

Islam and Biomedical Ethics

with Mohammed Ghaly, "Islamic Bioethics in the Twenty-first Century"; Henk ten Have, "Global Bioethics: Transnational Experiences and Islamic Bioethics"; Amel Alghrani, "Womb Transplantation and the Interplay of Islam and the West"; Shoaib A. Rasheed and Aasim I. Padela, "The Interplay between Religious Leaders and Organ Donation among Muslims"; Aasim I. Padela, "Islamic Verdicts in Health Policy Discourse: Porcine-Based Vaccines as a Case Study"; Mohammed Ghaly, "Collective Religio-Scientific Discussions on Islam and HIV/AIDS: I. Biomedical Scientists"; Ayman Shabana, "Law and Ethics in Islamic Bioethics: Nonmaleficence in Islamic Paternity Regulations"; and Willem B. Drees, "Islam and Bioethics in the Context of 'Religion and Science'."

WOMB TRANSPLANTATION AND THE INTERPLAY OF ISLAM AND THE WEST

by Amel Alghrani

Abstract. In Saudi Arabia in 2000 the world's first human uterus transplant was attempted with some success. In 2011 the second successful human uterus transplant took place in Turkey. Doctors in the United Kingdom have recently announced that uterus transplants will be carried out in the UK if doctors can raise enough funds to complete their research. As scientists continue to make progress in this domain this is anticipated to be the next breakthrough in the arena of assisted reproductive technologies. The procedure is designed to restore fertility in women unable to gestate due to an abnormal, damaged, or absent uterus. At present, the only other option for such women to achieve genetic motherhood is via surrogacy, which in Islam is widely regarded as haram or forbidden. This article examines the benefits of this technology so as to facilitate discourse between Islam and the West. It argues for Islamic scholars to consider these advances so as to ensure Muslims living as minorities in Western countries, such as the United Kingdom, are able to utilize such technology (if indeed regarded as permissible) should the government move to enact legislation to permit this procedure.

Keywords: bioethics; Islam; reproduction

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God knows what any female bears. He knows well to what extent the uterus may decrease and to what extent they may increase. To him everything is well measured and balanced. (Quran 13:8)

Reproduction and the ability to have children is a fundamental aspect of many people's lives. This great desire to be able to fulfill the basic human need to procreate has fueled the global technological revolution over the last half century in the context of artificial reproductive technologies designed to alleviate the effects of infertility. Reproductive advances such as in vitro fertilization (IVF), sex selection, reproductive cloning, and embryo selection for the purpose of creating "savior siblings" have all emerged as part of a rapid and ever-changing branch of medicine. The next revolutionary breakthrough on the horizon is the prospect of uterus or uterine transplantation. This technology will appeal to many but could hold distinctive advantages to those of the Islamic faith since it will enable a couple with an alternative method of reproduction which allows them to have a genetically related child where the woman suffers from uterus factor infertility. At present the only other option would be surrogacy, which is forbidden in Islam. This article explores the scientific endeavors thus far made into this novel technology and how this advance may be received in the Islamic faith.

REPRODUCTION, ISLAM, AND UTERUS TRANSPLANT TECHNOLOGY

Historical Overview. The main function of the uterus is to accept a fertilized ovum which becomes implanted into the lining of the uterine cavity, and to provide it with nourishment derived from blood vessels which develop exclusively for this purpose (Saladin 2007, 1052–53). Should pregnancy occur, the uterus serves as an incubator for the developing embryo where it can safely develop until birth (Soloman and Phillips 1987, 334). Transplantation of this vast organ is technically difficult given the complex blood vessels that supply the uterus which are smaller than those in other organ transplants (Grady 2002). Recipients of a transplanted uterus would need to take immunosuppressant drugs to prevent the body rejecting the uterus. Despite initial fears surrounding adverse effects such drugs may have on the fetus, Brannstrom et al. contend that there is now a long experience with successful outcomes from pregnancies in human organ transplant patients that have been under immunosuppression drugs (Brannstrom et al. 2007, 92). They refer to the results from the three large registries of pregnancy data of transplanted patients (UK Pregnancy Registry, European Dialyses and Transplantation Association, National Transplantation Pregnancy Registry in the USA) which evidence no increased risk of congenital malformations in those patients' offspring.

