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## RELIGIOUS PERSPECTIVES OF ETHICAL ISSUES IN INFERTILITY AND ART

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This chapter was based upon the presentations of a symposium at the 59th American Society for Reproductive Medicine (ASRM) annual meeting in San Antonio October 2003. This was the ASRM/MEFS cultural exchange session and I was asked to put together presentations that represented the views of the main religions. The Jewish, Christian, and Islamic views were presented by Sherman Silber, Botros R. M. B. Rizk, Pier G. Crosignanni, and Gamal I Serour. This symposium was very stimulating and generated interesting discussions and published

by the *Middle East Fertility Society Journal* in 2005, Volume (10), third issue. This chapter is produced with the permission of the journal with minor updating of my section. This led to another session at the ASRM 60th Annual Meeting in 2004 where presentations covered some more focused topics as stem cell and cord blood. Three presentations were given by Joe Leigh Simpson, Robert Casper, and Botros R. M. B. Rizk.

Religious Perspectives of Ethical Issues in ART. *Middle East Fertility Society Journal* 2005;10 (3): 185–204.

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### INFERTILITY, IVF AND JUDAISM

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#### Different Branches of Judaism

For most Jews, Judaism is not well defined. There are three main branches to Judaism: “Orthodox,” “Conservative,” and “Reformed.” Only about 10% of Jews worldwide are Orthodox, and only Orthodox Judaism is quite well defined. Approximately 85 percent of Jews worldwide are “Reformed,” and these Jews are, for the most part, secular. About 5 percent of Jews are “Conservative,” which is a sort of a hybrid between Orthodox and Reformed Judaism. Thus, with the exception of Orthodox Jews (10 percent), most Jews would have a very difficult time defining their belief system. In fact, Orthodox Jews often define themselves as “religious” Jews so as to distinguish themselves from the other 90 percent (Reformed and Conservative) who are viewed by the Orthodox as ethnic and historical Jews, but who are not following the traditional Jewish religion. Thus, to simplify the discussion of Judaism and modern reproductive technology, it is much easier to concentrate on the more clearly defined “Orthodox” branch of Judaism since it has the most severe set of rules.

#### *Basic Tenets of Orthodox Judaism*

The basic and unshakeable tenets of Judaism prior to the Reform and Conservative movements in the past century is that the Torah is the revealed word of God handed down at Mount Sinai 3,500 years ago. The “written Torah” is the first five books of both the Jewish and Christian Bible. Judaism believes that it is not unreasonable to assume that what was witnessed 100 generations (3,500 years) ago was so important in the lives of these desert nomadic people that it has been transmitted accurately from parent to child, and represents the absolute truth of what God expects of us. In fact, the word “Torah” literally means “instructions for living.” The Orthodox Jewish view is that life is so complex, challenging, and confusing, that without such a “handbook” so-to-speak, like an instruction manual, it would be impossible to know how to live life in the best possible way. That is why at the stage when humanity was ready to receive these instructions, 3,500 years ago, after Noah had discovered the principles of moral behavior, and after Abraham had discovered the universal validity of monotheism, the world was finally ready for the very specific revelation of the law on Mount Sinai after the exodus from Egypt.

The Torah consists of the classical “written” Torah, which is the first five books of the Bible, that is, the five books of Moses and the “oral” Torah, which is the “Talmud.” The Talmud contains the directions that were also given on Mount Sinai to the “children of Israel,” but which were too cumbersome and laborious, and too subject to subtle interpretation to be allowed to be “written down.” In fact, the oral Torah continued to be added to by religious scholars, rabbis, and sages over the past 3,500 years in the form of legal opinions and disagreements regarding the interpretation of the commandments. Thus, the Talmud consists of rules that were considered to be an oral expansion and clarification of the written Torah composed of the arguments and views and opinions from sages down through the centuries. In early Judaism, it was felt that the oral Torah must not be written down because the very concept of oral Torah allows for re-interpretation of absolute rules and commandments according to new conditions as life changes with the coming centuries. Nonetheless, it was written down after the first century A.D. when it was feared by the rabbis of the time (after the Romans expelled the Jews from Israel) that it might be lost if it were simply left to being handed down orally as it had been in the previous 1,600 years.

The basic tenet of Orthodox Judaism is that this written and oral Torah contains a complete guide to how God expects you to live your life. It is critical that you follow these commandments, and it is critical that when there appears to be conflicts or ambiguities in these commandments, that you use all of your intellectual ability to try to discern from these ambiguities and conflicts what exactly it is that God meant for you to do in every single situation that comes up in your life.

### Orthodox Jewish Legal System

The Orthodox Jewish legal system can be viewed as an extraordinary exercise in deductive logic, and can be compared for the sake of clarity to “Euclidean” and “non-Euclidean” geometry. Euclidean geometry, which we all studied in high school is not just a math course about shapes and lines. It is a study in the concept of deductive reasoning. In Euclidean geometry there are a set of six axioms and nineteen postulates, which are basic “obvious” truths from which the entire geometric structure of the world was derived. For example, one of the six axioms is that the “total is equal to the sum of its parts.” Axioms are basic truths that are not specific to geometry but to math in general. Postulates are basic truths that are specific to geometry. An example of one of the nineteen postulates is that “the shortest distance between two points is a straight line.” From these basic axioms and postulates, with which no one would argue, represent basic general truths, the entire system of Euclidean geometry, involving areas of triangles, squares, polyhedrons, and circles are derived. A complex system whose truth seems incontrovertible could be constructed using deductive logic from these very simple sets of axioms and postulates.

In the same way, the Jewish legal system was derived via logic, extrapolation, and argumentation based on the basic commandments in the Torah that were considered incontrovertible and irrefutable axioms and postulates. The result was a legal system that encompasses every imaginable detail of what one should and should not do, based on Gods primordial directions to mankind from Mount Sinai.

However, Euclidean geometry (as logical and unassailable as it appears to be) has rather unexpected potential deviations if

just one of those nineteen postulates is challenged. For example, the nineteenth Euclidean postulate states, “only one line can be drawn through a point which is parallel to another line.” That postulate seems to be pretty obvious, but in the nineteenth century, a completely different system of geometry based on the world’s being curved rather than a rectangular structure, assumed that if through a point, any number of parallel lines can be drawn parallel to any existing line. This non-Euclidean system of geometry was the basis for much of Einstein’s computations of relativity. It is this “risk” that any of the commandments (like postulates) might have been misinterpreted that in Judaism requires constant study, review, and argumentation. The Orthodox Jewish legal system supports this constant questioning process as the only way to attempt to approximate the truth, which Orthodox Jews do believe ultimately derives from Torah.

### Major Jewish Themes

The major themes throughout Judaism are that God is one, that life has a purpose, and that purpose is to live a good and moral life. However, life is very confusing and filled with potential conflict. Therefore, the essence of Orthodox Judaism is that only through intense and relentless study involving argument and counter argument via logic and extrapolation can Jews be guided through this confusion into leading the proper life.

Therefore, the Orthodox Jewish essence is that one must study Torah from the earliest years with all of their intellectual might. The purpose is to try to figure out through logic and introspection, debate and counter debate, all based on Torah, what it is that God expects of us. Only through critical study of Torah can Orthodox Jews figure out how to manage every single detail of living.

### The Most Important Two Commandments

The first commandment to appear in the Torah is that mankind should be “fruitful and multiply.” As a corollary, human life should be preserved above all. For example, if all there is to eat is pork, and otherwise you would die if you did not eat the pork, you are commanded to disobey the injunction against eating pork, so that you can continue to live. The only thing you are not allowed to do to save your life is either to deny the existence of God, or to cause someone else to die. Every other law can be forsaken if otherwise you would die. To either kill yourself or allow yourself to die unnecessarily, or to kill someone else, is strictly forbidden because the most important tenet in Orthodox Judaism is that human life is to be preserved above almost all other laws.

Other examples of Jewish law are that you must say a blessing over every meal and over every single pleasure so as not ever to take anything for granted. The reason for the commandment to say blessings is not because God needs to receive our thank you. The reason that God gives the commandment to say blessings is so that our pleasure in life can be enhanced by never taking the preciousness of life for granted. For example, you must thank God whenever you wake up in the morning for “renewing” your life. You must even remember to say a blessing over your sphincter whenever you are finished going to the bathroom. This may sound humorous and always gets a giggle from the audience. But just think about it. We take our sphincter for granted, unless we have an ileostomy, or incontinence.

As we walk around and live our normal lives, we do not derive any true joy from appreciating how wonderful it is that we have a properly functioning sphincter, unless we remember to say a blessing every time we finish going to the bathroom.

### **Confusion Which Can Result from Attempting to Follow the “Commandments”**

It is well known that Jews must not do any work on the Sabbath so as to remember and be grateful for the creation of the universe. The Sabbath is considered very holy because it is a celebration of our very existence, and it is the most important holiday in Judaism, occurring every single week on the seventh day, the day that God rested from creating the universe. That is the day that Orthodox Jews interface most directly with God, by following the specific commandment not to do any work on the Sabbath. That sounds easy, but how do you define “work”? Rabbis and sages over the past 3,500 years have continually debated this simply to try to figure out what is and is not “work” that is or is not allowable on the Sabbath.

For example, driving your car, even to Synagogue or anywhere else on the Sabbath is considered “work.” However, walking twenty or forty miles on Sabbath, if you live that far away, is not considered “work,” Lifting a 50-pound weight inside your house is not considered “work,” but carrying a single feather outside your enclosed neighborhood, or outside of your house, is considered “work,” which is not allowed on Sabbath. The mere flip of a switch, turning on a light bulb is considered “work,” whereas serving a meal to forty guests is not considered “work.” This is the type of confusion that can result when one sincerely attempts to follow the simplistic commandments of the Torah without having committed oneself to detailed and scholarly questioning. The logical answer has been to consider whatever was not allowable on Sabbath during the building of the tabernacle by Mount Sinai to be defined as “work.” Driving a car or turning on a light is considered work because it is the equivalent of starting a fire. Carrying a feather outside of the neighborhood is considered work because transporting from one area to another is not allowed, but rearranging furniture or other items in your house is not considered transport, and is not prohibited in the Torah. What is the point of giving these examples of the difficulties that the most religious Jews have in deciding what actions do or do not conflict with what God expects of us? It is to point out that the Orthodox Jewish views toward IVF (like the Sabbath) and modern reproductive technology has been subject to relentless intellectual scrutiny by some of the most brilliant minds in Judaism, attempting to extrapolate from ancient laws, believed to be handed down directly from God, what is and what is not allowable.

