Introduction

Religion, being concerned with affairs that are regarded as extraordinary and having unique importance in life, is an intrinsic part of the cultural fabric of each society. Moreover, developments in reproductive medicine raise new ethical questions for different religions that do not always have clear answers. Accordingly, the role of theology in bioethics is integral to clarify perceived attitudes toward these developments for different religious communities. This paper presents the attitude of monotheistic religions to therapeutic procedures, such as IVF–embryo transfer, spermatozoa, oocytes, embryo donation, cryopreservation of genetic material, surrogacy, posthumous reproduction, gender preselection, reproductive and therapeutic cloning.

Keywords: Christianity, cloning, embryo cryopreservation, gamete, Islam, Judaism

Judaism (Schenker and Halperin, 1995)

A strict association between faith and practicality characterizes the Jewish religion. The Torah is viewed as a single divine text that includes moral values and practical laws. While in principal Jewish law has written and oral divisions, authority is derived from the written Torah. The dominant parts of the oral law are as follows:
1. Mishnah. Its final form was established early in the 3rd century. The Mishnah includes early traditional and original interpretations of the written Torah, ancient regulations that are not written in the Torah, and post-Bible regulations.

2. Talmud. For approximately three centuries after the final compilation of the Mishnah, the great interpreters studied the six orders of the Mishnah and wrote a monumental composition called Talmud.

3. Post-Talmudic codes. After the compilation of the Talmud, an enormous amount of Talmudic knowledge was essential for efficient ruling. These post-Talmudic codes were introduced with the intention of assisting access to the laws, regulations, and customs of the Talmudic Halakha.

4. Responsa. The various attitudes of rabbinical scholars about the way religion should be applied in the changing world are analysed and discussed with regard to the legal codes, and written opinion is given by qualified authorities to questions about various aspects of Jewish law. Responsa is the term usually confined to written replies given to questions on all aspects of Jewish law by authorities from the time of the later Geonim to the present day. Approximately 1000 volumes, containing more than half a million separate Responsa, have appeared in print.

The application of new technology according to Jewish law is based on the following principles: the Mishnah emphasizes that only prohibitive, strict decisions require judicial substantiation, while permissibility or leniency needs no supportive precedent. The absence of a prohibitive substantiation is to be equated with Halakhic permissibility. This implies that any technological innovation is permissible unless there is a Halakhic reason for prohibiting it. In order to be sure that there is no Halakhic prohibition against a new procedure, an accepted Halakhic authority must be consulted. Jewish law differentiates between the authority to abrogate a temporary prohibition and the authority to determine permanent permissibility. Faced with uncertainty or insufficient information, one is entitled to be strict with oneself; no special authority is needed for prohibition by the individual. On the other hand, in order to establish permissibility, there must be unequivocal information. When there is no clear precedent in Halakha to decide the issue at hand, one must be thoroughly versed in all Halakhic sources before confirming that no Halakhic reason for prohibition exists. There are specified Halakhic rules for deciding controversial issues. If, for example, there is doubt in a matter prohibited by the Torah, the ruling is prohibitive; if the doubt is related to a rabbinical ruling, the decision is usually permissive (Talmud Babi).

Christianity (Encyclopaedia Britannica, 1976a)

The Old and New Testaments comprise the scriptures that are sacred to Christians. The Old Testament emphasizes the agreement between God and his people and records Jewish history to illustrate how faithfully this agreement was observed. The New Testament contains promises made by God to humanity, as depicted in the teaching and experiences of Christ and his followers. Jesus Christ is viewed by Christians as the supreme revelation of God, and as Lord of his followers. Three principal divisions comprise Christianity: the Roman Catholic Church, Protestant Churches, and Orthodox Catholic Churches. Christianity is particularly characterized by its universality and missionary activity. The most striking development in the evolution of Christianity from its Jewish origin was in its transition from a national religion (of the Jewish nation) to a universal religion. The church assumes a role inspired by a love for human kind in matters concerning reproduction, and helps to define the rights and duties of members.

Roman Catholic Church (Encyclopaedia Britannica, 1976b)

Roman Catholics base their beliefs on the Bible and the traditions of the church. Traditions are derived from declarations of church Councils and Popes in the form of dogmas. The Roman Catholic Church regards the indissoluble unity of marriage as the only setting worthy of truly responsible procreation. The church abides by the following principles to guide believers. The first principle relates to the protection of human life from conception, and the premise that the right to life is fundamental. The second principle is that procreation is inseparable from the physical union of the parents, and therefore, from the moral point of view, a child must be the fruit of marriage. Fidelity involves acknowledgment by spouses that they become parents only through one another; that their child is a living symbol of their love, and a permanent sign of their conjugal union. According to the Catholic Church Doctrine, procreation may not be performed by a physician: the physician may be in the position to help the parents achieve conception, yet is not the actual ‘baby maker’. The third principle is related to the personal norm of human integrity and dignity, and should be taken into consideration in all medical decisions, and especially in the field of infertility.

Eastern Orthodox Church (Encyclopaedia Britannica, 1976c)

The Eastern Orthodox Church was formally established in 1054 when a split between the Eastern and Western Churches occurred. The Eastern Orthodox Churches consist mostly of several independent and self-governing churches. The most ancient self-governing churches are in Constantinople, Turkey; Alexandria, Egypt; Antiochia, Damascus, Syria, and in Jerusalem. The largest national churches are in Russia, Rumania, Serbia, Greece, Bulgaria, Georgia, and Cyprus. Eastern Orthodox Congregations are also located in Western Europe, North America, Central Africa, and the Far East, but are not fully self-governing.