Animal Research into Uterine Transplantation. Since the first successful solid organ allotransplant in 1954 there have been developments in all areas of transplantation. Animal research into uterus transplantation has been under way since the 1960s (Fageeh and Lucchini 2007, 412). Current research has shown that transplantation of the uterus is possible in both smaller and larger animals. In 2002, Professor Brannstrom and his team successfully performed autotransplantation of a uterus in mice which resulted in pregnancy and also conducted research in the uterine transplantation of pigs and sheep (Wranning et al. 2006, 358–67). In the 2007–1008 Report, the UK's Human Fertilisation and Embryology Authority (HFEA) Horizon Scanning Panel noted that the “primate uterus can be perfused, preserved and circulated with blood post transplantation. Other large animal pregnancies following uterus transplantation have been achieved” (Scientific Horizon Scanning at the HFEA, Annual Report 2007/08).

Human Research into Uterine Transplantation. The first human uterus transplant occurred in 2000 in Saudi Arabia. The uterus was donated when a 26-year-old patient, who some years earlier had undergone peripartum hysterectomy because of life-threatening bleeding, received a uterus with attached oviducts from a 46-year-old unrelated live donor, who had been advised to have a hysterectomy after being diagnosed with benign ovarian disease (Fageeh et al. 2002, 245–51). Post transplant, the uterus produced two menstrual periods which was considered to reflect good blood perfusion and viability of the transplanted uterus. However, on the 99th day, an ultrasound confirmed cessation of the blood flow as a result of blood clots which had formed in the arteries. A hysterectomy became necessary and the transplanted uterus was removed. Notwithstanding this, Fageeh regarded the surgery as “a good start” and asserted “our clinical results with the first human uterine transplantation confirm the surgical technical feasibility and safety of this procedure in gynecological, surgical, and vascular terms.” Internationally the surgery was hailed as a breakthrough.

The second human uterus transplant was performed in Turkey in 2011, with the uterus coming from a deceased donor. The recipient was a 21-year-old married Muslim lady with Rokitansky syndrome, where the upper 2/3 of the vagina and uterine body were absent from birth owing to a defect in the development of the Mullerian ducts (Ozkan et al. 2013, 470–76). She had undergone vaginal reconstruction two years previously. After her sex life had normalized, she contacted the infertility clinic with her husband to discuss their options for having a child. The deceased donor was a 22-year-old, brain-dead woman who had incurred cerebral trauma in a traffic accident. Informed consent for organ donation was signed by the donor's family. In the 2013 article published by the clinicians who performed the

surgery, they reported that, since the transplant operation, the patient has had 12 menstrual cycles and has been sexually active with her husband since the third month of the transplant procedure. It is thought that this attempt has been more successful than the 2000 attempt in Saudi Arabia due to the use of a cadaver donor (enabling removal of a wider section of tissue surrounding the uterus along with longer vessels to support the organ) in conjunction with improvement in immunosuppressive drugs. IVF was performed prior to the transplant and the clinical team will in due course implant those in a bid to achieve a successful pregnancy in the transplanted uterus. They have stated that they “have no answer to the questions of how many transfers will be performed before considering the process a failure or how long the uterus will be retained if conception does not occur, but we will continue as long as the graft is viable and the patient is stable. We are not planning to continue immunosuppression until menopause if pregnancy does not occur.” The team has prudently stated they will not declare the surgery a success until the recipient successfully gestates a healthy baby in the transplanted uterus: “We are aware that the actual success will be the delivery of a single healthy fetus from the uterus transplant, but our preliminary results have been promising.”

As these research endeavors into uterine transplantation continue, Jeanette Foley has argued that now it is clear the surgical technique is possible, the next step should be analysis and exploration into the ethical issues that surround uterus transplantation rather than the continued focus on “Is It Possible?” Without this, she states “we will have gone too far down the slippery slope to be able to stop” (Foley 2012, 193–98).

(BIO)ETHICAL DELIBERATIONS

In the UK alone, it is estimated that approximately 15,000 women per year who seek the help of fertility specialists are found to be incapable of becoming pregnant because of uterine factor infertility (Bosley 2002). Brangstrom notes that women who suffer from absolute uterine infertility are those that are (1) born with no uterus, a condition called Mayer-Rokitansky-Kuster-Hauser (MRRH) syndrome; (2) women that have the lost the uterus through a hysterectomy, for reasons such as emergency obstetric complications, malignancy, or benign uterine disease; or (3) or women that have a deficient uterus in regards to implantation or pregnancy (Brannstrom et al. 2007, 86). The purpose of uterus transplantation is to restore fertility to these women. For women who have functioning ovaries, the lack of a functioning uterus means they have no permissible way of gestating their own child to term or attaining motherhood. For other women, surrogacy may theoretically provide an alternative, but as outlined below this is far from an adequate alternative.

