

THE EMBRYO AND ITS DEVELOPMENT IN REGARDS TO ITS FORMATION AS A COMPLETE HUMAN BEING ¹

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A. INTRODUCTION

The unpredictable and rapid progress of human reproductive techniques, in combination with research have removed the embryo from the security of the maternal womb and placed it before the challenge of unprecedented bioethical dilemmas. Thus, the need to escape from empirical knowledge and proceed to a more analytical study of the embryo's nature is imperative. As the knowledge of cellular and clinical embryology uncovers the secrets of the embryo, theology is invited to reveal the magnitude of its "hidden" mystery.

B. THE NATURE OF THE EMBRYO

The first basic question that emerges as we examine the embryo is whether and to what degree it is a human being with a person. Some people consider it to be a tissue of the maternal body; others recently named it -at the preimplantation stage- "genital material"². Some believe that its nature and status changes depending on its age, and finally, others insist that the embryo, from the very first moment of its existence, has a perfect human identity and, therefore, deserves to be respected as a person. The status of the embryo is directly related to the ethics of abortion, reproductive techniques, experiments on the embryos, etc.

The answer to the above question has a scientific as well as a philosophical and theological dimension and refers to the beginning of human life.

Scientific data

Contemporary biology, genetics and embryology provide us with significant data, so far unknown. However, as our knowledge seems to expand, our ignorance

¹ "Church and Bioethics: The Word of Science and the Word of Religion", Chambésy, 11-15 September 2002.

² Draft bill of the Special Legal Committee of the Greek Ministry of Justice, May 2002.

also appears to increase. As a result, our questions multiply, replies vary and confusion becomes greater.

When does human life begin? Does it exist in latent form within our germ cells (spermatozoa or oocytes) before their fusion takes place? Does it appear when these enter into a process of maturation, or at the moment of fertilization; or when the zygote (fertilized ovum) is formed; or between the 6-8th day, during the embryo's implantation; or on the 14th day, when the primitive streak is formed; or on the 30th day, when the development of the brain begins? Based on a logic that is more suitable than convincing, biologists and legal experts tend to place the beginning of life on the 14th day.³

Some researchers claim that the onset of human personality occurs on the day when the mother feels the first movements of the fetus, or when the fetus is viable outside the womb (24th week). Another group identifies the beginning of human life with the moment of the fetus' birth when it can breathe on its own or right after birth, namely when the fetus begins to become autonomous. The truth is, however, that "the more we can separate the beginning of human life from the time of fertilization, the greater becomes the 'window' for abortion, infanticide and embryo experimentation",⁴ and the more we can justify unjustifiable situations and legalise our illegal acts.

Despite the fact that the issue is distinctly a philosophical one, we need certain scientific data in order to approach it. The primordial germ cells (gonocytes) are separated from the other types of cells and migrate to the region of the genital ridge of the coelomic epithelium (primary kidney [mesonephros]) during the 15th-20th day of the embryo's life.⁵ Sex differentiation, namely morphological differences that allow us to speak about ovaries or testes, occurs during the 6th week of the fetus' life.⁶

The number of germ cells in a 4-month female embryo, namely of its oocytes, is about 2-3 million and remains stable throughout the entire course of its life. During puberty, the monthly periodical maturation of 10-15 oocytes begins, out of which only one matures fully while the rest degenerate. In total, an average of 400-500 oocytes ovulate throughout a woman's reproductive life, out of which 15-20 at

³ Edwards, R.G.: New ethical implications of human embryology, *Human Reproduction*, 1986b, 1 (4), pp. 277-278, McLaren A.: IVF: regulation or prohibition? *Nature* 1989, Vol. 6249, pp. 460-470. Warnock, M.: Do human cells have rights? *Bioethics* 1987, 1(1), pp. 1-14.

⁴ Breck, John: *The Sacred Gift of Life, Orthodox Christianity and Bioethics*, SVS Press, New York 1998, p. 128.