### **INFERTILITY, IVF AND JUDAISM**

The Jewish views on IVF issues are therefore readily deducible. According to the Talmud, the soul does not enter the embryo until forty days. Furthermore, we all have an obligation to have offspring and to “be fruitful and multiply.” Therefore, IVF is absolutely obligatory when it is medically indicated in order for a couple to have children. It is not just allowable but it is obligatory. Furthermore, PGD represents no moral or ethical risk because the soul has not yet entered the embryo. Furthermore, selective reduction of a multiple pregnancy is acceptable if its goal is to enhance the possibility of life.

Embryo research to promote life is, therefore, acceptable. Furthermore, not only is therapeutic cloning acceptable but it is an obligation to do any research which can enhance and promote life-saving treatment such as stem cell and cellular replacement therapy.

### **Commandments in Conflict**

The Talmud specifically forbids “cutting the sperm ducts.” But yet the Torah insists “be fruitful and multiply.” So if we are not allowed to cut the sperm ducts, and yet we are obligated to do whatever we can to have children, what about “MESA” and what about “TESE?” Modern Talmud scholars, universally respected Orthodox Rabbinical minds, have weighed this conflict, and decided that the first commandment “to be fruitful and multiply” takes priority over the commandment not to “cut the sperm ducts.” Therefore, MESA and TESE are fully allowable and, in fact, mandatory. However, such a decision, based on a clear conflict between two commandments is referred to as a “leniency.” In other words, the rabbi’s are not really happy about the prospect of an apparent violation of a Torah commandment, but it is understood that God’s intention in the commandment to avoid cutting the sperm ducts was meant to be a corollary to “be fruitful and multiply” and not to be a prohibition against doing whatever you can to “be fruitful and multiply.”

### **Controversial Issues Such as Donor Gametes**

Controversial issues such as whether or not donor gametes are allowable have not yet resolved themselves into any clear announcement from rabbinic authorities. The great legal Orthodox Jewish minds are very cautious on this issue. Many Orthodox Jews assume that donor gametes are not allowable and do not even think to engage in detailed, syllogistic scrutiny of this issue. Therefore, most rabbinic authorities generally do not allow either donor sperm or donor eggs. However, there is no clear injunction in the Torah against donor sperm or donor eggs, and there is a clear imperative to “be fruitful and multiply.” In fact, the imperative to “be fruitful and multiply” is so strong that prior to modern reproductive technology, divorce (which is generally shunned among Orthodox Jews) would be allowed if the couple were infertile, just to allow them the chance to try via a different marital partner to have children.

Therefore, to solve this issue, the couple has to search “for the right rabbi” who will go through the details of this complex issue with them privately. The greatest and most respected Orthodox Jewish mind of the twentieth century was Rabbi Moshe Feinstein. Unfortunately he has passed away, but his views (however radical seeming) were regarded universally by Orthodox Jews, no matter what their hesitation, as most probably being correct guidelines. His knowledge and his reasoning were considered to be vaster than any other rabbi in the later twentieth century. He never had a chance to make a ruling on donor eggs, but on donor sperm he felt that it was a private matter for the couple to decide, and in certain situations it would be recommended in order to fulfill the first commandment as well as to keep the marriage together. However, despite such an opinion, here is a general “feeling” among Orthodox Jews against donor gametes. However, my discussions with many of the great Talmudic minds would indicate to me (my personal view) that despite the controversy, donor gametes, in special situations, with the right couple, is preferable to going childless, and is acceptable under Jewish law.

### Torah and Science Do Not Conflict

Even the most fundamentalist Orthodox Jewish viewpoint is that Torah and science do not conflict. Mankind must use its creative intelligence to resolve conflict and to figure out from the “basic” principles of Torah what is right, and never to be blinded by dogma. A good example is the Orthodox Jewish view of creation and the concept of the Big Bang. Most physicists today believe that the universe is approximately thirteen billion years old. That would seem to conflict with the biblical notion that the universe was created in six days, and on the seventh day, God rested. However, MIT physicists have studied this concept of the Big Bang mathematically using basic principles of the relativity of time and velocity popularized by Einstein.

As an object is proceeding at or near the velocity of light, time slows down dramatically in relation to a fixed observer. Einstein originally postulated that if you were to travel in

a spaceship at the speed of light for thousands of years, and then return to earth, you will not have aged significantly, but back on Earth it will be thousands of years later. Time simply gets slower, the faster your velocity in relation to a fixed observer. If God is considered the external observer, and the universe is expanding near the speed of light, then the thirteen billion years which astronomers measure as the age of the universe comes out to approximately six days. Thus, there is no conflict between our observation that the universe is approximately thirteen billion years old, and the traditional biblical view that the universe was created in six days. This is one example of the firm belief in Judaism that science, observation, and study do not, and should not conflict, with religion and spirituality. That is not considered to be God’s wish. The Orthodox view of the most respected rabbinic minds is that Torah should be a window to view the universe with an open mind, and should not be a wooden shutter.

## THE VIEWS OF THE COPTIC ORTHODOX CHURCH ON THE TREATMENT OF INFERTILITY, ASSISTED REPRODUCTION, AND CLONING

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### Coptic

The Coptic Orthodox church is an apostolic church that is as old as Christendom. The Coptic Orthodox church is rich with her evangelistic and ascetic life, genuine patriotic inheritance, heavenly worship, spiritual rituals, living hymns and beautiful icons. The church is part of Egypt’s fabric. One of the statements of His Holiness Pope Shenouda III, Egypt is not a country that we live in, Egypt is a country that lives in us. The word “copt” derives from the Greek Aigyptios “Egyptian” via Coptic kyptaios and Arabic Qibti. Aigyptios derives from hikaptah, house of the Ka (spirit) of Ptah, a most highly revered deity in Egyptian mythology and one of the names for Memphis, the first capital of ancient Egypt (1). The Arabs, upon arriving to Egypt in 640 A.D., called Egypt dar al Qibt (home of the Egyptians) and since Christianity was the official religion of Egypt, the word Qibt came to refer to the practitioners of Christianity as well as to the inhabitants of the Nile Valley (Figure 73.1) (1,2).

### **Foundation of the Coptic Church by St. Mark**

In the first century, Egypt was blessed by the Holy Family’s visit (Figures 73.2 and 73.3). There is a strong tradition in Egypt that supports the New Testament story of the Flight into Egypt: Take the young child and his mother and flee into

Egypt: (Matt. 2: 13,15); “Behold the Lord rides on a Swift cloud and will come into Egypt” Isaiah 19:1; “Out of Egypt I called my son” (Hosea 11:1); and it is shared by Christians and Muslims alike (3,4). Egypt was a refuge to many people especially during famines. Abraham visited Egypt so did Joseph and Jeremiah. According to tradition, St. Mark (Figure 73.4) brought Christianity to Egypt (5) in the reign of the Roman Emperor Nero in the first century A.D. (1). He preached the Gospel, made his first convert, founded the See, and was martyred in Alexandria.

St. Mark was a Jew from the Levite tribe (6). St. Mark carried two names. His Jewish name, John, means God is merciful and his gentile name, Marcos, the more well known. His Jewish name was used alone in two references in the Acts of the Apostles in Chapter 13, verses 5 and 13 as well as in St. Paul’s letter to the Colossians and St. Peter’s letter. His two names were used together on three occasions in the Acts of the Apostles.

St. Mark was born in the Cyrene, one of the pentapolis in Libya called Apriatolis (5,6). His mother’s name was Mary, one of the Marys who followed the Lord Jesus Christ, and his father was Aristopaul who was a cousin of St. Peter and also a relative of St. Barnabas as mentioned in Colossians 4:10. In Acts, St. Mark is mentioned as a companion of Saul and Barnabas (12:52; 13:13); he is also portrayed as a co-worker of St. Peter, the Apostle to the Jews (12:12) and of St. Paul

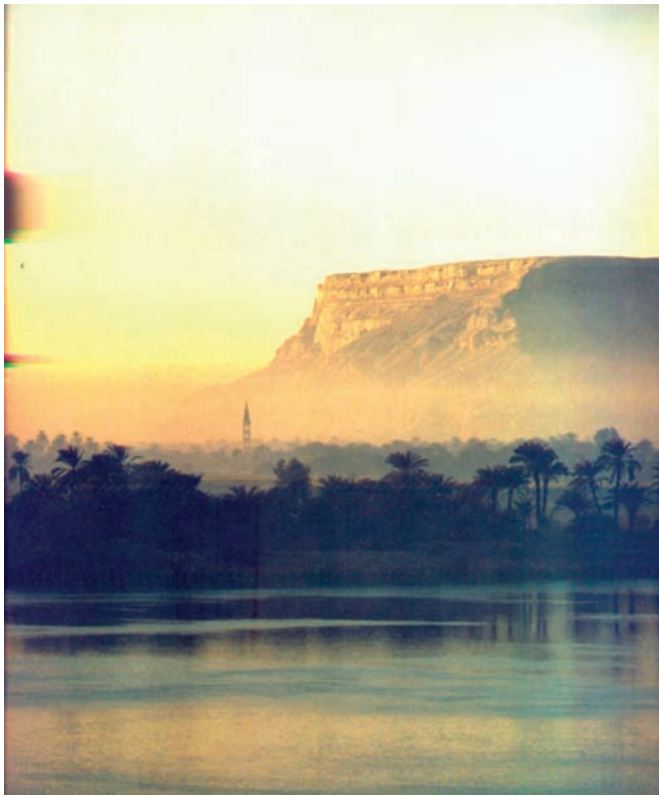


Figure 73.1. The Nile River in the land of the pharaohs.

the Apostle to the gentiles (Col 4: 10; 2Tim 4:11). St. Mark preached in Asia, Europe, Antioch, Cypress, Rome, Colossy, and Venice.