UTERUS TRANSPLANTS AT THIS EXPERIMENTAL STAGE ARE
UNSAFE

With little data on potential outcomes some, such as Caplan, contend that it is unethical to transfer embryos into a transplanted uterus since “it is very likely that the first uterus transplant will fail” (Caplan 2007). Unsatisfied with Del Priore’s comments (Del Priore et al. 2007) that the uterus can be removed if things go wrong, Caplan states:

But what if that uterus contains a fetus? What if the mother says she is willing to die to give birth to that fetus? What if the father or the mother say they want the uterus removed even if there is a fetus present if things are not going as planned? The doctors have not said as much as they need to about what their “exit” strategy will be if, sadly, the surgery does not go as planned.

At its experimental stages, a uterus transplant will raise concerns regarding the safety of the procedure. All novel methods of reproduction raise concerns, not least because potential harm to both mother and fetus may be unknown. Until a fetus is gestated in and born from a transplanted uterus, the success of the procedure will not be known. Yet the unpredictability of the procedure in its experimental stage should not of itself provide a sufficient reason to prohibit the technology. Coital conception can also pose risks. As Elsner comments, “we accept a woman has the right to bear a child by the traditional method of procreation knowing that it will have suboptimal health (e.g., as the result of a parent’s genetically transmissible condition or the mother’s health status)” (Elsner 2006, 598). An analogy can also be drawn with IVF when it was in its experimental stages. When Edwards and Steptoe embarked on IVF they

could not be sure that developmental malformations would not occur. Indeed, noted ethicists had argued that IVF was unethical because of the risk that resulting children might be born damaged (Kass 1972, 18–56). They condemned the selfishness of couples who were so bent on having children that they were willing to risk the birth of handicapped children. (Robertson 1986, 939–1041)

Elsewhere it has been noted how:

Several years of failed attempts—including one attempt that resulted in an ectopic pregnancy in 1976—preceded the first successful replacement of an IVF embryo into a recipient’s uterus. Furthermore, intracyto-plasmic sperm injection, which currently “accounts for nearly half of all assisted reproductive treatments in the United States,” was introduced without an experimental phase “partly because animal models were thought to be unsuitable.” (Elsner 2006, 598)

Determining whether an experimental reproductive technology is acceptable will be dependent on the level of risk posed to offspring as compared to the benefit, and thus will necessitate a risk/benefit ratio

calculation. As with many new medical treatments, in the initial stages there will be some risk involved. This necessitates setting a base for safety; for instance, if the procedure has a 20% risk of failure and 40% risk of serious harm to the fetus, would this be regarded as too high to justify proceeding? Whether the risks to offspring being gestated in this fashion are justified will be a question policymakers and governments in the relevant countries must decide, taking account of the risks posed to the offspring, the “liberty interests of individuals needing assistance and to the moral responsibility of providers who decide whether or not to offer their services” (Robertson 2004, 9). In the context of uterus transplantation some of those working within the field have already undertaken such an assessment and they have been inclined to proceed, as is evident by the recent attempt in Turkey.

Precautions can also be taken, such as prenatal diagnosis, to monitor the development of the pregnancy and healthy growth of the fetus. Measurements of heartbeat and fetal scanning by ultrasonics can detect abnormalities of the head, limbs, and other organs, and three-dimensional ultrasound images enable clinicians to view images of the fetus.¹ Safety concerns by themselves do not justify prohibiting a future procedure, providing the risk of harm is minimal when compared to the potential benefits. Thus safety concerns *per se* do not provide sufficient reason to bar this procedure. As noted above, the clinical team in Turkey plans to implant an embryo into the uterus transplant recipient this year and achieve a successful pregnancy through this novel technique.