Protestantism (Encyclopaedia Britannica, 1976d)

Protestantism resulted chiefly from the Reformation, a religious and political movement that began in Europe in 1517. At its foundation was protest against the bureaucracies and policies of the Roman Catholic Church that resulted in the formation of several Protestant denominations. Certain beliefs differ, and specifically those related to the nature of faith and grace, and the authority of the Bible. Most Protestants believe
that the Bible should be the only authority in Christianity. Protestantism is most widely practised in Europe and North America. A Protestant religion is the state religion in a number of nations, including Denmark, Norway and Sweden. Protestantism has strongly influenced the cultural, political, and social history of these and other countries. The Baptist, Methodist, Lutheran, Mormon, Presbyterian, Episcopalian, United Church of Christ, Christian Science, Jehovah’s Witness, and Mennonite religions have liberal attitudes towards infertility treatments.

Anglican Church (Encyclopaedia Britannica, 1976e)

Before the Reformation the Church of England separated from the Roman Catholic Church. Anglicanism became the state religion of England and spread as British colonists settled in North and South America, Africa, and Asia. It is the official faith of England. Anglicans live in the ancient faith of the Christian Church as expressed in the Apostles and Nicene creeds. The Anglican Religion is based on scripture, tradition, and reason. The Book of Common Prayer is followed, which is the basis for doctrine, discipline, and worship, yet the right of national churches to revise the Book according to their own needs is acknowledged. Anglicans often view themselves as a bridge between Roman Catholics and Protestants.

Islam (Serour, 1995)

Islam was founded by the Prophet Mohammed (700–632 BCE), who was born in Mecca. In middle life, an inner conviction dawned upon him that he was the prophet chosen by Allah to convey eternal messages to the Arabs. There are two broad subdivisions of Islam: Shia and Sunnis. Shia originally referred to the partisans (Shiva) of Ali and over the centuries developed its own body of law. This differed in minor ways (inheritance and the status of women) from that of the majority of Sunnis. Sharia law is the heart of the Islamic religion, defining the path in which God wishes human beings to walk. The law deals not only with matters of religious ritual but also regulates every aspect of political, social, and private life. The main roots from which it is derived are the Quran and the Hadith; the tradition of the Prophet Mohammed. According to Orthodox Muslims, the law is founded upon divine revelation, and since revelation ended with the death of Mohammed, the Sharia is immortal. There are primary and secondary sources of Sharia in Islam. The four primary sources include: the Holy Quran, which is equated with the word of God; the Sunna, the customs and authentic tradition and sayings of the Prophet Muhammad collected by specialists in Hadith (tradition); the Ijmaa, which forms the consensus of the community of believers, who, according to a saying of the Irophen, would not agree on any error; and finally, Kias (analogy). Kias is the intelligent reasoning with which to rule on events the Quran and Sunna do not mention, by comparing events already ruled upon. Good Muslims resort to secondary sources of Sharia for matters that are not entertained in the primary sources.

The Sharia is not rigid and leaves room to adapt to emerging situations in different times and places. It can accommodate different honest opinions, as long as they do not conflict with the spirit of the primary sources, and are directed to the benefit of humanity. Muslim modernists, however, have proclaimed the right of every qualified person to examine the sources of the Sharia. The result is that in most Muslim countries today, the Sharia laws are restricted and dominate only personal affairs. Even in personal matters, a great deal of attention is now given to ways of adapting Islamic Law to modern life. The progressive attitudes of some religious leaders are revealed not only in familiar law, but also with respect to other matters, and especially those concerning medical developments in the field of reproduction. Muslims want assurance that modern medicine is also acceptable in accordance with Sharia Islamic norms. Islamic medical ethics is based on Egyptian Fatawa, which are the legal responses provided by religious scholars on request from lay persons or government authorities. The Muftis and Cadiz adapt laws of personal status to the requirements of contemporary society, mainly in an attempt to base modern medical treatments in the classic sources of Islamic Law. There is also the idea that problems raised derive directly from the commandments and prohibitions of Islamic Law. When Islamic Law and state law on certain medical ethics conflict, the Fatawa is issued to mediate. Islamic medical ethics is often inseparable from social and political issues.

Sexual practices (Schenker, 2000)

Judaism

Jewish Law recognizes sexual desire, and as such, the Jewish approach to sex is free, healthy, and lacking in frustration. Complete abstinence by a married couple is not condoned, and each married partner has conjugal duties towards the other. The wife has conjugal rights based on Mitzvah Onah, which is one of the three elementary duties of the husband: to support his wife with food, clothing, and conjugation.

Christianity

In early Christianity, the church fathers in Rome articulated principles for the position on sexual intercourse. The central concern was the liberation of spirit from flesh, and not reproduction and family formation. As a result, the objective of sexual intercourse in married couples was almost exclusively for the purpose of procreation. Pleasure was viewed as evil and unworthy of a Christian.

Islam

Islam recognizes the sexual drive of both sexes and disapproves of celibacy. According to Islam, sexual practice is only permitted for married couples. Premarital and extramarital sex is forbidden. The couple must avoid sexual intercourse during menstruation, puerperium sickness, and disability. Homosexual relations are forbidden. The Quran outlines a system of punishment for men and women who commit adultery, and links marital sex to procreation and family formation. The Habit Shareef emphasizes this link. The Quran restricts sexual intercourse to the penis in the vagina, as this is the route for procreation. Oral sex is not mentioned in the primary source of Sharia. However, secondary sources of Sharia indicate that although it is disliked, it is not forbidden. Sexual practices with species other than human beings is forbidden in Islam as mentioned.
in several verses of the Quran, and is similar to verses
mentioned in the Bible.