According to the historian Eusabius of Pamphylia (fourth century) St. Mark appointed his first convert in Alexandria, the cobbler Anianus, to serve as bishop of Alexandria in his place. Moreover, he ordained three priests Milus, Cerdon, and Primus all of whom became patriarchs of the See of Alexandria. The unbelievers of the city were greatly annoyed by the rapid spread of the Gospel and planned to entrap the evangelist during the Easter celebrations of 68 CE. In the course of the divine Eucharist, the furious mob seized St. Mark, put a rope around his neck, and dragged him through the cities of Alexandria. The following day once again dragged him by the rope until he died (7). Some of the earliest converts to the new faith came from the Jewish community in Egypt which probably represented the largest Jewish population of Jews outside Palestine (1) that existed for more than one thousand years B.C. (8).

### The School of Alexandria

Long before the establishment of Christianity in Alexandria, the city was famous for its many schools. By far, the largest school is the "Museum," which was founded by Ptolemy and became the most famous school in the East. In addition, there were the "Serapeum" and the "Sebastion." Each of these three schools had its own huge library. The Museum's library contained 700,000 volumes (9).

Alexandria was the metropolis of Egypt, the flourishing seat of commerce, of Grecian and Jewish learning, and of the greatest library of the ancient world. It was destined to become one

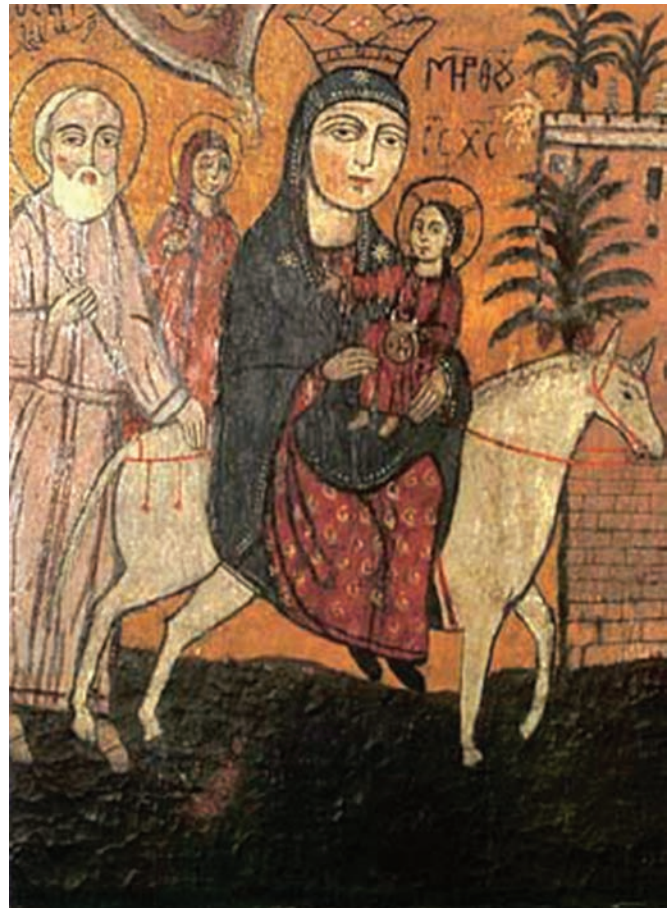


Figure 73.2. The Holy Family's flight to Egypt.



Figure 73.3. The Holy Family's journey on the Nile.

of the great centers of Christianity, the rival of Antioch and Rome.

St. Jerome records that the Christian School of Alexandria was founded by St. Mark himself. He was inspired by the Holy Spirit to establish it to teach Christianity, as this was the only way to give the new religion a solid foundation in the city. The school became the oldest center for sacred sciences in the history of Christianity. In it, the first system of Christian theology was formed and the allegorical method of biblical exegesis was devised.



Figure 73.4. St. Mark, the founder of Christianity in Egypt and his Cathedral in Alexandria.



Figure 73.5. His Holiness Pope Shenouda III 117th Pope of Alexandria and Patriarch of the See of St. Mark.

### The Orthodox Church's Big Picture in Christianity

If you consider all the Christians in the world, more than 700 million are Catholic and 325 million are Protestants of different denominations and 200 million are Orthodox Christians. However, father Marc Dunaway (1995) states if you are like most Americans, you probably know very little about the Orthodox Church and Orthodox Christianity (10). There are approximately 134 million Christians in the United States: eighty million are Protestant, fifty million are Catholic, and four million are Orthodox. The primary locations of Orthodoxy in the world today are Greece, Russia, Eastern Europe, Egypt, and the Middle East as in Syria, Lebanon, Palestine, and Israel. The Orthodox Church is larger in number than any of the Protestant denominations individually.

### The History of the Church

The history of the Church went through different ages. The first was the age of the apostles followed by the age of persecution followed by the age of the ecumenical councils. In a critical moment in Church history, the Church began to be pulled in two directions along the lines of East and West. At that time "East" meant Greece, Asia, Alexandria, and the Middle East and "West" referred to Europe. The causes of this rift were many and complex among which were language and culture, Latin versus Greek (10). This parting of the ways is known as the "Great Schism."

This was the beginning in the West of what is now called Roman Catholicism and in the East as Orthodox Christianity.

### The Coptic Orthodox Church

The Coptic tradition holds that St. Mark heads the list of patriarchs of Alexandria and today's spiritual leader of the Coptic community, His Holiness Pope Shenouda III, is 117th Pope of Alexandria, (Figure 73.5). His Holiness the Pope is one of the church's greatest spiritual leaders, theologians, poets and philosophers. He has enriched us with his spiritual lectures, renewed our minds and made the times enjoyable with His great sense of humor. The early history of the Coptic Church is both glorious and tragic (7). It is glorious because of its illustrious children such as the theologians Athanasius and Cyril the Great and the monastic fathers and mothers St. Anthony, St. Pachomias, and St. Syncretica (7) and tragic because of the persecution. Copts regard their Church as the Orthodox Church that held firm to the Nicene Creed as formulated in the first and greatest of the Church councils in 325 A.D. (11). They take pride in the fact that St. Anthony, an Egyptian hermit (Figures 73.6 and 73.7), remains the spiritual father of Christian monasticism (Figures 73.8 and 73.9), and St. Athanasius, his disciple, was the founder of the Nicene Creed (12). All Christian monasticism by St. Basil, St. Jerome, and St. Benedict stems directly or indirectly from Egyptian monasteries whether by Saint Antony or Saint Pachomias.



Figure 73.6. St. Anthony, founder of Monasticism.

### Coptic Orthodox Church in the Twentieth Century

The twentieth century has seen a revival of the Coptic Church. The main revival came through the Sunday School Movement and the resurgence of Coptic Monasticism. Coptic Orthodox Christianity has been preached on all the continents during the past four decades by His Holiness Pope Shenouda III. His Holiness ordained more than one hundred bishops in Egypt and several Bishops for the United States in the 1990s. His Grace Bishop Youssef, a beloved and delightful head of the Southern Diocese of the United States kindly revised this manuscript. As he was originally an ENT surgeon he was familiar with medical technology and scientific advances. He worked tirelessly for fifteen years to develop the diocese with grace and in the process built a significant number of churches in Florida and Texas (Figure 73.10).

### The First Book on the Christian Opinion on In Vitro Fertilization

The first book on the opinion of the Coptic Orthodox Church on in vitro Fertilization and transfer of embryos was published by His Grace, the late Bishop Gregorios (Figures 73.11 and 73.12), the bishop of theological studies, Coptic culture, and scientific research (13). His book was based on a lecture that he had delivered the year before at the 10th Annual Conference of the College of Medicine, at Ain Shams University in Cairo in

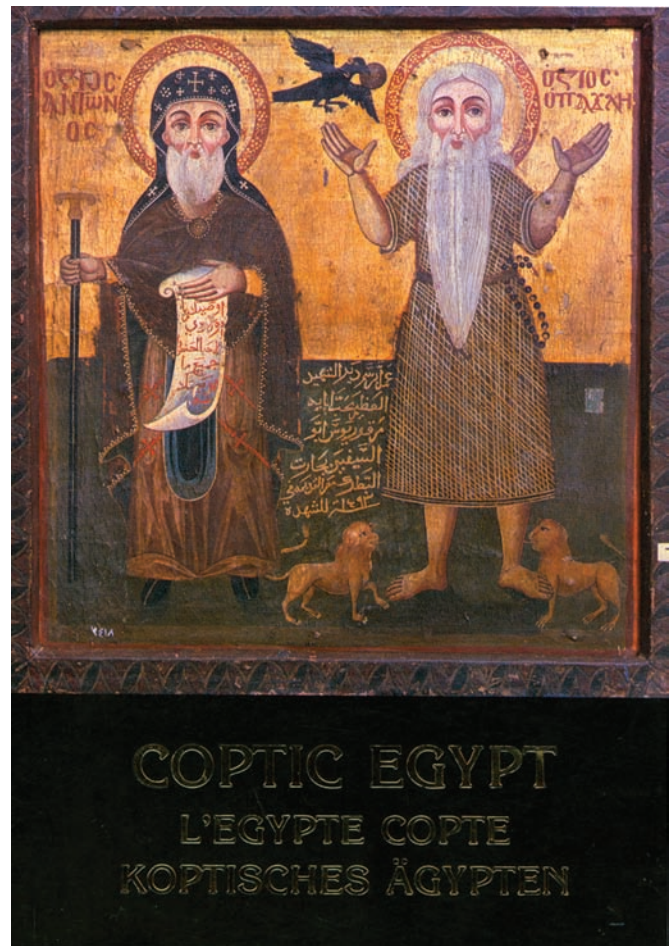


Figure 73.7. St. Anthony and St. Paul depiction of their historic meeting.

March 1987. The author could personally testify that His Grace Bishop Gregorios was a scholar in different fields of theology and science and represented the ultimate in dedication and purity that could ever be achieved. His book was given to me more than fifteen years ago by Professor Mohamed Aboulghar who started in vitro fertilization in Egypt and sought the opinion of the Coptic Orthodox community as well as the Islamic community. The introduction of his lecture and book starts by ascertaining that the success of in vitro fertilization represents a great success for science by alleviating a great obstacle for married couples wishing to conceive a child. Although having children is not the only reason for marriage, it represents nature's first goal of marriage in all beings including humans. He fully acknowledges that motherhood is the strongest instinct that a woman could have and that having children is the first wish for any mother and certainly infertile women are among the unhappiest people even if they were married to the richest, wealthiest, and most famous. He also acknowledges that the success of in vitro fertilization has brought happiness to thousands of married couples and settled lives among many families. He quoted examples from the Old Testament, painting a picture of how such tragedy could affect family life such as Sara who asked Abraham to marry her maid-servant and Rachel and Jacob. He cited Rachel's statement asking Jacob to give her children or she would rather die.