UTERUS TRANSPLANT SURGERY OFFERS A BETTER ALTERNATIVE TO SURROGACY

For a woman lacking a functioning uterus the only way *genetic* motherhood can be achieved is through surrogacy. Surrogacy, even in the West, in those countries where this practice is permitted such as the United Kingdom, is problematic. Surrogacy can be an emotionally draining method of founding a family and is shrouded in legal uncertainty. For instance, in the United Kingdom, surrogacy agreements are not legally enforceable and it is the woman who gives birth to the baby who is regarded as the legal “mother” (The Human Fertilisation and Embryology Act 2008, s33(1)). Thus, there is always the risk that the surrogate could renege on the agreement: she may decide to keep or abort the child. Highlighting the difficulties surrounding surrogacy, Rosenfel explains why a surrogate may change her mind:

The consent that the birth mother gives prior to conception is not the consent of . . . a woman who has gone through the chemical, biological, endocrinological changes that have taken place during pregnancy and birth, and no matter how well prepared or well intentioned she is in her decision prior to conception, it is impossible for her to predict how she will feel after she gives birth. (Andrews 1998, 162)

As a method of founding a family, the practice of surrogacy continues to generate legal and ethical debate in the United Kingdom. Winslade summarized why there is a reluctance to accept surrogacy: “The practice has a potential for economic exploitation, moral confusion and psychological harm to the surrogate mothers, the prospective adoptive parents and the children” (Winslade 1981, 153). In *A v C* [1985] FLR 445, one of the first cases involving a surrogacy arrangement to come before the English courts, the judges were unanimous and explicit in their condemnation of surrogacy; Justice Ormrod commented that the surrogacy arrangement was a “simple, logical but totally inhumane proceeding.” Lord Justice Cumming-Bruce condemned the arrangement as “a kind of baby-farming operation of a wholly distasteful and lamentable kind” and Lord Justice Stamp described it as an “ugly little drama” (Jackson 2006, 873). In *Re C* (a minor) (wardship: surrogacy), Justice Latey referred to the “difficult and delicate problems of ethics, morality and social desirability raised by surrogacy.”

However, judicial attitudes do appear to have changed in more recent times. For instance, note Justice Baker’s comments in the case of *Re T* (a child) (surrogacy: residence order) [2011] EWCH 33 (Fam)² that “in recent years the practice of surrogacy—whereby a woman gives birth to a child for others—has been accepted as a method of enabling childless couples to experience the joy and fulfillment of parenthood.” Yet the practice remains problematic and the very case in which Justice Baker made those comments demonstrates the pitfalls with surrogacy as a method of attaining parenthood; in that case the surrogate reneged on the agreement and refused to hand the baby to the commissioning parents after the birth. Furthermore the case highlights how the law regulating surrogacy in the UK offers little protection to either the commissioning couple or the surrogate. In the section on religious deliberations below I discuss how surrogacy is not an alternative for Muslims because the practice is regarded as forbidden in Islam. Suffice it is to say that uterus transplant surgery holds major advantages over surrogacy; Brangstrom et al. cogently sums these up as follows:

The advantages of a model for a successful uterine transplantation compared to gestational surrogacy are obvious for the infertile couple—apart from the joy of experiencing a pregnancy, they would not be dependent on a third party during gestation and would have full control over maternal lifestyle-influences on their offspring. Furthermore, the genetic mother, instead of the surrogate, would take the physiological risks involved with any pregnancy. Issues such as maternal bonding during gestation, the definition of motherhood and the risk of economic pressure being a factor in recruitment of the surrogate carrier, would be abolished. Also, the prospected child would not have to deal with the possible conflict of having two mothers. (Brannstrom et al. 2003, 177–84)

A uterus transplant would allow women the opportunity to gestate and experience pregnancy. Just as endeavors to assist women overcome other forms of infertility such as IVF, surgical sperm retrieval, and embryo transfer have become widely acceptable, women lacking a functioning uterus are suffering from a form of infertility. Thus there is a persuasive case to be made in the West that uterus transplantation should be regarded no differently than other forms of fertility treatment. Just as IVF assists couples having difficulty in *conceiving*, uterus transplantation will assist women having difficulty *gestating*.

Research demonstrates that many women do attach importance to the experience of gestation and pregnancy (Thornton et al. 1994, 87–92). Altchek explains why gestation is deemed to be of such importance to women:

For many women, the ability to become pregnant can be very important. For them, childbearing fills a deep emotional and social need, and they may feel a corresponding sense of loss if they are unable to conceive and give birth. It is likely that for many women the intense desire to become pregnant is, at least in part, an innate feature of evolutionary biology. But there may be a stronger social component to this desire. Historically, in many cultures, to be barren was to be cursed. Having a child, on the other hand, meant that one was blessed and honored, perpetuating a family and a name. (Altchek 2003, 154)

In light of the importance of gestation to many women and the shortfalls of surrogacy as an alternative, there are strong grounds to allow uterus transplant technology as clinical treatment to enable women to overcome uterine factor infertility. Surrogacy, adoption, and foster care offer no better alternative. They do not compensate for the inability to gestate one's own child.