Reproduction

Jewish attitudes

The Jewish attitude toward infertility can be discerned from the
first commandment from God to Adam: ‘Be fruitful and
multiply’ (Old Testament, Genesis 1:18). This is expressed in
the Talmudic saying from the second century, ‘Any man who
has no children is considered as a dead man’. This perspective
arises from the Bible (Old Testament, Genesis 30:2) and refers
to the words of Rachel, who was barren: ‘Give me children
or else I die.’ A rabbinic disagreement in the Mishnah deals with
the number of children required to fulfil the divine command
of procreation. The Shammai School claimed that two sons
were sufficient and referred to the two sons of Moses as the
proper model. The Hillel school insisted that one son and one
daughter were essential. The Hillel view is based on God’s
creation of the rib, with Adam and Eve as the first human beings.

In most cases, Talmudic preference is in accord with the Hillel
School (Maimonides). Although a man who accomplishes the
basic commandment of procreation is not required by the
Torah to continue to procreate, he is obligated to be married
and not live in celibacy. Along these lines, the Mishnah raises
an interesting question: does the demand to procreate rest
equally on men and women, or is it an exclusive obligation of
men? Do women, who carry the risk of childbearing, bear no
responsibility? According to Jewish Law, an infertile couple
should undergo diagnosis and treatment as a single unit
(Schenker, 1997). However, medical treatment is different for
men and women. From a strictly religious point of view, one
should first examine the woman. If a pathological condition is
not found, the man is examined. The Halakhot (religious laws)
surrounding a woman’s menstrual cycle form the basic
backdrop for this discussion because they govern the normal
sexual life of a religiously committed Jewish couple.
Understanding their basic concepts is indispensable to
professionals providing fertility therapy to an observant
couple.

A menstruating woman is called Niddah in the Bible and in the
Talmudic and post-Talmudic literature. As long as she is within
the status of Niddah, sexual contact with her is forbidden. The
laws concerning Niddah are some of the most fundamental
principles of the Halakhic system, and the historical
development of these laws is extremely complicated.

Christian attitudes

It is often difficult to find common elements, other than origin
and the acceptance of common sacred writings and symbols,
among Christian groups. There are, however, a core of
common principles within the early Christian movement, the
Western Medieval Church, and the Modern Roman Catholic
and major Protestant Churches. Christianity intensifies some
types of group cohesion; it exerts a moral force tending
towards the stability of marriage and other social relations, and
it heightens the status of children as immortal souls received
by their parents in sacred trust. All these factors are conducive
to high fertility, but they are influences common to many
religions rather than characteristics particular to Christianity.

According to Roman Catholic instruction, the suffering of
spouses who cannot have children, or who are afraid of
bringing a handicapped child into the world, is a plight that
everyone must understand. The desire for a child is natural,
and symbolizes the vocation to fatherhood and motherhood
inscribed in conjugal love. This desire can be stronger if the
couple is affected by sterility.

Marriage, however, does not confer upon the spouses the duty
to have a child, but rather, the right to perform the natural acts,
which are per se ordered for procreation. According to
Christianity, ownership of a child is contrary to the child’s
dignity and nature. For this reason, the child has the right, as
already mentioned, to be the fruit of the specific act of
conjugal love between his/her parents; and also has the right to
be respected as a person from the moment of conception. The
community of believers is called to shed light upon and
support the suffering of those who are unable to fulfil their
legitimate aspiration to marriage. Moreover, physical sterility
can be an occasion for other important services to humanity;
for example, adoption, various forms of educational work,
assistance to families, and to disadvantaged children.

Islamic attitudes

Mohammedanism gives strong and unequivocal emphasis to
high fertility, and Mohammedan social structures universally
support high fertility. Mohammed did not endorse unlimited
polygamy, but rather restricted the practice already present in
Arab society. Polygamy is practised to a much lesser extent in
stable Mohammedan societies today than it was in earlier
movements of ethnic expansion.

Assisted reproduction

The pattern of religion throughout the world is in constant
change. Christianity dominates Western Europe and the
Americas. Secondary to strongly held individual views and
religious wars of the past, there are major differences in
religious traditions within the Christian family. Islam
dominates the Middle East and North Africa. The remainder of
Africa and Asia is a patchwork of religions, including Islam,
Buddhism, and Hinduism. This pattern of religion is changing
rapidly in many countries, as a result of various influences,
including migration, disaffection with religion in some
populations, and conversion to old or new religions. In other
words, the practising physician in the field of reproduction is
likely to encounter families with very different beliefs to those
which dominated within a given society in the past. It is
critically important that the physician understand the religious
beliefs of individuals and couples who seek remedy for
infertility problems and achieve a consensus about care which
respects those beliefs inasmuch as possible.

The Israeli population is multi-ethnic. In July 2004, the
population was estimated near 7 million; 80% Jewish, 14.6%
Muslim, 2.1% Christian, and 1.6% Druze. Other faiths account
for the remaining 1.6%. In the West Bank, Gaza, and the East
Jerusalem territory. There are 2.8 million Palestinians living in
Israel, of whom approximately 45,000 are Christians. The
Jewish–Israeli population will do anything in order to have a child, and this attitude has resulted in Israel being one of the leading countries in the world in the research and development of new reproductive technologies. Although geographically small, Israel currently holds the highest number of fertility clinics per capita in the world, and Israel’s National Health Insurance Fund provides IVF treatments for up to two live births for childless couples and for women who want to become single mothers. In Israel, special legal problems arise because of the exclusive jurisdiction of the rabbinical courts in matters of personal status. Although Israeli Law is secular and legislated by the Knesset (the Parliament of Israel), matters of personal status are governed by Judaic law and enforced by special rabbinical courts. Matters concerning marriage, divorce, paternity, legitimacy, bastardies, and cases of Jewish identity are therefore adjudicated according to Judaic Law by the rabbinical courts. Cases concerning other religious denominations in Israel are governed by respective communal laws and referred to the appropriate communal courts. At present, matters relating to assisted reproduction practice have thus far been regulated in secondary legislation enacted by the Ministry of Health (except the primary legislation by the Knesset, the surrogacy, and cloning laws (Schenker and Halperin, 1995; Tanos and Schenker, 1998; Schenker, 2003).