⁵ Semenova-Tiam-Shanskaya, A.G.: Primordial germ cells during migration to gonad anlage in human embryos (in Russian), *Anch. Ant.*, 1969, 56(6), p. 3-8.

⁶ Kurilo, L.F.: Oogenesis in antenatal development in man, *Human Genetics*, 57(1), pp. 86-92, 1981.

the most, can give life to a new individual. Approximately, one third of the mature oocytes present early degeneration, but the exact reasons behind this are still unknown.⁷

The basic role of the ova is to assist with the beginning of the new life and to give food and energy to the embryo during its first pre-implantation stages. For this reason, the ovum is the largest in size cell (up to 2000 times larger than other cells) of the human body (150µm, visible with human eye) as opposed to the spermatozoon (5µm head, 54µm tail) that is a great deal smaller.⁸

Corresponding data exist for spermatozoa. However, these are constantly being produced within the male body and in each ejaculation their number varies from 40-320 million in 2-4 ml of sperm. In this case, for unknown reasons too, a mechanism of chromosomal aberration develops which results in the degeneration of a significant percentage of male sperm cells.

Another selective phase follows, since during the process of fertilisation and implantation approximately 70% of the embryos are lost for various reasons.⁹ Finally, a percentage of 0.5-0.7% of the newborn babies present chromosomal aberration.¹⁰ All of the above indicate that a dynamic selection of the best and more resilient embryos gradually occurs.

The fact that the physiological mechanisms destroy so many ova, spermatozoa and even embryos (often incorrectly named by scientists pre-embryos) in order to make the final selection of one embryo, makes some people believe that the embryo is not a human being before implantation. In other words, is it possible that the destroyed embryos are in fact human beings with a soul, although they will never be given the right to live in this world?

Another group of scientists believe that the onset of life is connected with the beginning of the functioning of the embryo's senses. It is worth noting that the fetus starts moving during the 6th week, when the formation of the neural synapses in the spinal cord is completed. During the 10th week, the first neuromediators are determined in the neural fibres and the activity of the brain stem is registered.¹¹ Based on electrophysiologic and immunohistochemical investigations of the central

⁷ Ibid.

⁸ Sherman, Irwin, W. & Sherman, Vilia, G.: *Biology, A Human Approach*, 3rd edition, Oxford University Press, 1983, p. 175.

⁹ Shiota, K., Uwabe Ch., Nishimura, H.: High prevalence of defective human embryos at the early postimplantation period, *Teratology* 1987, 35(3), pp. 309-316.

¹⁰ Kurilo, F.: Nature and status of the embryo: scientific aspects, *3rd Symposium on Bioethics*, Strasburg, 15-18 December 1996.

¹¹ Reinold, E: Fetal motor behavior during pregnancy as a dynamic criterion of embryo-fetal health, *Invest. Ultrasonology and Clinical Advances*, London 1981, pp. 78-86

and peripheral nervous system, we could conclude that the fetus begins to feel at the age of 18-25 weeks; however, there is no proof that it can process its perceptions until the 30th week.¹² We believe that the neurophysiological criterion of the beginning of the human person is not adequate, since the development of the cerebral functions is completed two years after birth.

C. THE EMBRYO ACCORDING TO ORTHODOX CHRISTIAN THEOLOGY AND TRADITION

According to older western writers and philosophers (Fienus, professor of Louverin University, 1620) the soul enters the embryo three days after conception,¹³ while according to Aristotle, forty days after conception. Georgios Gennadios Scholarios¹⁴ seems to share the same view, because at this time the formation of all body's organs is completed. Aristotelian philosophers identify the presence of the soul with the embryo's first movement; specifically, in males on the 40th day after conception and in females on the 80th day. In fact, some claim that the "natural" soul enters in the body during pregnancy, the "logical" soul at birth and the "cognizant soul" at the early stages of life.¹⁵ Thomas Aquinas believes that God creates souls at the same time when He unites them with the material they will form.¹⁶

Although these theories basically describe the various trends and perceptions on the subject, the Orthodox Christian Church has always believed, with consistency and clarity, that man is created in the image of God "from the very beginning of conception".