The second chapter focuses on the pitfalls of in vitro fertilization and assisted conception. He emphasized that a key issue

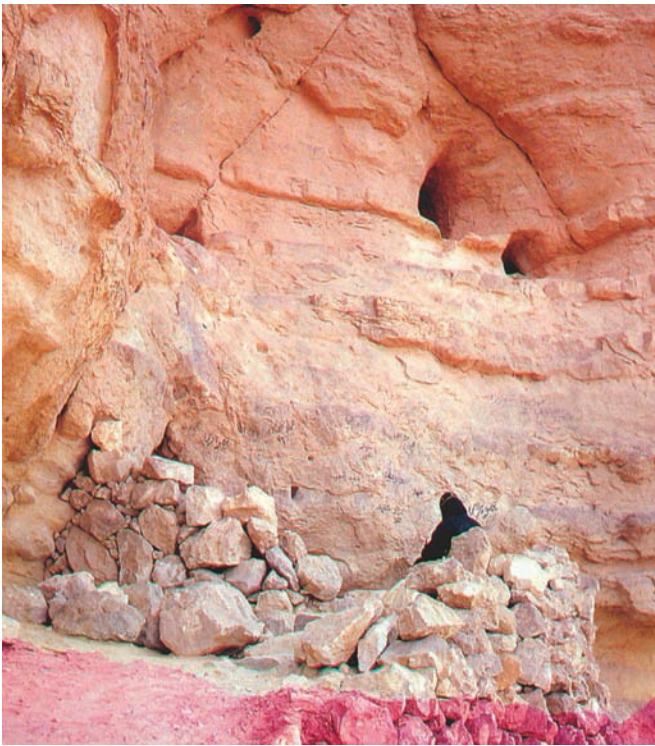


Figure 73.8. The Monastery of St. Anthony on the Red Sea: The world's first monastery.

is the fertilization of a woman's oocyte by her husband's sperm, and extreme accuracy should be exercised in this important issue. He stresses the role of the treating physician in honesty so that there is no question that fertilization has occurred between the husband and wife and not any third party. He acknowledges that in certain situations fertilization might not occur but does not accept that fertilization should be attempted between the wife's oocyte and any other man's spermatozoa, whether it is from a known or an unknown donor. His Grace Bishop Gregorios calls this fertilization incomplete ethically or legally from all aspects because the fruit of the relation between a man and a woman should be from a holy relation.

Another issue that he does not accept is the establishment of embryo banks and the buying and selling of gametes with money. This is fully unacceptable because it brings down the relation of the value of marriage and conception and having children to a low level.

His grace then discusses the difficult issue of surrogate pregnancy and believes that this is an area that has serious consequences. One of those consequences is that the infant may inherit some different psychological or physiological traits of the carrier. He acknowledges that in the past, a mother who died had her child nursed by another woman who could do so and that was a legitimate option in the absence of facilities for feeding. In a later discussion, His Grace Bishop Gregorios denounces surrogacy (14).

In summary, His Grace Bishop Gregorios welcomes and accepts in vitro fertilization only under the circumstances where the oocyte and sperm are taken from the husband and wife and fertilization occurred in vitro with no doubt about gamete mixing. Embryo transfer must be performed to the mother who is the source of the oocytes. All the steps of in vitro fertilization should occur with the approval of the husband and wife, and the treating physician should be alert to the fact that no mixing of gametes



Figure 73.9. St. Anthony's cave in the mountain on the Red Sea.

should occur and there should be no doubt in anyone's mind regarding the source of the gametes. He accepted in this lecture that surrogacy is an option when the sperm and oocyte are obtained from the married couple when the wife has lost or does not have the ability to carry a pregnancy as in the case of a woman who has had her uterus removed because of bleeding or cancer. In a later communication, he closed the door on surrogacy even under those rare circumstances (14). In the details of his lecture, he goes through the clinical indications for in vitro fertilization and the steps that should be adhered to from the retrieval of the oocytes until the embryos are transferred to ensure the extreme caution that should be exercised by the couple and the treating physician.

In 1998, His Grace Bishop Serapion of Los Angeles published a series of articles in the *El Kiraza* journal of which His Holiness Pope Shenouda III is the editor-in-chief (15). His Grace Bishop Serapion (Figure 73.10) who is also a physician by background acknowledges that in vitro fertilization is a legitimate option for couples who cannot achieve a pregnancy by normal means including medical and surgical options. In vitro fertilization is acceptable only if the gametes are from husband and wife. No donor oocyte or spermatozoa should ever be used under any circumstances. Surrogacy is fully unacceptable.

In 1997 His Grace Bishop Moussa, also a medical doctor, published a small book on contraception, in vitro fertilization and cloning, he supported the ethical use of in vitro fertilization using the gametes of the husband and wife. He raised the difficult issue of the fate of the extra embryos and how to handle them (16).

In 2000, His Grace Bishop Moussa published another book on the challenges of the new century, particularly technology, reproduction and organ transplantation. He supported the use of IVF but not donor gametes or third party and condemned cloning. Most importantly, he emphasized the need for honest scientists and clinicians within the church to advise the church on the advances in technology (17).





Figure 73.10. Bishop Youssef, Bishop of the Southern Diocese in the United States ordaining a priest in Dallas, Texas.



Figure 73.11. His Holiness Pope Shenouda III and His Grace Bishop Gregorios, bishop of scientific research and writer of the first book on in vitro fertilization.

### Sex Selection

Ethicists are divided in two camps: those who feel that sex selection is a choice of couples and those who believe that this would be a biased intervention with negative consequences (16,18). His Grace Bishop Moussa did not support sex selection (17).

### Cloning or Somatic Cell Nuclear Transfer

Somatic cell nuclear transfer or cloning is an issue that has divided more ethicists in the Western world (19,20). Cloning



Figure 73.12. His Holiness Pope Shenouda III and His Grace Bishop Gregorios ordaining bishops in 1971.

could be performed for reproductive reasons. This type of cloning is known as reproductive cloning. To our knowledge, no human being has been successfully cloned. Although it is not impossible, it is extremely difficult to do so. Most medical societies including the American Society for Reproductive Medicine does not accept cloning from an ethical point of view even if it becomes technically possible. Cloning for the production of stem cells is known as therapeutic cloning which is acceptable to some medical societies (19,20). The Coptic Church Los Angeles Diocese has discussed this issue in its Web site. It acknowledges that the goal of stem cell therapy is a noble goal for millions of peoples. However, it emphasizes that noble goals should have also noble means to achieve them. The use of other source of stem cells is therefore advised rather than the use of embryonic stem cells resulting in the destruction of the embryos.

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ISLAMIC PERSPECTIVES OF ETHICAL ISSUES IN ART

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Science without conscience ruins the soul. It is therefore not surprising that science and religion have been interrelated since the beginning of human history. The past two decades have witnessed the secularization of bioethics. The religious influence on bioethics subsequently declined. Bioethics today is no longer dominated by religion and medical traditions as it used to be in the past. It has become dominated more by philosophical, social, and legal concepts (1). However, in some parts of the world like Middle East, where the three major religions, namely Judaism, Christianity, and Islam emerged, religion still means and influences a lot of behaviors, practices, and policy makings. This also applies to conservative followers and observants of these religions in different parts of the world. The three major religions Judaism, Christianity, and Islam have encouraged procreation, family formation, and child birth through natural conception within the frame of marriage. The Holy Quraan encouraged marriage, family formation, and reproduction. It says: “We did send apostles, before thee, and appointed for them wives and children” (2). In another version it also says “And God has made for you mates (and companions) of your own nature, and made for you, out of them, sons and daughters and grandchildren, and provided for you sustenance of the best” (3). It also refers to the possibility of infertility among some couples as it says “He bestows (children),

male or female, according to His will (and Plan), or He bestows both males and females, and He leaves barren whom He will” (4).

ART and Islamic Perspectives

With the advent of assisted reproduction technology (ART) since the birth of Louise Brown in UK on July 25, 1978, it became possible to separate the bonding of reproduction from sexual act (5). ART, whether in vivo or in vitro, enabled women to conceive without having sex. ART made it possible for the involvement of a third party in the process of reproduction whether by providing an egg, a sperm, an embryo, or a uterus. ART opened the way for several other practices including gender selection, preimplantation genetic diagnosis (PGD), genetic manipulation, cryopreservation of gametes, embryos and gonads, cloning . . . etc. This challenged the age-old ideas and provoked ethical debate, which continued since its earliest days (6). An inconsistent attitude was created in many countries all over the world regardless of the religious, cultural, economical, or political background of these countries.

The teaching of Islam covers all the fields of human activity; spiritual and material, individual and social, educational and cultural, economic and political, national and international.

Instruction which regulates everyday activity of life to be adhered to by good Muslims is called Sharia. There are two sources of Sharia in Islam: primary and secondary. The primary sources of Sharia in chronological order are: The Holy Quraan, the very word of God, the Sunna and Hadith, which is the authentic traditions and sayings of the Prophet Mohamed as collected by specialists in Hadith, *igmaah*, which is the unanimous opinion of Islamic scholars or *Aimma* and analogy (*Kias*), which is the intelligent reasoning, used to rule on events not mentioned by the Quraan and Sunna, by matching against similar or equivalent events ailed on. The secondary sources of Sharia are *Istihsan*, which is the choice of one of several lawful options, views of Prophet's companions, current local customs if lawful, public welfare, and rulings of previous divine religions if they do not contradict the primary sources of Sharia. A good Muslim resorts to secondary sources of Sharia in matters not dealt within the primary sources. Even if the action is forbidden, it may be undertaken if the alternative would cause harm. The Sharia is not rigid. It is flexible enough to adapt to emerging situations in different items and places. It can accommodate different honest opinions as long as they do not conflict with the spirit of its primary sources and are directed to the benefit of humanity (1, 7–9). Islam is a religion of *Yusr* (ease) not *Usr* (hardship) as indicated in the Holy Quraan (10). The Broad Principles of Islamic Jurisprudence are permissibility unless prohibited by a text (*Ibaha*), no harm and no harassment; necessity permits the prohibited and the choice of the lesser harm. ART was not mentioned in the primary sources of Sharia. However, these same sources have affirmed the importance of marriage, family formation, and procreation (2–4, 11, 12). Also, in Islam adoption is not acceptable as a solution to the problem of infertility. Islam gives legal precedence to purity of lineage and known parenthood of all children. The Quraan explicitly prohibits legal adoption but encourages kind upbringing of orphans (13). In Islam infertility and its remedy with the unforbidden is allowed and encouraged. It is essential if it involves preservation of procreation and treatment of infertility in the married couples (7). This is applicable to ART, which is one line of treatment of infertility. The prevention and treatment of infertility are of particular significance in the Muslim World. The social status of the Muslim women, her dignity, and self-esteem are closely related to her procreation potential in the family and in the society as a whole. Childbirth and rearing are regarded as family commitments and not just biological and social functions. As ART was not mentioned in the primary sources of Sharia, patients and Muslim doctors alike thought by seeking ART for infertility treatment, they are challenging God's will trying to make the barren woman fertile, and handling human gametes and embryos. ART was only widely accepted after prestigious scientific and religious bodies and organizations issued guidelines, which were adopted by medical councils or concerned authorities in different Muslim countries and controlled the practices in ART centers.