Jewish law

There are three basic principles in the Jewish religion that, with certain restrictions, favour the permissibility of fertility treatment (Schenker, 1997). First and foremost, as previously mentioned, is the commandment to ‘Be fruitful and multiply’. Second is the mitzvah of loving kindness (Gemitut Hasadim), and third, family integrity. The first commandment in the Torah is based on the verse ‘Be fruitful and multiply and replenish the earth’. In Halakhic literature, the fulfilment of this commandment is considered to be of greatest importance because fulfillment of all the other commandments rests upon it. However, despite its importance, Halakha does not permit indiscriminate multiplication of genetic offspring. On the contrary, a system of laws and marital restrictions (laws of incest) forbidding sexual activity within a closed family framework emphasize the dissemination of biological genes, and transmission of cultural and moral traditions from generation to generation.

Domestic peace and the integrity of the family are extremely important in Jewish law.

There is near unanimity of opinion that therapeutic insemination of the husband’s spermatozoa (AHI) is permissible if no other method will enable the wife to achieve pregnancy. However, certain stipulations exist. First, the couple must have attempted conception for a reasonable period of time (5–10 years), and there must be medical proof attesting the absolute necessity of AHI. Second, according to many authorities, insemination may not be performed while the woman is in Niddah. Most rabbis allow spermatozoa to be obtained from the husband both for analysis and insemination, but opinions differ about the best method for procuring it. Masturbation should be avoided if at all possible, and coitus interruptus and the use of a special condom are the preferred methods. Therapeutic insemination with donor spermatozoa (AID) is accepted by a portion of the Jewish population in Israel. According to the regulations of the Ministry of Health, it is allowed under special conditions. AID is not morally acceptable to all infertile couples or their physicians, however, and is unacceptable to most rabbinical authorities. Rabbis have been discussing the principles involving AID for many centuries. Their discussions are based on ancient sources in the Talmud and codes of Jewish Law dating back to the fifth century that mention procreation without intercourse. Experts agree that using the semen of a Jewish donor for AID is forbidden. It is the gravity of the prohibition that is debatable: the question is whether AID constitutes adultery, which is strictly forbidden by the Torah, or as most experts maintain, whether this injunction stems from the view of the legal complications resulting from the birth of an AID offspring. Some rabbinical authorities permit AID if the donor is a non-Jew. This eliminates some of the legal complications related to the personal status of the offspring. If the donor is a gentile, the child is pagan (blemished); if the child is a girl, she is forbidden to marry a Cohen (priest). Jewish Law prohibits AID for a variety of reasons: incest, lack of genealogy, and problems related to inheritance. In addition, donors and the physicians who use the semen are violating the severe prohibition against masturbation. Many rabbinical scholars consider a child conceived through AID as having the status of manzer (bastard), which severely limits prospects of marriage and implies a severe functional handicap from a social point of view. Other rabbis believe the offspring to be legitimate.

Various aspects of the ‘test tube baby’ (IVF and embryo transfer) are of considerable interest. The basic fact that allows IVF–embryo transfer to be considered in the rabbinical literature at all is that the oocyte and the spermatozoon originate from the wife and husband based on the commandment of procreation stated in the Bible (Old Testament, Genesis 1:18). What are some of the delineating factors that would nevertheless prohibit Jewish Law from allowing IVF–embryo transfer? Some individual rabbis take a strict position and suggest that legal and biological ties are severed with the removal of the egg. The fact that the host environment is sustained by means of medical intervention could change the biological and legal status of the child. The Jewish majority’s religious point of view, however, as formulated by the chief rabbis of Israel, one from the Ashkenazi sector (European origin), and one from the Sephardic sector (Oriental origin), supports both IVF and embryo transfer. Jews living outside Israel are generally subjected to the laws of the country in which they live, except when they wish or are required to obey Jewish traditional personal status regulations. In such cases, local rabbinical authorities apply the rules that are applicable in the State of Israel, as appropriate. Jewish Law places limits on semen collection, management of menstrual problems, and homologous and heterologous insemination. These factors are considered when IVF–embryo transfer is undertaken. If a donor is used, it must be of the type that will not damage sperm vitality. Using either natural cycles or induced cycles to prepare a woman for oocyte retrieval may interfere with the Niddah state. Despite these concerns, thousands (3000–4000 yearly) of Jewish children are born as a result of IVF procedures in Israel, many of them to very religious couples.

The main issue with regard to egg or embryo donation is whether the oocyte donor or the recipient should be considered
the mother (Schenker, 1996). Jewish Law dictates that the mother determines the religious status of the child. For purposes of lineage, the woman receiving the egg, rather than the woman donating the egg, is the mother, although the latter is certainly the genetic parent. If the recipient is Jewish, then the child is Jewish.

Cryopreservation of pre-embryos is routinely practised in IVF programmes. Because cryopreservation stops the development and growth of the embryo, it raises the basic question of whether it cancels all rights of the pre-embryo’s father. As far as the mother is concerned, the problem is simple, since the embryo is transferred into her uterus. As for the father, whose main function is to fertilize the oocyte to form the pre-embryo, the period of freezing may sever his relationship with the child.

Freezing the spermatzoa, pre-embryo, and ovarian tissue is permitted in Judaism only when all measures are taken to ensure that the father’s identity will not be lost (Schenker, 1997). The Jewish religion does not forbid surrogacy. If surrogacy is practised, the infant should be placed in the custody of the producer of the spermatzoa. From the religious point of view, the child belongs to the man who donated the spermatzoa and the woman who gave birth.