RESOURCES

Despite the recent resurgence of uterine transplantation research, the gain is very limited because few research groups are dedicating their resources to this challenging and relatively new area in reproductive medicine. (Bedaiwy et al. 2008, 2031–55)

In a country such as England which has a publicly funded healthcare system and limited budget, some form of rationing policy must operate. The National Institute for Health and Clinical Excellence (NICE) provides one way in which treatments can be rationed³ by examining the increase in health likely to accrue as a result of introducing a new treatment—the so-called incremental cost effectiveness ratio (Mason and Laurie 2006, 442–43). This is measured by the cost per quality adjusted life year (QALY).

Limited resources might have thus far delayed success in achieving a breakthrough in uterus transplant technology. The success of the IVF technologies may have negatively affected investments in this more recent endeavor, and now that it has become apparent that the IVF technologies do not present a solution for some infertility cases, uterus transplants appear to have resurfaced on the bioethical agenda. Arguments that uterus transplantation should not be publicly funded or invested in because it is not medical treatment needed to preserve life, can be rejected by reference to the fact that treatments are often permitted and invested in medical procedures that are not life-saving. Consider kidney transplantation which will significantly improve a patient's quality of life, and yet dialysis is accepted as a life-preserving alternative. Cornea transplants to restore the sight of people with clouded vision is also now a well-accepted therapy, and it is performed only to improve a patient's quality of life, not to preserve it. Finally, fertility treatment is offered in the United Kingdom by the National Health Service, and it is worth recalling how the Warnock Committee "took the view that actions taken with the intention of overcoming infertility can, as a rule, be regarded as acceptable substitutes for natural fertilization" (Report of the Committee of Inquiry into Human Fertilisation and Embryology 1984). This was accepted by the government, and since April 2005 women between the ages of 23 and 39 are able to get one free IVF cycle through the NHS.⁴ NICE guidelines published in 2004 recommended that this be increased, so that suitable couples receive up to three free cycles of IVF treatment from the NHS.⁵

Uterus transplantation, after it has proved a successful method of reproduction, should similarly be made available for women suffering from uterus factor infertility, just as other forms of medical treatment to treat infertility are made available. As the Warnock Committee stated:

There are many other treatments not designed to satisfy absolute needs (in the sense the patient would die without them) which are readily available on the NHS. Medicine is no longer exclusively concerned with the preservation of life but with remedying the malfunctions of the human body. On this analysis, an inability to have children is a malfunction and should be considered in exactly the same way as any other In summary, we conclude that infertility is a condition meriting treatment.

These arguments apply equally to uterus transplantation, which will help to create life and treat uterus factor infertility. At present, the costs of uterus transplantation are unknown, and it may be the case that it will be more expensive than IVF. While allocation of state funding is beyond the scope of this chapter, costs of this procedure could be limited by stating it is to only be available as an option of last resort in the face of a woman's clinical inability to bear a child. Access to this procedure could be limited by the implementation of eligibility criteria: for instance, that uterus

transplants are only to be funded by the NHS where the woman/couple have no children and the woman is unable to reproduce because she lacks a functioning uterus which could be remedied by a uterus transplant. Just as it is widely accepted that it is legitimate to invest state funds into both organ transplantation (which in the case of kidney transplants is not life preserving) and fertility treatment; it is argued that NHS funding should also extend to helping women overcome uterus factor infertility.

RELIGIOUS DELIBERATIONS IN THE ISLAMIC TRADITION

Infertility and Islamic Law (Shariah). Within Islam, marriage is a fundamental institution and is recommended for those who can afford it. It is considered a duty and a form of *Ibada* (worship):

Marry those among you who are single and (marry) your slaves, male and female, that are righteous. (Quran 24:32)

Sachedine states that in Islam marriage is said to have two functions (Sachedine 1990, 108); the first is to unite humanity:

And of His signs is that He created for you from yourselves mates that you may find tranquility in them; and He placed between you affection and mercy. Indeed in that are signs for a people who reflect. (Quran 30:21)

The second purpose is the procreative function:

And Allah hath given you wives of your own kind, and hath given you, from your wives, sons and grandsons, and hath made provision of good things for you. Is it then in vanity that they believe and in the grace of Allah that they disbelieve? (Quran 16:72)

The issue of infertility is also mentioned in the Quran:

To God belongs the dominion of the heavens and the earth; He creates what He wills; He bestows male or female, according to his will; or He bestows both males and females and He leaves barren whom He will; for He is full of knowledge and power. (Quran 2: 49–50)

Since there was no mention of assisted reproduction in the primary sources, the opinions of Islamic scholars are taken into account after due consideration (Jabbar 1999, 461). The application of assisted reproductive technology (ART) to overcome infertility in the Islamic world was, according to Gamal Serour, “delayed for many years, based on the misconception that Islamic teachings do not approve assisted reproduction” (Serour 2008, 34). It is now widely accepted that Islam permits the use of ARTs within the framework of marriage. However genetic lineage is imperative in the Islamic faith and endeavors must be made to ensure an unadulterated inheritance of genes and heredity is preserved. This is made clear in the

Quran in the context of adoption, whereby an adopted child must retain the name of his gamete progenitors:

Nor has [God] made your adopted sons your sons. That is but a saying of your mouths. And God says The Truth and He guides to the way. Call to them by the names of their fathers. That is more equitable to God. But if you know not their fathers, they are your brothers in the way of life and your defenders. And there is no blame on you in what mistake you make in it but what your hearts premeditate. And God has been Forgiving, Compassionate. (Quran 33:4–5)

While the Quran repeatedly emphasizes the importance of taking care of orphans and those in need (2:67; 2:147; 4:36),⁶ it is clear that parenthood is defined by genetic origins. It is important to also note when considering marriage and the family, the Quran and Hadith condemn as *zina* (fornication) any intercourse between a man and a woman who is not his wife or slave:

Nor come nigh to adultery: for it is a shameful (deed) and an evil, opening the road to other evils. (Quran 17:32)

Children born out of wedlock as a result of *zina*, as Atighetchi explains, “cannot belong to the paternal family, there is no recognition for them; they have no connection with the father, no right to inheritance. The illegitimate child (*walad az zina*) has no connections other than with the mother and the maternal family” (Atighetchi 2007, 138). These fundamental values placed on the importance of marriage, procreation, and preserving the genetic lineage of children are reflected in the attitude of Islam toward ARTs. Thus IVF to overcome fertility is permitted only if it is the gametes of the married couple that are used. Using donor sperm, donor oocyte, or embryo or surrogacy is considered *haram* (forbidden) and is considered similar to acts of *zina*.

Applying this to women who are unable to gestate due to uterus factor infertility as discussed above, the only recourse currently available to them which would allow her and her husband to have a genetically related child using their gametes would be to use a surrogate. Yet surrogacy in Islam surrogacy is widely regarded as *haram* or forbidden and there have been fatwas issued to this effect. In March 2001, M. S. Tantawi, sheikh of Al Azhar, issued a fatwa in which he condemned as illicit the practice of “renting out a uterus” (Atighetchi 2007, 146). In April of the same year, the Islamic Research Council condemned recourse to surrogate maternity, which would have enabled a woman without a uterus due to a tumor to have a child using her own and her husband’s gametes, although it should be noted that this vote was not unanimous (Atighetchi 2007, 146; Serour 2008). Notwithstanding the fact that surrogacy is regarded as prohibited in Islam, Morgan Clarke in research conducted in Lebanon

for his book *Islam and New Kinship* noted how in Lebanon it was “clear that such procedures have occasionally been carried out, albeit in utmost secrecy” (Clarke 2009,175). While it may be the reality that this practice is performed in exceptional circumstances in some Muslim states, the rulings on this practice declare it is forbidden in the Islamic faith.

Thus surrogacy does not provide an alternative recourse for Muslim women suffering from uterus factor infertility. As uterus transplantation may provide the only permissible method in which such women can procreate, the discussion will now consider how uterus transplantation might be received in Islam.

Islamic Jurisprudence (Fiqh). At the outset the author notes how in the absence of an organized single theological body that speaks for the entire Muslim community and given the lack of unanimity among Muslim jurists of different schools of Islamic law, it is difficult to write about how certain biomedical technologies may be received in the Islamic faith.⁷ As Mohammed Ghaly notes, “it is generally acknowledged that bioethics in Islam is mainly a branch of Islamic law and ethics, and thus contrary to the case in the Western world, not (yet) an independent field of study” (Ghaly 2012, 175). Thus answers to ethical dilemmas often come from religious scholars. Ghaly further explains that where a biomedical advance is not mentioned in the Quran or Sunnah the main task of Islamic scholars is to provide “an independent reasoning or interpretation,” known in the Islamic tradition as *ijtihad*, of what these sources would imply about the bioethical matter under consideration. Uterus transplant technology is one biomedical advance which is not mentioned in the Quran or Sunnah.