These guidelines which played a role in the change of attitude of society and individuals in the Muslim World included Fatwa from AI-Azhar, Cairo 1980 (7) and Fatwa from Islamic Fikh Council, Mecca 1984, the Organization of Islamic Medicine in Kuwait (1991), Qatar University (1993), the Islamic Education, Science and Culture Organization in Rabaat (2002), the United Arab Emirate (2002), and the International Islamic Center for Population Studies and Research, AI Azhar University (14–19). These bodies stressed the fact that Islam encouraged marriage, family formation, and procreation in its primary sources. Treat-

ment of infertility, including ART when indicated, is encouraged to preserve humankind within the frame of marriage, in otherwise incurable infertility. The attitude of patients changed from rejection, doubt, feeling of shame, guilt, and secrecy when seeking ART in the eighties to openly asking ART in the nineties. The introduction of the effective ICSI treatment for male infertility played a role in the change of attitude of many couples to ART (9). In family affairs, particularly reproduction, the decisions are usually taken by the couple. However, not uncommonly the husband's decision is the dominating one. Husbands became very enthusiastic about ART. They took the initiative and encouraged their wives to undergo ART treatment for male, female, or unexplained infertility. Today the basic guidelines for ART in the Muslim World are: if ART is indicated in a married couple as a necessary line of treatment, it is permitted during validity of marriage contract with no mixing of genes. If the marriage contract has come to an end because of divorce or death of the husband, artificial reproduction cannot be performed on the female partner even using sperm cells from former husband. The Shi'aa Guidelines has "opened" the way to a third-party donation, via Fatwa from Ayatollah Ali Hussein Khomeini in 1999. This Fatwa allowed third-party participation including egg donation, sperm donation, and surrogacy. The Fatwa is gaining acceptance in parts of the Shi'ite world. Recently, there has been some concern about sperm donation among Shi'aa. All these practices of third-party participation in reproduction are based on the importance of maintaining the family structure and integrity among the Shi'aa family. They are allowed within various temporary marriage contract arrangements with the concerned donors.

### Surrogacy

Surrogacy is not permitted for most sunni. The Fatwa of the Fikh council in 1984 allowed surrogacy by replacing the embryos inside the uterus of the second wife of the same husband who provided the sperms. In 1985, the council withdrew its approval of surrogacy (1, 6, 14).

Recently, there had been a debate among Sunni scholars on surrogacy. While some religious authorities thought that it can be permitted, others believed that it should not be approved.

### Cryopreservation

The excess number of fertilized eggs can be preserved by cryopreservation. The frozen embryos are the property of the couple alone and may be transferred to the same wife in a successive cycle but only during the validity of the marriage contract (7, 8, 16–18). Whether the couple's preserved embryos could be implanted in a wife after her husband's death was discussed in an international workshop organized by The International Islamic Center for Population Studies and Research, AL Azhar University in 2000. The strict view was that marriage ends at death, and procuring pregnancy in an unmarried woman is forbidden by religious laws, for instance, on children's rights to be reared by two parents, and on inheritance. After due time, the widow might remarry but could not then bear a child that was not her new husband's. An opposing view, advanced as reflecting both Islamic compassion and women's interests as widows, was that a woman left alone through early widowhood would be well and tolerably served by bearing her deceased husband's child, through her enjoying companionship, discharge of religious

duties of childrearing, and later support. The Grand Mufti of Egypt (personal communication) stated that permission had once been given for embryo implantation in a wife following her husband's death, based on the circumstances of the particular case. However, this should not be taken as a generalization, and each case should be considered on its own merits (18, 20).

### **Multifetal Pregnancy Reduction**

Multifetal pregnancy particularly HOMP should be prevented in the first place. Should HOMP occur in spite of all preventive measures, then multifetal pregnancy reduction may be performed applying the jurisprudence principles of necessity that permits the prohibited and the choice of the lesser harm. Multifetal pregnancy reduction is only allowed if the prospect of carrying the pregnancy to viability is small. Also it is allowed if the life or the health of the mother is in jeopardy (16, 20–22). It is performed with the intention not to induce abortion but to preserve the life of remaining fetuses and minimize complications to the mother.

### **Embryo Research**

Development of embryo/fetus advances step by step with its morphological development and growth from a clot to a lump of flesh, then boned flesh, and, finally, a fully grown infant (23, 24). Till forty days the embryos in the mother's womb is "a nutfa," then "an alqa" for an equal period then "a mudgha." The organ differentiation occurs in forty-two days after fertilization. Ensoulment of the fetus occurs after 120 days from fertilization (25). The old threshold of forty days and upward from conception has been brought back to fourteen days because the new embryology has established this embryonic period of cellular activity before which individuation cannot begin (15). Embryo research, for advancement of scientific knowledge and benefit of humanity, is therefore allowed before fourteen days after fertilization on embryos donated for research with the free informed consent of the couple. However, these embryos should not be replaced in the uterus of the owner's of the eggs or in the uterus of any other woman (7, 8, 15, 18). Reflecting the unstructured ethical governance of research in several of the Muslim countries should each country form a national research ethics committee to which any proposed research involving the use of gametes or embryos outside the body shall be submitted for prior review and approval.

### **Sex Selection**

The use of sperm-sorting techniques or PGD for non medical reasons such as sex selection or balancing sex ratio in the family is guarded. These techniques are better alternative to prenatal diagnosis that necessitates abortion for sex selection. Muslims adhere to the view that human life requiring protection commences two to three weeks from conception and uterine implantation (15). Accordingly, decisions not to attempt replacement of embryos produced in vitro on grounds that they show serious chromosomal or genetic anomalies, such as aneuploidy, cystic fibrosis, muscular dystrophy or hemophilia, are accepted. PGD is encouraged, where feasible, as an option to avoid clinical pregnancy terminations for couples at exceptionally high risk (20). More contentious is non medical purposes of sex selection. Arabs more than 1,400 years ago, before Islam, used to practice infanticide for gender selection. The Holy Quraan described this act and condemned it (26, 27). It says: "On God's Judgment Day the

entombed alive female infant is asked, for what guilt was she made to suffer infanticide?" Sex selection technologies have been condemned on the ground that their application is to discriminate against female embryos and fetuses, so perpetuating prejudice against the girl child (28) and social devaluation of women. Such discrimination and devaluation are condemned in the Muslim World. However, universal prohibition would itself risk prejudice to women in many present societies, especially while births of sons remain central to women's well-being. Sex ratio balancing in the family is considered acceptable, for instance, where a wife had borne three or four daughters or sons and it was in her and her family's best interests that another pregnancy should be her last. Employing sex selection techniques to ensure the birth of a son or a daughter might then be approved, to satisfy a sense of religious or family obligation and to save the woman from increasingly risk-laden pregnancies (29, 30). Application of PGD or sperm-sorting techniques for sex selection should be disfavored in principle, but resolved on its particular merits with guidelines to avoid discrimination against either sex particularly the female child (20, 29, 30). It should not be used for selection of the sex of the first child or for selection of one sex only in the family. Also it is only applied to families who have children of only one sex and have intense desire to have one more child of the other sex. The service is only provided after proper counseling with the reproductive medicine physicians, geneticist, social scientist, and psychologist (31).

### **Pregnancy in the Postmenopause**

The possibility of postmenopausal pregnancy in the past before cryopreservation was considered dependent on ovum donation, which was disapproved in principle as it involves mixing of genes (7, 8, 22). Also pregnancy after menopause is associated with increased risks for both mother and child. Accordingly, it was unacceptable in the Muslim World (17). However, with the development of cryopreservation it is now possible to have pregnancy in the postmenopause using one's own cryopreserved embryos or even oocytes and possible in future cryopreserved ovaries. Taking into consideration special care necessary for the safe induction and completion of pregnancy in a woman who was of advanced, or beyond normal, child-bearing years and of the easier case where premature menopause affects a woman who would otherwise be of suitable maternal age, and the children's needs of parents likely to survive at least into their midadolescence, research efforts should be concentrated on the prevention of premature menopause and that the postmenopausal pregnancy be permissible to attempt in exceptional cases justified by maintenance of integrity of a child's genetic parentage, the pressing nature of the circumstances, the relative safety to mother and child, and parental capacity to discharge childrearing responsibilities (18, 20).

### **Cloning**

Reproductive cloning for creation and birth of a new person who would be the genetic twin of one born previously is condemned. Research in non reproductive cloning, particularly for stem cell creation, study, and research intended for human benefit is encouraged. Encouragement is not limited by recognition that use of deliberately created embryos is likely to be involved. Study and research were anticipated to have a beneficial impact on reproduction, in that understanding of the origins of genetic defects in

embryonic and fetal development would facilitate prevention and correction of defects, and, when prevention or correction were impossible, selection of healthy gametes or embryos (18). Some theologians are sympathetic to consideration of reproductive cloning of cells of a childless sterile man if his wife was willing so to bear the child, to permit discharge of religious duties and relieve family distress and risk of marriage breakdown through the wife's right of divorce. There would be no violation of the rules against third-party involvement or against confusion of lineage. However, the genetic father would be the husband's father, introducing problems of his consent and perhaps of inheritance laws. On balance, it is considered rather premature to recommend departure from the prevailing condemnation of reproductive cloning (18, 20).