**Roman Catholic Church**

The Vatican statement on assisted reproduction is very clear: assisted reproduction is not accepted. In 1956, Pope Pius XII declared that attempts at artificial human fecundation in vitro must be rejected as immoral and absolutely unlawful. The Church argues that IVF involves disregard for human life and separates human procreation from sexual intercourse. The Vatican’s instruction on respect for human life made an important contribution for the discussion on the practice of new reproductive technologies. It was issued by the Congregation for the Doctrine of the Faith in February 1987, signed by Cardinal Joseph Ratzinger, and approved by Pope John Paul II (Doctrine of the Faith, 1987). The document is a response to inquiries from Episcopal conferences and individual bishops about interventions in human reproduction. The key value in the instructions is respect for the dignity of the human person. The criteria for evaluating these interventions is the respect, defence, and promotion of a human being with a primary and fundamental right to life and dignity, as a person who is endowed with a spiritual soul and moral responsibility.

Fertilization is allowed when it is the result of a conjugal act, that is, sexual intercourse between husband and wife. From the moral point of view, procreation is deprived of its proper perfection when it is not a result of the conjugal act and spouses’ unification. Consequently, the instruction prohibits IVF–embryo transfer, surrogate motherhood, and cryopreservation of embryos. It also rejects AID and IVF on the grounds that this involves separation between ‘the goods and meanings of marriage’. Separation of the two implies that procreation is ‘deprived of its proper perfection’ and is therefore ‘not in conformity with the dignity of the person’. A child must be conceived through an act of love and, indeed, of sexual intercourse.

Within marriage, AID cannot be accepted except in situations when the procedure is not a substitute for the conjugal act, but rather, a facilitation of it, so that the act maintains its natural purpose. Gamete intra-Fallopian transfer (GIFT) is acceptable because spermatzoa can be removed from the vagina after a normal sexual act and implanted into the Fallopian tube, where fertilization occurs.

Heterologous artificial fertilization is contrary to the unity of marriage, to the dignity of the spouses, to the vocation proper to parents, and to a child’s right to be conceived and brought into the world through marriage. As mentioned, this method of conception also violates the rights of the child, compromises his or her parental origins, and can interfere with the development of personal identity. This position eliminates any use of donor semen for artificial insemination or for IVF. Furthermore, artificial fertilization of a woman who is unmarried or a widow, whoever the donor may be, cannot be morally justified. The practice of ovum donation is prohibited on the same basis as sperm donation.

**Eastern Orthodox Church**

The Eastern Orthodox Church supports medical and surgical treatment of infertility. IVF and other assisted reproductive technologies are not absolutely rejected. However, the Church opposes gamete donation, especially AID, on the grounds that it constitutes an adulterous act.

**Protestantism**

The Baptist, Methodist, Lutheran, Mormon, Presbyterian, Episcopalian, United Church of Christ, Christian Science, Jehovah’s Witness, and Mennonite religions have liberal attitudes toward infertility treatments.

All denominations except Christian Science accept IVF with the spouse’s gametes and no embryo wastage (Dunstan, 1986). Christian Science poses no objection to AID, but opposes IVF because of the drugs and surgical procedures used. The aforementioned religions oppose IVF with donated gametes and the practice of surrogacy. The Anglican Church is liberal on the use of IVF.

**Islam**

Artificial reproduction is not mentioned in the primary sources of Sharia; however, these sources affirm the importance of marriage, family formation, and procreation. When procreation fails, Islam encourages treatment, especially because adoption is not an acceptable solution. Thus, attempts to cure infertility are not only permissible, but also a duty (Serour, 1993). The duty of the physician is to help a barren couple achieve successful fertilization, conception, and delivery of a baby. The procedure of IVF–embryo transfer is acceptable (Serour, 1992), but it can be performed only if it involves the husband and wife. A third party is not acceptable, whether in providing the egg, spermatzoa, embryo, or uterus. If a marriage has come to an end through divorce or death of the husband, artificial reproduction cannot be performed on the woman even using the sperm cells of her former husband. Islamic law strictly condemns the practice of AID on the grounds that it is adulterous. According to Islam,
man’s infertility should be accepted if it is beyond cure.

Islam permits a man to marry out of the Muslim faith; for example, he may marry a Muslim, Jewish, or Christian, woman, as the religion of offspring is linked to the father in Islam. Oocyte donation is not permitted in Islam, since it involves the intervention of a third party (Schenker, 1996). Islamic law limits a man to the marriage of four wives simultaneously. Donation of oocytes between wives is not permitted. However, according to Fatwa from Ayatollah Hussein Khomeini in 1999 egg donation was approved, yet simultaneously. Donation of oocytes between sisters may be permitted.

Hussein Khomeini in 1999 egg donation was approved, yet simultaneously. Donation of oocytes between wives is not permitted. However, according to Fatwa from Ayatollah Hussein Khomeini in 1999 egg donation was approved, yet simultaneously. Donation of oocytes between sisters may be permitted.

Donation of embryos, according to Islam, is prohibited. Frozen pre-embryos are the property of the couple alone and may be transferred to the wife in a successive cycle.

Surrogacy

Using surrogacy to overcome childlessness is not a recent concept. The first example was mentioned in the Bible (Old Testament, Genesis 16) ‘Sarai said to Abram: Behold now, the Lord has prevented me from bearing children; Go to my maid, Hagar, it may be we shall obtain children from her, and Hagar bore Abram a son, Ishmael’. In another Biblical example (Old Testament, Genesis 30), Rachel, who was childless, used her slave girl Bilha to bear a child for Jacob. This type of surrogacy was probably practised for centuries by peoples in different civilizations. The more simple process of ‘partial’ surrogacy involves insemination of the surrogate mother with spermatoozoa of the ‘commissioning’ (or ‘intended’) father. By contrast, ‘full’ (or ‘gestational’) surrogacy requires medical intervention, and entails IVF using the egg and spermatoozoa of the ‘commissioning couple’ (or ‘intended parents’). While partial surrogacy can, and often does, remain a private or even secret arrangement, the involvement of medical personnel and clinics in full surrogacy has translated the procedure into a matter of public concern.