Long before the first ever human uterus transplant was attempted in 2000, the issue of transplantation of reproductive glands was considered in two different events. The first (a) was at the Islamic Organization for Medical Sciences (IOMS) sixth Juristic-medical seminar in Kuwait during October 1989. The IOMS seminars are attended by distinguished jurists, shariah experts, medical practitioners, scientists, and specialists in other human sciences. The second (b) was at the sixth session of the International Islamic Fiqh Academy (IIFA) held in Saudi Arabia in March 1990. It is to be noted that (b) quoted and also almost identically agreed with (a) although (a) was presented as an IOMS recommendation and (b) as an IIFA resolution.

In the IOMS in Kuwait in October 1989, the conclusive recommendation reached was wholly taken up the following year in 1990 by the IIFA in Resolution 6/8/59 of the Academy of Muslim law of Jeddah.⁸ The documents were divided into two parts:

- (1) The transplant of genital glands (ovaries and testicles) which is prohibited as the glands continue to produce gametes which then

transmit the genetic heritage of the donor, even after their transfer to another person.

- (2) The transplant of the external genital parts, except *awrat mugallaza* [which means the male and female sexual organs, i.e., penis and vagina] is permissible in the case of a legitimate necessity and in accordance with the Shar'i norms and criteria outlined in the IIFA resolution no.1 of the fourth session.

Atighetchi comments that the expression "*awrat mugallaza*" in the text of the fatwa does not appear to include the uterus (Atighetchi 2007, 181) and both the IOMS Recommendation 1989 and IIFA Resolution 1990 do not appear to expressly prohibit uterine transplantation. The comments of one sheikh indicate a lack of consensus on this matter: in 2004 the Egyptian sheikh Abdel Rahman Al-Adawey, head of the Councils Jurisprudence Research committee, pronounced himself as against uterus transplants on the basis of a previous fatwa of the Islamic research council forbidding the donation and transplant of sexual organs as well as donation of individual organs (e.g., hear, liver, pancreas) (Atighetchi 2007, 181). In the sheikh's opinion, the uterus is not only a shelter for the child but has its own genealogical characteristics and as a consequence "as the infant takes the characteristics from the mothers uterus, if it grows in a uterus, donated by a stranger, he/she will carry some of the stranger's genealogical characteristics. Then the question will have to be raised as to who the child's mother is" (Atighetchi 2007, 181).

It could be asked why uterus transplantation was not mentioned specifically. Furthermore, whether womb transplantation could be included in the second category of external genital parts by addressing the question: does womb transplantation transmit any genetic characteristics or affect the physical make-up of the fetus/baby in any sense? Answering these questions goes beyond the scope of this article; however, it is clear that in light of recent advances it is submitted that the matter now merits clarification from bioethicists and Islamic scholars.

WHY IT IS IMPERATIVE THAT ISLAM ENGAGES WITH THESE ADVANCES AND CONTRIBUTES TO THE DISCOURSE ON THE MATTER

Ensuring the Muslim Voice Is "Heard" and "Represented" in the West. In the United Kingdom, regulation of ARTs operates in a social context where it is shaped by institutions, organizations, and individuals in ways not envisaged when the principal statute governing this area (The Human Fertilisation and Embryology Act 1990 as amended) was initially drafted. The extent to which such diverse bodies influence policy formation has been relatively neglected in legal and ethical discourse. It is important

that we understand how the formulation of law and policy in this area is being influenced, and the degree to which institutions, organizations and individuals can be engaged or consulted in a more informed manner. This is a vital step toward attaining effective, responsive, and representative legislation in this contentious area.