Allied with stem cell research is the prospect of gene therapy. Progress in somatic cell gene therapy, which alters the genes only of a treated patient, has suffered recent setbacks, and germline gene therapy, which would affect all future generations of a patient's offspring, remains little short of universally condemned and prohibited (32). Genetic alteration of embryos before their cells have reached differentiation, that is, while they are still totipotent, would constitute germline manipulation. Little would be added to reiterate prevailing condemnation. Gene therapy is a developing area that may be used with ART in the future. It is critical that its use be clearly beneficial, focused on alleviating human suffering. The focus on therapeutic applications would exclude purely cosmetic uses and goals of enhancement of non pathological conditions. Alleviation of genetic diseases and pathological conditions alone would exclude such applications as to make people who would be within the normal range of physique, capacity, and aptitude, taller, stronger, more likely to achieve athletic success or to be more intelligent or artistically sensitive or gifted. Gene therapy might be legitimate, not to promote advantage or privilege, but to redeem genetically or otherwise physiologically inherited disadvantage (7, 8, 16).

## Conclusions

Physicians providing ART are always concerned about legislations of various practices of ART in countries where they are practicing. However, in many countries legalizations do not exist and physicians follow guidelines issued by prestigious concerned bodies and organizations if they exist.

With globalization, doctors and patients alike are moving around to different parts of the world; it becomes not uncommon that physicians may have to provide medical services to patients with an ethical precepts, which are different from that of their own. However, conscientious objection to offer certain required treatment to patients by their physicians should not deprive them from the right of being referred to other physicians who would provide such treatment. It becomes, therefore, mandatory to be aware of various religious perspectives on various practices in ART.

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## THE VATICAN VIEW ON HUMAN PROCREATION

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### INTRODUCTION

The gift of life which God the Creator has entrusted to man calls him to appreciate the inestimable value of what he has been given and to take responsibility for it: this fundamental principle must be placed at the centre of one's reflection in order to clarify and solve the moral problems raised by artificial interventions on life as it originates and on the processes of procreation. Thanks to the progress of the biological and medical sciences, man has at his disposal ever more effective therapeutic resources; but he can also acquire new powers, with unforeseeable consequences, over human life at its very beginning and in its first stages. Various procedures now make it possible to intervene not only in order to assist but also to dominate the processes of procreation. These techniques can enable man to "take in hand his own destiny," but they also expose him "to the temptation to go beyond the limits of a reasonable dominion over nature" (1). They might constitute progress in the service of man, but they also involve serious risks.

### Science and Technology at the Service of the Human Person

God created man in his own image and likeness: "male and female he created them" (Gen 1: 27), entrusting to them the task of "having dominion over the earth" (Gen 1:28). Basic scientific research and applied research constitute a significant expression of this dominion of man over creation. Science and technology are valuable resources for man when placed at his service and when they promote his integral development for the benefit of all; but they cannot of themselves show the meaning of existence and of human progress. Being ordered to man, who initiates and develops them, they draw from the person and his moral values the indication of their purpose and the awareness of their limits.

The rapid development of technological discoveries gives greater urgency to this need to respect the criteria just mentioned: science without conscience can only lead to man's ruin.

### Fundamental Criteria for a Moral Judgment

The fundamental values connected with the techniques of artificial human procreation are two: the life of the human being called into existence and the special nature of the transmission of human life in marriage. The moral judgment on such methods of artificial procreation must therefore be formulated in reference to these values.

Advances in technology have now made it possible to procreate apart from sexual relations through the meeting in vitro of the germ cells previously taken from the man and the

woman. But what is technically possible is not for that very reason morally admissible. Rational reflection on the fundamental values of life and of human procreation is therefore indispensable for formulating a moral evaluation of such technological interventions on a human being from the first stages of his development.

### Teachings of the Magisterium

On its part, the Magisterium of the Church offers to human reason in this field too the light of Revelation: the doctrine concerning man taught by the Magisterium contains many elements which throw light on the problems being faced here. From the moment of conception, the life of every human being is to be respected in an absolute way because man is the only creature on earth that God has "wished for himself" (16) and the spiritual soul of each man is "immediately created" by God; (17) his whole being bears the image of the Creator. Human life is sacred because from its beginning it involves "the creative action of God" (18) and it remains forever in a special relationship with the Creator, who is its sole end (19). God alone is the Lord of life from its beginning until its end: no one can, in any circumstance, claim for himself the right to destroy directly an innocent human being (20). Human procreation requires on the part of the spouses responsible collaboration with the fruitful love of God (21); the gift of human life must be actualized in marriage through the specific and exclusive acts of husband and wife, in accordance with the laws inscribed in their persons and in their union (22).

### Respect for Human Embryos

At the Second Vatican Council, the Church for her part presented once again to modern man her constant and certain doctrine according to which "life once conceived, must be protected with the utmost care; abortion and infanticide are abominable crimes" (23). More recently, the Charter of the Rights of the Family, published by the Holy See, confirmed that "human life must be absolutely respected and protected from the moment of conception" (24).

### Interventions upon Human Procreation

By "artificial procreation" or "artificial fertilization" are understood here the different technical procedures directed toward obtaining a human conception in a manner other than the sexual union of man and woman. This instruction deals with fertilization of an ovum in a test-tube (in vitro fertilization) and artificial insemination through transfer into the woman's genital tracts of previously collected sperm.

A preliminary point for the moral evaluation of such technical procedures is constituted by the consideration of the

circumstances and consequences, which those procedures involve in relation to the respect due the human embryo. Development of the practice of in vitro fertilization has required innumerable fertilizations and destructions of human embryos. Even today, the usual practice presupposes a hyperovulation on the part of the woman: a number of ova are withdrawn, fertilized and then cultivated in vitro for some days. Usually not all are transferred into the genital tracts of the woman; some embryos, generally called “spare,” are destroyed or frozen. On occasion, some of the implanted embryos are sacrificed for various eugenic, economic, or psychological reasons. Such deliberate destruction of human beings or their utilization for different purposes detrimental to their integrity and life is contrary to the doctrine on procured abortion already recalled. The connection between in vitro fertilization and the voluntary destruction of human embryos occurs too often. This is significant: through these procedures, with apparently contrary purposes, life and death are subjected to the decision of man, who thus sets himself up as the giver of life and death by decree. This dynamic of violence and domination may remain unnoticed by those very individuals who, in wishing to utilize this procedure, become subject to it themselves. The facts recorded and the cold logic which links them must be taken into consideration for a moral judgment on IVF and ET (in vitro fertilization and embryo transfer): the abortion mentality which has made this procedure possible thus leads, whether one wants it or not, to man’s domination over the life and death of his fellow human beings and can lead to a system of radical eugenics.

Nevertheless, such abuses do not exempt one from a further and thorough ethical study of the techniques of artificial procreation considered in themselves, abstracting as far as possible from the destruction of embryos produced in vitro. The present instruction will therefore take into consideration in the first place the problems posed by heterologous artificial fertilization (II, 1–3),\* and subsequently those linked with homologous artificial fertilization (II, 4–6).\*\* Before formulating an ethical judgment on each of these procedures, the principles and values which determine the moral evaluation of each of them will be considered.

## Heterologous Artificial Fertilization

### *Why Must Human Procreation Take Place in Marriage?*

Every human being is always to be accepted as a gift and blessing of God. However, from the moral point of view, a truly responsible procreation vis-a-vis the unborn child must be the fruit of marriage.

For human procreation has specific characteristics by virtue of the personal dignity of the parents and of the children: the procreation of a new person, whereby the man and the woman collaborate with the power of the Creator, must be the fruit and the sign of the mutual self-giving of the spouses, of their love, and of their fidelity (34). The fidelity of the spouses in the unity of marriage involves reciprocal respect of their right to become a father and a mother only through each other. The child has the right to be conceived, carried in the womb, brought into the world and brought up within marriage: it is through the secure and recognized relationship to his own parents that the child can discover his own identity and achieve his own proper human development. The parents find in their child a confirmation and completion of their reciprocal self-giving: the child is the living image of their love, the permanent sign of their

conjugal union, the living and indissoluble concrete expression of their paternity and maternity (35).

### *Does Heterologous Artificial Fertilization Conform to the Dignity of the Couple and to the Truth of Marriage?*

The desire to have a child and the love between spouses who long to obviate a sterility which cannot be overcome in any other way constitute understandable motivations; but subjectively good intentions do not render heterologous artificial fertilization conformable to the objective and inalienable properties of marriage or respectful of the rights of the child and of the spouses.

## Homologous Artificial Fertilization

Since heterologous artificial fertilization has been declared unacceptable, the question arises as to how to evaluate morally the process of homologous artificial fertilization: IVF and ET and artificial insemination between husband and wife. First a question of principle must be clarified.

### *What Connection is Required from the Moral Point of View between Procreation and the Conjugal Act?*

1. The Church’s teaching on marriage and human procreation affirms the “inseparable connection, willed by God and unable to be broken by man on his own initiative, between the two meanings of the conjugal act: the unitive meaning and the procreative meaning. Indeed, by its intimate structure, the conjugal act, while most closely uniting husband and wife, capacitates them for the generation of new lives, according to laws inscribed in the very being of man and of woman” (38). This principle, which is based upon the nature of marriage and the intimate connection of the goods of marriage, has well-known consequences on the level of responsible fatherhood and motherhood. “By safeguarding both these essential aspects, the unitive and the procreative, the conjugal act preserves in its fullness the sense of true mutual love and its ordination towards man’s exalted vocation to parenthood” (39). The same doctrine concerning the link between the meanings of the conjugal act and between the goods of marriage throws light on the moral problem of homologous artificial fertilization since “it is never permitted to separate these different aspects to such a degree as positively to exclude either the procreative intention or the conjugal relation” (40). Contraception deliberately deprives the conjugal act of its openness to procreation and in this way brings about a voluntary dissociation of the ends of marriage. Homologous artificial fertilization, in seeking a procreation which is not the fruit of a specific act of conjugal union, objectively affects an analogous separation between the goods and the meanings of marriage. Thus, fertilization is licitly sought when it is the result of a “conjugal act which is per se suitable for the generation of children to which marriage is ordered by its nature and by which the spouses become one flesh” (41). But from the moral point of view procreation is deprived of its proper perfection when it is not desired as the fruit of the conjugal act, that is, to say of the specific act of the spouses’ union.
2. The moral value of the intimate link between the goods of marriage and between the meanings of the conjugal act is based upon the unity of the human being, a unity involving

body and spiritual soul (42). Spouses mutually express their personal love in the “language of the body,” which clearly involves both “sponsal meanings” and parental ones (43). The conjugal act by which the couple mutually express their self-gift at the same time expresses openness to the gift of life. It is an act that is inseparably corporal and spiritual. It is in their bodies and through their bodies that the spouses consummate their marriage and are able to become father and mother. In order to respect the language of their bodies and their natural generosity, the conjugal union must take place with respect for its openness to procreation; and the procreation of a person must be the fruit and the result of married love. The origin of the human being thus follows from a procreation that is “linked to the union, not only biological but also spiritual, of the parents, made one by the bond of marriage” (44). Fertilization achieved outside the bodies of the couple remains by this very fact deprived of the meanings and the values which are expressed in the language of the body and in the union of human persons.