Under the law in Israel (State of Israel Knesset Law, 1995), a special committee, the Approving Committee, must authorize each case of surrogacy. This committee is multidisciplinary, nominated by the Health Minister, and includes seven members: (i) two physicians qualified in obstetrics and gynaecology; (ii) one physician qualified in internal medicine; (iii) a clinical psychologist; (iv) a social worker; (v) a lawyer; and also, as a public representative, (vi) a clergyman, in accordance with the religion of the involved parties.

Full surrogacy is permitted only when the gametes are provided by both parties of the commissioning couple (CC), who are married according to the law of the country. In special cases, the committee can authorize surrogacy with ovum donation. Sperm donation is not allowed, since according to Judaism it would make the child ‘illegitimate’. The surrogate mother should be single or divorced; otherwise, the child is ‘illegitimate’ according to the Jewish religion. Since the Israeli population consists of multiethnic and diverse religious groups, the attitude of the various religions is considered (Report, 1994). Since a child’s religion is determined by the mother in Judaism, the surrogate mother should be of the same religion as the CC. However, if the parties are not Jewish, the committee may allow an agreement between parties of different religions following consultation with the clergyman from the committee. However, since Muslims and Christians do not allow surrogacy, such an agreement would be unlikely. According to Islamic authorities, surrogacy used to be permitted in Saudi Arabia if it took place between wives of the same husband, but is no longer allowed. In 1985, in Mecca, The Islamic Council withdrew its earlier permission of surrogacy between two wives of the same husband.

Multiple pregnancy reduction

In recent years, there has been a dramatic increase in multiple pregnancies throughout the world. Undoubtedly, the main factor has been the use of ovulation inducing drugs and of multiple embryo transfer in the treatment of infertility. Multiple pregnancy has very serious implications for the mother and for her offspring, for the family, community, and for health service resources. Multifetal pregnancy reduction was initially used selectively to terminate a fetus affected by a genetic disorder. This procedure of multifetal pregnancy reduction (MFPR) is now considered an efficient and safe way to improve the outcome.

Jewish law

The fetus is regarded as a part of the mother’s body and not as a separate being until it begins to egress from the womb during parturition, and attains the status of ‘nefesh,’ which means soul in Hebrew. Prior to this time, the fetus is not considered to be a person. In fact, until 40 days after conception, the fertilized egg is considered to be mere fluid (Eisenberg and Schenker, 1997).

Abortion on demand is repulsive to the ethics of the Halakha; however, in many situations a pregnancy may be terminated. If, for example, the mother’s life is in danger, each fetus is a Rodef; an aggressor who may or must be killed in order to save the individual in danger. Most rabbis permit and even mandate abortion when the health or life of the mother is threatened. Some authorities are stringent and require the mother’s life to be in actual danger, however remote that danger, whereas others permit abortion for a serious threat to the mother’s health. The procedure is prohibited for fetal or social reasons.

The question of multifetal pregnancy reduction was debated in the Responsa literature by rabbinical authorities. If the mother’s life is in danger, each fetus is a Rodef; an aggressor who may or must be killed in order to save the individual in danger. Most rabbis permit and even mandate abortion when the health or life of the mother is threatened. Some authorities are stringent and require the mother’s life to be in actual danger, however remote that danger, whereas others permit abortion for a serious threat to the mother’s health. The procedure is prohibited for fetal or social reasons.

The question of multifetal pregnancy reduction was debated in the Responsa literature by rabbinical authorities. If the mother’s life is in danger, each fetus is a Rodef; an aggressor who may or must be killed in order to save the individual in danger. Most rabbis permit and even mandate abortion when the health or life of the mother is threatened. Some authorities are stringent and require the mother’s life to be in actual danger, however remote that danger, whereas others permit abortion for a serious threat to the mother’s health. The procedure is prohibited for fetal or social reasons.

The question of multifetal pregnancy reduction was debated in the Responsa literature by rabbinical authorities. If the mother’s life is in danger, each fetus is a Rodef; an aggressor who may or must be killed in order to save the individual in danger. Most rabbis permit and even mandate abortion when the health or life of the mother is threatened. Some authorities are stringent and require the mother’s life to be in actual danger, however remote that danger, whereas others permit abortion for a serious threat to the mother’s health. The procedure is prohibited for fetal or social reasons.

The question of multifetal pregnancy reduction was debated in the Responsa literature by rabbinical authorities. If the mother’s life is in danger, each fetus is a Rodef; an aggressor who may or must be killed in order to save the individual in danger. Most rabbis permit and even mandate abortion when the health or life of the mother is threatened. Some authorities are stringent and require the mother’s life to be in actual danger, however remote that danger, whereas others permit abortion for a serious threat to the mother’s health. The procedure is prohibited for fetal or social reasons.
death, multifetal reductions might well be allowed. The number of fetuses to be destroyed is a medical question that should be decided by the doctors involved, who must determine the minimum number that need to be reduced to ensure a good prognosis for the mother and remaining fetuses.

Christianity

The different Christian Churches do not have a position on higher-order multiples. However, as it is believed that human life begins at conception, any attempt to ‘reduce’ a higher-order multiple pregnancy must be considered abortion, which, therefore, would seriously discount the value of human life.

In 1995 Pope John Paul II, in an Encyclical letter to all Catholics, warned of the rise of a ‘culture of death’ in modern society, using his strongest language to condemn abortion, which he claimed is a crime that no human law can claim to legitimize.