What is clear is that when law and policy is being formulated in the context of ARTs and the general public are consulted⁹ or invited to respond /submit their view, certain faith organizations such as Comment on Reproductive Ethics (CORE), a Catholic pro-life lobby group, are quite prolific and successful in participating and getting their view heard. CORE shaped law and policy in this domain through mounting numerous legal challenges against reproductive advances which they deemed contrary to their beliefs. For instance, they legally opposed cloning (*R (Quintavalle) v Secretary of State for Health* [2001] EWHC 918), and the use of PGD (prenatal genetic diagnosis) and tissue typing to allow parents to create a child as a donor to help treat an already existing sick child (*R (Quintavalle) v Human Fertilisation and Embryology Authority* [2005] UKHL 28 (HL)).¹⁰ I am not suggesting that mounting legal challenges contrary to one's religious belief is the best way forward, but rather that the endeavor should be made to engage in dialogue with the government and statutory body which governs reproductive technologies in the UK (The Human Fertilisation and Embryology Authority) to ensure the views of all minority groups are heard. In stark contrast, the Islamic response to reproductive advances in the UK is often nonexistent. If Muslims are to benefit from technological advances in this context and are to be represented in the West, then bridging the gap between Western bioethics and Islam is crucial. But Muslims can only contribute when they are clear on what their own religious stance is with regards to a certain advance. This supports the contention I have made throughout the article that we now need to be clear on how uterus transplant technology is regarded in Islam, so that should this become clinical treatment and legislation is brought in to govern it, Muslims as a group within Western society can engage in any public consultations or government dialogue.

CONCLUSION: THE INTERPLAY OF ISLAM AND THE WEST

Scientific advances attained in the West in the context of uterus transplantation surgery must not be disconnected from Islam and specifically Islamic bioethics. Whereas Muslims have been excluded from utilizing other advances in ARTs due to the importance of preserving the genetic code, uterus transplantation is one advance that Muslims may be able to utilize to help them achieve their desires of parenthood. What is now needed is for Islamic scholars to revisit and clarify the matter. The interplay of Islam and the West is important, not merely to inform religious scholars of the

technical and ethical aspects that such biomedical advances may raise and facilitate such discourse between the two, but also because we must not forget that “the West” and “Islam” are not always two distinct separate identities. This is rhetoric which has come to characterize the dominant discourse surrounding the globalized “War on Terror” and the imperialist military intervention which lies at its core (Gilmore 2012). However, in the context of uterus transplantation, “Islam” and the “West” need not be mutually exclusive and are in fact intertwined. The first attempt at human uterus transplant occurred in Saudi Arabia, a Muslim country, and it was this surgery that provided the impetus for the later advances in the West. The second attempt in Turkey was also designed to assist a young Muslim couple overcome their infertility.

Furthermore, one can be Western and Muslim, and it is important that Islamic scholars reach out and open channels of communication with individuals who may be living as religious minorities in the West. Islamic scholars must not go “quiet” on the issue of uterus transplantation, especially now that it appears it is only a matter of time before it is offered as a clinical treatment in the West. Only when Muslims in the West are informed can they “speak up” when consulted by the government about prospective legislation governing such novel advances, thereby ensuring the Muslim voice is heard and thus represented.

NOTES

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1. Similar concerns were also raised with regards to IVF—Edwards raised similar defense in regards to objections based on the future well-being of the fetus (Edwards 1992, 73).

2. For a case commentary on this, see Alghrani (2006).

3. See also McHale and Fox (2007).

4. There are however eligibility criteria which are set by each of the Primary Care Trusts (PCT) and these can vary from region to region.

5. This included national guidelines called “Fertility: Assessment and Treatment for People with Fertility Problems.” In these guidelines, there was the recommendation that the NHS should provide three cycles of IVF treatment for suitable patients in England and Wales. These guidelines were published by NICE in February 2004. The full guideline can be found at <<http://www.nice.org.uk/page.aspx?o=104435>>.

6. For more on adoption in Islam, see *Adoption and the Care of Orphan Children: Islam and the Best Interests of the Child*, August 2011, Muslim Women’s Shura Council, American Society for Muslim Advancement 2011.

7. Although the author notes that Muhammed Khalifa advocated for such a body in his paper “Human Health in World Religions and the Need to Establish an International Religious Organization for Bioethics” as presented at the international conference entitled “Islamic Bioethics: The Interplay of Islam and the West,” held at Georgetown University, Qatar, on June 24, 2012.

8. Decision no. 6/8/59 in IOMS, Transplantation de certains organes humains du point de vu de la Ch'ria, Actes du Sexieme colloque orgnaiser par l'IMOS, Koweit, Octobre 1989; Rabat, IESCO, 1999, 776; Atighetchi 2007, 181.
9. For instance, see the 2002 Human Fertilisation and Embryology Authority Consultation on Sex Selection; the consultation commissioned by the Medical Research Council on public attitudes to stem cell research; and the public consultation paper *Choosing the Future: Genetics and Reproductive Decision-making* launched by the Human Genetics Commission in July 2004.
10. For a commentary on the case, see Alghrani (2005, 2006).

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