3. Only respect for the link between the meanings of the conjugal act and respect for the unity of the human being make possible procreation in conformity with the dignity of the person. In his unique and irrepeatable origin, the child must be respected and recognized as equal in personal dignity to those who give him life. The human person must be accepted in his parents’ act of union and love; the generation of a child must therefore be the fruit of that mutual giving (45) which is realized in the conjugal act wherein the spouses cooperate as servants and not as masters in the work of the Creator who is Love. In reality, the origin of a human person is the result of an act of giving. The one conceived must be the fruit of his parents’ love. He cannot be desired or conceived as the product of an intervention of medical or biological techniques; that would be equivalent to reducing him to an object of scientific technology. No one may subject the coming of a child into the world to conditions of technical efficiency which are to be evaluated according to standards of control and dominion. The moral relevance of the link between the meanings of the conjugal act and between the goods of marriage, as well as the unity of the human being and the dignity of his origin, demand that the procreation of a human person be brought about as the fruit of the conjugal act specific to the love between spouses. The link between procreation and the conjugal act is thus shown to be of great importance on the anthropological and moral planes, and it throws light on the positions of the Magisterium with regard to homologous artificial fertilization.

***Is Homologous “In Vitro” Fertilization Morally Licit?***

The answer to this question is strictly dependent on the principles just mentioned. Certainly, one cannot ignore the legitimate aspirations of sterile couples. For some, recourse to homologous IVF and ET appears to be the only way of fulfilling their sincere desire for a child. The question is asked whether the totality of conjugal life in such situations is not sufficient to ensure the dignity proper to human procreation. It is acknowledged that IVF and ET certainly cannot supply for the absence of sexual relations (47) and cannot be preferred to the specific acts of conjugal union, given the risks involved for the child and

the difficulties of the procedure. But it is asked whether, when there is no other way of overcoming the sterility which is a source of suffering, homologous IVF may not constitute an aid, if not a form of therapy, whereby its moral licitness could be admitted. The desire for a child – or at the very least an openness to the transmission of life – is a necessary prerequisite from the moral point of view for responsible human procreation. But this good intention is not sufficient for making a positive moral evaluation of IVF between spouses. The process of IVF and ET must be judged in itself and cannot borrow its definitive moral quality from the totality of conjugal life of which it becomes part nor from the conjugal acts which may precede or follow it (48).

Conception in vitro is the result of the technical action which presides over fertilization. Such fertilization is neither in fact achieved nor positively willed as the expression and fruit of a specific act of the conjugal union. In homologous IVF and ET, therefore, even if it is considered in the context of “de facto” existing sexual relations, the generation of the human person is objectively deprived of its proper perfection: namely, that of being the result and fruit of a conjugal act in which the spouses can become “cooperators with God for giving life to a new person” (50). These reasons enable us to understand why the act of conjugal love is considered in the teaching of the Church as the only setting worthy of human procreation. For the same reasons the so-called simple case, that is, a homologous IVF and ET procedure that is free of any compromise with the abortive practice of destroying embryos and with masturbation, remains a technique which is morally illicit because it deprives human procreation of the dignity which is proper and connatural to it. Certainly, homologous IVF and ET fertilization is not marked by all that ethical negativity found in extra-conjugal procreation; the family and marriage continue to constitute the setting for the birth and upbringing of the children. Nevertheless, in conformity with the traditional doctrine relating to the goods of marriage and the dignity of the person, the Church remains opposed from the moral point of view to homologous “in vitro” fertilization. Such fertilization is in itself illicit and in opposition to the dignity of procreation and of the conjugal union, even when everything is done to avoid the death of the human embryo. Although the manner in which human conception is achieved with IVF and ET cannot be approved, every child which comes into the world must in any case be accepted as a living gift of the divine Goodness and must be brought up with love.

***What Moral Criterion Can be Proposed with Regard to Medical Intervention in Human Procreation?***

The humanization of medicine, which is insisted upon today by everyone, requires respect for the integral dignity of the human person first of all in the act and at the moment in which the spouses transmit life to a new person. It is only logical therefore to address an urgent appeal to Catholic doctors and scientists that they bear exemplary witness to the respect due to the human embryo and to the dignity of procreation. The medical and nursing staff of Catholic hospitals and clinics are in a special way urged to do justice to the moral obligations which they have assumed, frequently also, as part of their contract. Those who are in charge of Catholic hospitals and clinics and who are often religious will take special care to safeguard and promote a diligent observance of the moral norms recalled in the present instruction.



## Conclusions

The spread of technologies of intervention in the processes of human procreation raises very serious moral problems in relation to the respect due to the human being from the moment of conception, to the dignity of the person, of his or her sexuality, and of the transmission of life. With this instruction, the Congregation for the Doctrine of the Faith, in fulfilling its responsibility to promote and defend the Church's teaching in so serious a matter, addresses a new and heartfelt invitation to all those who, by reason of their role and their commitment, can exercise a positive influence and ensure that, in the family and in society, due respect is accorded to life and love. It addresses this invitation to those responsible for the formation of consciences and of public opinion, to scientists and medical professionals, to jurists and politicians. It hopes that all will understand the incompatibility between recognition of the dignity of the human person and contempt for life and love, between faith in the living God and the claim to decide arbitrarily the origin and fate of a human being.

In particular, the Congregation for the Doctrine of the Faith addresses an invitation with confidence and encouragement to theologians, and above all to moralists, that they study more deeply and make eves more accessible to the faithful the contents of the teaching of the Church's Magisterium in the light of a valid anthropology in the matter of sexuality and marriage and in the context of the necessary interdisciplinary approach. Thus, they will make it possible to understand ever more clearly the reasons for and the validity of this teaching. By defending man against the excesses of his own power, the Church of God reminds him of the reasons for his true nobility; only in this way can the possibility of living and loving with that dignity and liberty which derive from respect for the truth be ensured for the men and women of tomorrow. The precise indications which are offered in the present instruction therefore are not meant to halt the effort of reflection but rather to give it a renewed impulse in unrenounceable fidelity to the teaching of the Church.

In the light of the truth about the gift of human life and in the light of the moral principles which flow from that truth, everyone is invited to act in the area of responsibility proper to each and, like the good Samaritan, to recognize as a neighbour even the littlest among the children of men (cf. Lk 10: 29–37). Here Christ's words find a new and particular echo: "What you do to one of the least of my brethren, you do unto me" (Mt 25:40).

## REFERENCES

1. POPE JOHN PAUL II, Discourse to those taking part in the 81st Congress of the Italian Society of Internal Medicine and the 82nd Congress of the Italian Society of General Surgery, 27 October 1980: AAS72 (1980) 1126.
2. POPE PAUL VI, Discourse to the General Assembly of the Religious Perspectives in ART United Nations Organization, 4 October 1965: AAS57 (1965) 878; Encyclical *Populorum Progressio*, 13: AAS59 (1967) 263.
3. POPE PAUL VI, Homily during the Mass closing the Holy Year, 25 December 1975: AAS68 (1976) 145; POPE JOHN PAUL II, Encyclical *Dives in Misericordia*, 30: AAS72 (1980) 1224.
4. POPE JOHN PAUL II, Discourse to those taking part in the 35th General Assembly of the World Medical Association, 29 October 1983: AAS76 (1984) 390.
5. Cf. Declaration *Dignitatis Humanae*, 2.
6. Pastoral Constitution *Gaudium et Spes*, 22; POPE JOHN PAUL II, Encyclical *Redemptor Hominis*, 8: AAS71 (1979) 270–272.
7. Cf. Pastoral Constitution *Gaudium et Spes*, 35.
8. Pastoral Constitution *Gaudium et Spes*, 15; cf. also POPE PAUL VI, Encyclical *Populorum Progressio*, 20: AAS59 (1967) 267; POPE JOHN PAUL II, Encyclical *Redemptor Hominis*, 15: AAS71 (1979) 286–289; Apostolic Exhortation *Familiaris Consortio*, 8: AAS74 (1982) 89.
9. POPE JOHN PAUL II, Apostolic Exhortation *Familiaris Consortio*, II: AAS74 (1982) 92.
10. Cf. POPE PAUL VI, Encyclical *Humanae Vitae*, 10: AAS60 (1968) 487–488.
11. POPE JOHN PAUL II, Discourse to the members of the 35th General Assembly of the World Medical Association, 29 October 1983: AAS76 (1984) 393.
12. Cf. POPE JOHN PAUL II, Apostolic Exhortation *Familiaris Consortio*, 11: AAS74 (1982) 91–92; cf. also *Pastoral Constitution Gaudium et Spes*, 50.
13. SACRED CONGREGATION FOR THE DOCTRINE OF THE FAITH, Declaration on Procured Abortion, 9, AAS66 (1974) 736–737.
14. POPE JOHN PAUL II, Discourse to those taking part in the 35th General Assembly of the World Medical Association, 29 October 1983: AAS76 (1984) 390.
15. POPE JOHN XXIII, Encyclical *Mater et Magistra*, III: AAS53 (1961) 447.
16. Pastoral Constitution *Gaudium et Spes*, 24.
17. Cr. POPE PIUS XII, Encyclical *Humani Generis*: AAS42 (1950) 575; POPE PAUL VI, *Professio Fidelis*: AAS60 (1968) 436.
18. POPE JOHN XXIII, Encyclical *Mater et Magistra*, III: AAS 53 (1961) 447; cf. POPE JOHN PAUL II, Discourse to priests participating in a seminar on "Responsibility of Procreation", 17 September 1983, *Insegnamenti di Giovanni Paolo II*, VI, 2 (1983) 562: "At the origin of each human person there is a creative act of God: no man comes into existence by chance: he is always the result of the creative love of God."
19. Cf. Pastoral Constitution *Gaudium et Spes*, 24.
20. Cf. POPE PIUS XII, Discourse to the Saint Luke Medical-Biological Union, 12 November 1944: *Discorsi e Radiomessaggi VI* (1944–1945) 191–192.
21. Cf. Pastoral Constitution *Gaudium et Spes*, 50.
22. Cf. Pastoral Constitution *Gaudium et Spes*, 51: "When it is a question of harmonizing married love with the responsible transmission of life, the moral character of one's behaviour does not depend only on the good intention and the evaluation of the motives: the objective criteria must be used, criteria drawn from the nature of the human person and human acts, criteria which respect the total meaning of mutual self-giving and human procreation in the context of true love."
23. Pastoral Constitution *Gaudium et Spes*, 51.
24. HOLY SEE, Charter of the Rights of the Family, 4: *L'Osservatore Romano*, 25 November 1983.
25. SACRED CONGREGATION FOR THE DOCTRINE OF THE FAITH, Declaration on Procured Abortion, 12–13: AAS66 (1974) 738.
26. Cf. POPE PAUL VI, Discourse to participants in the Twenty-third National Congress or Italian Catholic Jurists, 9 December 1972: AAS64 (1972) 777.
27. The obligation to avoid disproportionate risks involves an authentic respect for human beings and the uprightness of therapeutic intentions. It implies that the doctor "above all . . . must carefully evaluate the possible negative consequences which the necessary use of a particular exploratory technique may have