Islam

Since the fetus is alive and life is the right of God, it is forbidden to abort the fetus, except for a legitimate cause allowed by God. In the Holy Quran, God reveals that the fetus goes through a number of distinct stages. Causes for allowing abortion, are mainly the fear for the mother’s life if she continues to carry the fetus in her womb. Attitudes toward abortion have changed over the centuries. In 1355, the Grand Mufti issued a Dictum allowing contraception, but abortion was permissible only for reasons such as interruption of lactating mother’s milk, which endangered the existing child. After quickening, abortion was prohibited in all circumstances. According to Islamic view, multifetal pregnancy reduction is only allowed if the prospect of carrying the pregnancy to viability is very small. It is also allowed if the life or health of the mother is in jeopardy. Every attempt should be made to prevent the incidence of multiple pregnancy, especially high-order multiple pregnancy. When MFPR is performed, it is not performed with the objective of inducing abortion. MFPR is performed with the objective of increasing the chances of continuation of the pregnancy and the chances of survival of the remaining fetus or fetuses (al-Shazil, 1995).

Posthumous reproduction

The latest remarkable technological advances in assisted reproduction, which enables cryopreservation of spermatozoa, oocytes, embryos and ovarian tissue, raise difficult and debatable legal, social, ethical and moral issues concerning the right to posthumous reproduction (Benshushan and Schenker, 1998). Israel’s Attorney General has issued formal regulations that will allow removal of spermatozoa from a man’s body at the request of his wife or common law wife. The guidelines are based on the assumption that a man who lived in a loving relationship with a woman would want her to have his genetic child after his death even if he never had the opportunity to formally express such a desire. However, when the deceased has expressed an explicit objection, the courts are advised to view the objection as an overriding consideration and to deny the request. The guidelines limit the approval of posthumous requests to female ex-partners and deny any such rights to the deceased’s parents or any other party. The new situation in Israel is in contrast to the situation in most Western countries.

Jewish attitude

In the Bible (Old Testament, Deuteronmy 5:25), in a case where a married man dies without having children, his brother or nearest relative has an obligation to marry the widow and the oldest son is named after the deceased. If the brother-in-law refuses to marry the woman, he is obliged to go through a humiliating, public ceremony because of his unwillingness to establish his brother’s heirs. In fact, King David is the grandson of Ovad, son of Ruth, who was born according to this law (Old Testament, Ruth 4:7–10). Three thousand years ago, this was the most feasible way to have a ‘genetic heir’. The use of oocytes from a cadaver, although technically feasible, involves the co-operation of a surrogate mother, and thus is limited to places where this is legal. The use of frozen embryos, after the death of one of the contributors, can be more complicated in the case of the death of the woman, as when it involves a third party, namely a surrogate mother. In the case of frozen embryos, Israeli law allows transfer of such embryos to the wife 1 year after the death of her husband even in the absence of consent, while in cases where the wife has died the frozen embryos cannot be used. Posthumous reproduction is supported by Jewish Law.

Christian attitude

The different Christian Churches do not have a position on this specific issue.

Islamic attitude

A divorcee or a widow has no right to insert the fertilized ovum in her womb after the end of the marital term, since this is a joint right during the marital term. According to the marriage contract, she is a vessel and the agent for the growth of the fetus resulting from a legal liaison, whereas after the marriage is over she no longer enjoys these rights, as it suffices to point out that no inheritance occurs between husband and wife at that time. It is a duty, in accordance with Islamic law, to find out whether a woman is pregnant after divorce or widowhood, through the period known in al-Shar’a as al-idda (a period of waiting in which the widow must remain unmarried), to ensure the sanctity of man and the receipt of rights by the legally rightful owners.

Gender preselection

Examination of current methods of pre-conceptual gender selection revealed that in-vivo methods such as timing of intercourse, the use of ovulation induction medications, and artificial insemination do not appear to affect the sex ratio to a clinically significant degree. Recent scientific advances have made highly reliable pre-conceptual sex selection possible by using preimplantation genetic diagnosis (PGD) or sperm separation by flow cytometry combined with AIH or IVF. Family balancing through PGD remains an issue of debate. The subject raises such concerns and emotions that people generally have very polarized views: those wanting complete freedom to choose the sex of the child and those that demand
total prohibition of sex selection for non medical purposes. The objection to sex selection arises from examples of countries such as China, Korea, and the Middle East, in which boys are highly prized for economic, hereditary, or religious/cultural reasons. The financial hardship of raising girls in some of these countries has led to the abandonment of female children and the widespread use of abortion and infanticide in favour of boys, and this would ultimately alter the established sex ratio (Schenker, 2002).

**Jewish law**

The requirement for a man to procreate by having a minimum of two children, a boy and a girl, is obligatory according to Jewish law. According to both schools, Beit Shammai and Beit Hillel, in order to fulfil the obligation of procreation, at least one son is required. Therefore, the application of sex preselection for non-medical indications may by of practical importance using the method of sperm separation or sex selection of pre-embryo by PGD.

**Christian view**

This reliable medically assisted sex selection by PGD would likely involve infanticide on an embryonic level. If a couple chooses implantation of a specific-sex embryo, what happens to the embryo of the opposite sex? This sex will be discarded. Discarding an embryo, or infanticide on an embryonic level, is not morally acceptable in Christianity and doing so violates the right of the discarded embryo to live. The long tradition of Christianity, and mainly of the Catholic Church, is that human life begins at conception and, therefore any use or destruction of a pre-embryo that optimized the opportunity of birth seriously discounts human life. In conclusion, gender selection according to Christianity is forbidden.

**Islamic view**

Most pre-Islamic urban women lived in a male-dominated society in which their status was low and their rights negligible. They were continuously under the thumb of a male relative or husband, who exerted rights over them as rights over any property. In November 2000, a workshop organized by the International Islamic Centre for Population Studies and Research at Al-Azhar University in Cairo, Egypt, supported the practice of PGD (Serour and Dickens, 2001).

