ways of having children. Most jurisdictions allow people to modify their sex as a matter of law. It's not clear why this accommodation should extend *only* to documentation of identity and maybe to some certain social benefits and *not* to all matters bearing on one's relations with the state.

Sparrow does not maintain that gestation by men would be necessarily a bad thing, but he leaves the door open to that possibility if harmful effects followed changes in the social meaning of sexed bodies. Assisted gestation, let me suggest, might never meet that threshold of harm. The social meaning of sexed bodies has changed and continues to change in a variety of ways, without the sky falling. For example, one influential and long-reigning social meaning of sexed bodies was – as far as certain influential social authorities were concerned – that males have sex with females and that females have sex with males.<sup>41</sup> To say that states have structured their responsibilities toward people on the basis of this social meaning of sexed bodies would be an understatement in the extreme. Historically, governments have deployed a vast array of criminal sanctions against homosexuality and otherwise treated gay men and lesbians unequally before the law.<sup>42</sup> Male and female homosexuality confounds a certain social meaning of sexed bodies, to be sure, but yet no harm of moral significance has followed broad social acceptance of homosexuality, certainly none of a kind that could justify closing off this sexuality as permissible.

We should be cautious about treating social change in itself as social harm, no less in sexual relationships than in

<sup>41</sup> In some places, of course, this view still prevails. As of this writing, sexual acts between men and sexual act between women are still illegal in approximately 76 countries. Five countries and parts of two others hold out the possibility of the death penalty for violations of the laws criminalizing homosexuality. See International Lesbian, Gay, Bisexual, Trans, and Intersex Association. *State-Sponsored Homophobia: A World Survey of Laws*, 8th ed. At: [old.ilga.org/Statehomophobia/ILGA\\_State\\_Sponsored\\_Homophobia\\_2013.pdf](http://old.ilga.org/Statehomophobia/ILGA_State_Sponsored_Homophobia_2013.pdf). See also A. Cowell. *Uganda Put Penalties in Place for Homosexuality that Can Include Life Imprisonment*. *New York Times*. 2014 Feb 24.

<sup>42</sup> J. Finnis wants the state to do what it can to discourage men having sex with men and women having sex with women. He doesn't want human bodies in those kinds of relationships, hence, all the prohibitions he recommends to discourage homosexuality so far as those prohibitions will allow. See: *Law, Morality, and Sexual Orientation*. *Notre Dame Law Review* 1994; 69: 1049–1076.

choices about children. When it comes to assessing the social meanings of gestation, it should be remembered that one US transgender man has been able to gestate his own children because he did not remove his uterus as part of his gender transition.<sup>43</sup> I submit that Thomas Beattie's multiple pregnancies and childbirths have not led to an identifiable social harm rooted in changed social meanings of sexed bodies, let alone a harm of a magnitude that would justify imposing moral or legal obstacles to assisted gestation by transgender men. It is hard to see that this outcome would change even if more transgender men followed his example. As far as the world at large is concerned, transgender men will be outwardly fathers to their children. One could reasonably expect even less social impact from transgender women who gestate their own children, since in that case the social identity of the parent (female) would align with female-typical behavior (gestation).

This is not to say that assisted gestation in transgender men would have no social consequences. Sparrow points to one possible social complication of male gestation. He says 'although it might become possible for men to gestate a fetus in the abdominal cavity, it is not clear that this would constitute *pregnancy* unless it was also the case that at the conclusion of this process they were the social and gestational mother of the child by virtue of having carried it.'<sup>44</sup> In other words, unless we are prepared to confer the title of 'mother' on gestating men at the point of birth, then they are not pregnant properly speaking, but only gestating men. Would this effect – having to distinguish people who gestate as sometimes mothers but sometimes not – be enough to build a case assisted gestation by men?

It is doubtful that society and the law must be unable to digest the idea that gestating men are pregnant. At a child's birth, the law might record simply that a man is both the father and the gestational parent of the child, or some version of that. This is apparently what happened when Andy Inkster, a transgender man, gave birth to a child; the state of Massachusetts recorded the child not as having a mother or father but only one parent.<sup>45</sup> If we give up the view that all people must be men or women in the eyes of the state, according to the sex assigned at birth, why can we not also give up the idea that all parents must be fathers or mothers to their children in an either-or way? In any case, treating motherhood as implied in pregnancy would not disturb the concept of motherhood by transgender women. No confusion would follow in treating a transgender woman pregnant by

<sup>43</sup> T. Beattie. *Labor of Love: The Story of One Man's Extraordinary Pregnancy*. Berkeley, CA: Seal Press; 2009.

<sup>44</sup> Sparrow. *op. cit.*, note 7, 282; emphasis in the original.

<sup>45</sup> J. Casio. *The Reproductive Rights of Trans Men*. *The Good Men Project*. 2014 Feb. 21. At: <http://goodmenproject.com/featured-content/reproductive-rights-trans-men/>.

assisted gestation as also the social and gestational mother of her child. But that is, again, only if we get past the idea that transgender women are men masquerading as women.

Furthermore, what will happen to the idea that motherhood requires gestation if techniques of extracorporeal gestation come along? If women can turn to techniques of extracorporeal gestation – aka artificial wombs – called for by some feminists in order to have children, they would not either – on Sparrow's account – seem entitled to the title of mother since their children would be gestated altogether outside a body.<sup>46</sup> The day may also come when clinicians are able to derive sperm and ova from the same person and use those gametes to produce children. Let's now combine embryos conceived with synthetic gametes with techniques of extracorporeal gestation. What will become of sex-grounded ideas of parenthood when people can be both mothers and fathers to children gestated entirely outside anyone's body?

<sup>46</sup> A. Smajdor. The Moral Imperative for Ectogenesis. *Camb Q Healthc Ethics* 2007; 16: 336–345.

The foregoing analysis shows, I submit, that the sex-typical interests of men and women in having children do not exhaust all the interests people may have in regard to having children, and it is that the state should not frame its research responsibilities in fertility medicine on the assumption that their sex confines their reproductive destiny. There is no reason in principle to exclude expenditures by the state on research aimed at developing techniques of assisted gestation, such as UTx, for transgender women and even men. Not all state expenditures are grounded in duties exercised in relation to correlative rights. Any actual expenditure would depend, of course, on the totality of responsibilities borne by the state in regard to the money it has available to meet all its obligations, but there is no barrier to making a case for public funds for assisted gestation. My analysis shows as well that the prospect of possible social harm does not hold much significance for the case against assisted gestation, however the costs of the research development are paid.

**Timothy F. Murphy** is Professor of Philosophy in the Biomedical Sciences at the University of Illinois College of Medicine at Chicago and is a 2014–2015 Fellow of the UIC Institute for the Humanities. His most recent book is *Ethics, Sexual Orientation, and Choices about Children*, published by The MIT Press.