- upon the unborn child and avoid recourse to diagnostic procedures which do not offer sufficient guarantees of their honest purpose and substantial harmlessness. And if, as often happens in human choices, a degree of risk must be undertaken, he will take care to assure that it is justified by a truly urgent need for the diagnosis and by the importance of the results that can be achieved by it for the benefit of the unborn child himself” (POPE JOHN PAUL II, Discourse to Participants in the Pro-Life Movement Congress, 3 December 1982: *Insegnamenti di Giovanni Paolo II*, V, 3 [1982] 1512). This clarification concerning “proportionate risk” is also to be kept in mind in the following sections of the present Instruction, whenever this term appears.
28. POPE JOHN PAUL II, Discourse to the Participants in the 35th General Assembly of the World Medical Association, 29 October 1983: AAS76 (1984) 392.
  29. Cf. POPE JOHN PAUL II, Address to a Meeting of. *The Pontifical Academy of Sciences*, 23 October 1982: AAS75 (1983) 37: “I condemn, in the most explicit and formal way, experimental manipulations of the human embryo, since the human being, from conception to death, cannot be exploited for any purpose whatsoever.”
  30. HOLY SEE, Charter of the Rights of the Family, 4b: *L'Osservatore Romano*, 25 November 1983.
  31. Cf. POPE JOHN PAUL II, Address to the Participants in the Convention of the Pro-Life Movement, 3 December 1982: *Insegnamenti di Giovanni Paolo II*, V, 3 (1982) 1511: “Any form of experimentation on the fetus that may damage its integrity or worsen its condition is unacceptable, except in the case of a final effort to save it from death.” *SACRED CONGREGATION FOR THE DOCTRINE OF THE FAITH*, Declaration on Euthanasia, 4: AAS72(1980) 550: “In the absence of other sufficient remedies, it is permitted, with the patient’s consent, to have recourse to the means provided by the most advanced medical techniques, even if these means are still at the experimental stage and are not without a certain risk.”
  32. No one, before coming into existence, can claim a subjective right to begin to exist; nevertheless, it is legitimate to affirm the right of the child to have a fully human origin through conception in conformity with the personal nature of the human being. Life is a gift that must be bestowed in a manner worthy both of the subject receiving it and of the Religious perspectives ill ART MET’S subjects transmitting it. This statement is to be borne in mind also for what will be explained concerning artificial human procreation.
  33. Cf. POPE JOHN PAUL II, Discourse to those taking part in the 35th General Assembly of the World Medical Association, 29 October 1983: AAS76 (1984) 391.
  34. Cf. Pastoral Constitution on the Church in the Modern world, *Gaudium et Spes*, 50.
  35. Cf. POPE JOHN PAUL II, Apostolic Exhortation *Familiaris Consortio*, 14: AAS74 (1982) 96.
  36. Cf. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS41 (1949) 559. According to the plan of the Creator, “A man leaves his father and his mother and cleaves to his wife, and they become one flesh” (Gen 2:24). *The unity of marriage, bound to the order of creation, is a truth accessible to natural reason*. The Church’s Tradition and Magisterium frequently make reference to the Book of Genesis, both directly and through the passages of the New Testament that refer to it: Mt 19: 4–6; Mk: 10:5–8; Eph 5: 3 I. Cf. ATHENAGORAS, *Legatio pro christianis*, 33: PO 6, 965–967; ST CIIRYSOSTOM, In *Matthaeum homiliae*, LXII, 19, 1: PG 58 597; ST LEO THE GREAT, *Epist. ad Rusticum*, 4: PI. 54, 1204; INNOCENT III, *Epist Gaudemus in Domino*: DS 778; COUNCIL OF LYONS II, IV Session: DS 860; COUNCIL OF TARENT, XXIV, Session: DS 1798. 1802; POPE LEO XIII, *Encyclical Arcanum Divinae Sapientiae*: ASS 12 (1879/80) 388–391; POPE PIUS XI, *Encyclical Casti Connubii*: AAS 22 (1930) 546–547; SECOND VATICAN COUNCIL, *Gaudium et Spes*, 48; POPE JOHN PAUL II, *Apostolic Exhortation Familiaris Consortio*, 19: AAS74 (1982) 101–1 02; Code 0 Canon aw, Can. 1056.
  37. Cf. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS 4 (1949) 560; Discourse to those taking part in the Congress of the Italian Catholic Union of Midwives, 29 October 1951: AAS43 (1951) 850; Code of Canon Law, Can. 1134.
  38. POPE PAUL VI, *Encyclical Letter Humanae Vitae*, 12: AAS 60 (1968) 488–489.
  39. Loc. cit, *ibid.*, 489.
  40. POPE PIUS XII, Discourse to those taking part in the Second Naples World Congress on Fertility and Human Sterility, 19 May 1956: AAS48 (1956) 470.
  41. Code of Canon Law, Can. 1061. According to this Canon, the conjugal act is that by which the marriage is consummated if the couple “have performed (it) between themselves in a human manner.”
  42. Cf. Pastoral Constitution *Gaudium et Spes*, 14.
  43. Cf. POPE JOHN PAUL II, General Audience on 16 January 1980: *Insegnamenti di Giovanni Paolo H, III*, 1 (1980) 148–152.
  44. POPE JOHN PAUL II, Discourse to those taking part in the 35th General Assembly of the World Medical Association, 29 October 1983: AAS76 (1984) 393.
  45. Cf. Pastoral Constitution *Gaudium et Spes*, 51.
  46. Cf. Pastoral Constitution *Gaudium et Spes*, 50.
  47. Cf. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS41 (1949) 560: “It would be erroneous. to think that the possibility of resorting to this means (artificial fertilization) might render valid a marriage between persons unable to contract it because of the *impedimentum impotentiae*.”
  48. A similar question was dealt with by POPE PAUL VI, *Encyclical Humanae Vitae*, 14: AAS60 (1968) 490–491.
  49. Cf. *supra*: I, 1 ff.
  50. POPE JOHN PAUL II, *Apostolic Exhortation Familiaris Consortio*. 14: AAS74 (1982) 96.
  51. Cf. Response of the Holy Office, 17 March 1897: DS 3323; POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS41 (1949) 560; Discourse to the Italian Catholic Union of Midwives, 29 October 1951: AAS43 (1951) 850; Discourse to those taking part in the Second Naples World Congress on Fertility and Human Sterility, 19 May 1956: AAS48 (1956) 471–473; Discourse to those taking part in the 7th International Congress of the International Society of Haematology, 12 September 1958: AAS50 (1958) 733; POPE JOHN XXIII, *Encyclical Mater et Magistra*, III: AAS53 (1961) 447.
  52. POPE PIUS XII, Discourse to the Italian Catholic Union of Midwives, 29 October 1951: AAS43(1951) 850.
  53. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS41 (1949) 560.
  54. *SACRED CONGREGATION FOR THE DOCTRINE OF THE FAITH*, Declaration on Certain Questions Concerning Sexual ethics, 9: AAS68 (1976) 86, which quotes the Pastoral Constitution *Gaudium et Spes*, 51. Cf. Decree of the Holy Office, 2 August 1929: AAS21 (1929) 490; POPE PIUS XII, Discourse to

- those taking part in the 26th Congress of the Italian Society of Urology, 8 October 1953: AAS45 (1953) 678.
55. Cf. POPE JOHN XXIII, Encyclical *Mater et Magistra*, III: AAS53 (1961) 447.
  56. Cf. POPE PIUS XII, Discourse to those taking part in the 4th International Congress of Catholic Doctors, 29 September 1949: AAS41(1949) 560.
  57. Cf. POPE PIUS XII, Discourse to the taking part in the Second Naples World Congress on Fertility and Human Sterility, 19 May 1956: AAS48 (1956) 471–473.
  58. Pastoral Constitution *Gaudium et Spes*, 50.
  59. POPE JOHN PAUL II, Apostolic Exhortation *Familiaris Consortio*, 14: AAS74 (1982) 97.
  60. Cf. Declaration *Dignitatis Humanae*, 7.
  61. Cardinal Joseph Ratzinger (The actual Holy Pope), Instruction on respect for human life in its origin and on the dignity of procreation replies to certain questions of the day, *Given at Rome, from the Congregation for the Doctrine of the Faith*, February 22, 1987, the Feast of the Chair of St. Peter, the Apostle.