Preimplantation gender selection was accepted with some reservations. Family balancing was considered acceptable, for instance, where a wife has three or four daughters and it is in the best interests of her and her family to prevent repeated pregnancies until a male offspring is conceived. Employing PGD to ensure the birth of a son in such a case might be approved to satisfy a sense of religious or family obligation, and/or to save the woman from increased risk in future pregnancies. The workshop considered that the application of PGD for sex selection should not be encouraged in principle, but reconciled on its individual merits. It should be pointed out that during a previous seminar concerning Human Reproduction in Islam in 1983, a different statement was expressed regarding sex preselection. There was agreement from the Islamic legal point of view that fetal sex selection is unlawful when practised at a national level. However, when considering individual circumstances, some scholars participating in the seminar believed that there is no legal breech involved in attempting to fulfil the wish of a married couple to have a boy or a girl through available medical means. In contrast, other scholars believed it to be unlawful for fear that one sex might outnumber the other (Serour and Dickens, 2001).

**Cloning**

Perspectives for applying cloning technology to human reproduction have generated much controversy. Worldwide legislations have banned reproductive cloning.

Ethical and religious reasons have been cited for this total ban. In 1998, Israel was one of the first countries to adopt a Law that prohibits reproductive cloning. In 2004, this moratorium was extended for an additional 5 years by the Knesset, the Israeli Parliament (Law, 1998, 2004). The moratorium is for 5 years, during which neither cloning of an entire human being, nor genetic changes affecting human reproductive cells will be allowed.

Nearly every mainstream religious group that has officially taken a position on reproductive cloning has condemned it, some citing the fact that it is currently unsafe as the primary basis for objection. Some religious organizations, including the Catholic Church, object to both reproductive and therapeutic cloning on religious or moral grounds. Others (including several Jewish groups) advocate so-called therapeutic cloning on the grounds that such medical research could uncover cures for debilitating and deadly diseases. Human embryonic stem cell research must be performed.

**Jewish law**

The Jewish religion takes the position that reproductive cloning, the cloning of human beings, could conceivably be justified in some circumstances. This view is largely based on historical tradition and sacred writings, which largely focus on human destiny. The Jewish tradition emphasizes that man is in partnership with God. Some Jewish thinkers find justification for this view in the story of Genesis, which says that Adam and Eve were ‘to work it [the garden] and to preserve it’ (Old Testament, Genesis 2). Man is obligated to care for what he has created and to improve upon creation in order to meet human needs. Jewish scholars do not believe that potential violations of human dignity are reason enough to prohibit human cloning. They believe that the potential benefits of developing cloning technology outweigh the potential risks, provided man fulfils his obligation to minimize violations of human dignity. Some Jewish thinkers fear that cloning human beings might harm the family by changing the roles and relationships between family members that define their responsibilities to one another and patterns of inheritance. Furthermore, in Judaism religious status is passed down through the mother and tribal designation is passed down through the father. Thus, a child needs both a mother and a father. However, many regard cloning of a family member as more acceptable than donor insemination or egg donation. The overriding duty derived from the Torah and rabbinic commentary is the preservation of human life. Given this presumptive duty, it is possible to support cloning when it is
presented as a therapeutic remedy for diseases. Jewish Law is squarely situated on the side of medical research that has potential to save and preserve life. The Jewish tradition places high value on scientific research. If cloning technology research advances the ability to heal human beings with greater success, it ought to be pursued, since it does not require or encourage the destruction of life in the process. Since Jewish law does not grant full moral status to the human embryo, cloning research conducted on the early human embryo may be acceptable. The Talmud deems the embryo during the first 40 days following conception as ‘mere water’.

**Christian view**

Basically, all religions value life highly. Roman Catholicism is the most conservative in issues related to human reproduction, and stresses the point that all forms of human life should be respected from the time of fertilization. In 1987. Roman Catholic scholars, after examining the Bible and Canon Law became the leading voice against human cloning of any kind. In a document called ‘Donum Vitae’, Roman Catholics were told that cloning was considered contrary to the moral law, since it is in opposition to the dignity of human procreation and the conjugal union. Recently, The Pope declared (Brennan, 2003) ‘Methods that fail to respect the dignity and value of the person must always be avoided; in particular of attempts at human cloning with a view to obtaining organs for transplants. These techniques, insofar as they involve the manipulation and destruction of human embryos, are not morally acceptable, even when their proposed goal is good in itself. What is technically possible is not for that reason alone morally admissible.’

Protestant churches, although having differences in doctrines, generally take a negative view of human cloning. Protestant arguments against cloning are often similar to those of the Roman Catholic tradition. Since there is no teaching arm of the Protestant Church to interpret scripture, followers look directly to the texts for guidance. Man should not allow human cloning because it violates God’s intentions by allowing men to reproduce. Protestants also believe that the Bible says that children should be conceived within a marital union between opposite sexes. There is some diversity of opinions regarding cloning among American Baptists, Disciples of Christ, Episcopalians, Evangelical Lutherans, United Methodists, Presbyterians, United Church of Christ and other sects. Conservative Christians resoundingly oppose any cloning, as embryos are defined as having the status of human beings.

**Islam**

Islamic attitudes regarding human cloning stem from deeply held Muslim beliefs and interpretations of the Quran. Most Islamic thinkers, including the Mufti of Cairo, opposed reproductive cloning (Serour and Dickens, 2001). Human cloning could affect kinship, which is a key concept in Islamic law. Cloning would result in a loss of kinship because it creates children who lack either a mother or a father. Islam imposes no restrictions on scientific research, considers it a religious duty, and encourages it. The results of research in the public domain should be properly examined by Sharia experts. There is no consensus among schools of Islamic thought about the moral status of the human embryo.

**References**


Serour GI 1995 Traditional sexual practices in Islamic world. Global Bioethics 1, 35–47.


Talmud Babli, Beitza Ishut 15, 2.


Received 3 September 2004; refereed 22 October 2004; accepted 6 December 2004.