¹²Tawia, S.: When is the capacity of sentience acquired during human fetal development? *Journal of Maternal-Fetal Medicine* 1992, 1(3), pp. 153-165.

According to other theories, the first movement and sense of pain takes place during the 8th week, as soon as the primitive streak is formed: ACOG: *Committee Opinion of the American College of Obstetricians and Gynecologists*, No. 136 (April 1994), "Preembryo research: History, scientific background and ethical considerations".

¹³ Kokkinakis, Athinagoras: *Introduction to Dogmatics of Saint Gregory of Nyssa* (in Greek), EPE 1.85.

¹⁴ Scholarios, Georgios: *Oeuvres complètes*, Maison de la Bonne Presse, Paris, 1928, pp. 461-480.

¹⁵ Troianos, S.: The embryo in Byzantine Canon Law, in *Bio-politics – The Bio-environment*, Vol. III, ed. by Vlavianou-Arvaniti A., pp. 179-184, International Organization of Bio-Politics, Athens, 1991.

¹⁶ Parker, T.L. and Parker S.A.(trsl): *A Manual of Modern Scholastic Philosophy*, vol. I, 2nd ed., London, 1921. Rev. William Reany, D.D.: *The Creation of the Human Soul*, Benziger Brothers, New York, 1932, p. 88.

The basic sources from which the Orthodox Christian Church derives her respect towards embryonic life are the Holy Scriptures, Old and New Testament, certain sacred canons and liturgical texts.

Old and New Testament

In the first chapter of the Gospel of Saint Luke, we encounter the Theotokos going “with haste” to Elisabeth (vs. 39), right after the event of the Annunciation, namely right after her conception. During this revealing encounter we see, on the one hand, that the embryo-St. John the Baptist, after “hearing the greeting of Mary” (vs. 41), “leaps in her womb”, in fact, he leaps “with joy” (vs. 44), “filling with the Holy Spirit” his mother (vs. 41). At this point, the evangelist refers to him as “babe”. Moreover, the leaping of the Forerunner reflects the recognition of Jesus as the Lord, just when He was a few days old embryo. This is why Elisabeth calls the Theotokos “mother of my Lord” (vs. 43). These elements indicate distinctly that in no way does the embryonic status question or limit the perfect identity of the Forerunner and of the Lord, despite the fact that He is a few days old embryo. The encounter of the Theotokos with Elisabeth and the leaping of the embryo-St. John, after recognizing the embryo-Jesus, refer not only to the embryo’s biological mobility, but also to the perfect spiritual expression of its soul.

The theanthropic life of the Lord does not begin at his mature age, or with His birth, but humbly from the moment of His conception. The Lord was theanthropos at the moment of His Transfiguration, as a babe in Bethelhem as well as in the womb of the Theotokos. Respectively, man during all the phases of his biological life, as an old man or young man, as a baby or embryo is a human being.

Corresponding references in the texts of the Old Testament indicate that the embryonic status constitutes a stage of human evolution during which the grace of God acts upon man. Hence, in the books of Psalms and in the prophetic writings, we come across explicit phrases that confirm the fact that the grace of God is active and His will is expressed during the period of pregnancy. The embryo is not simply a group of cells or a combination of organs or even more so a soulless tissue of the maternal body, but it forms a person upon whom the grace of God acts freely as in every other human being.

It is interesting that Isaiah confesses that he has been a perfect person bearing a name, since the time he was in his mother’s womb; “The Lord called me from the womb, from the body of my mother he named my name... And now the Lord says, who formed me from the womb to be his servant”.¹⁷

¹⁷ Is. 49:1, 5.

Respectively, Jeremiah becomes the recipient of the sacred prophetic calling since his embryonic age; "Before I formed you in the womb I knew you, and before you were born I consecrated you; I appointed you a prophet to the nations".¹⁸

Actually in the Book of Psalms, David talks about the special providence of God for every human being that begins from conception; "For thou didst form my inward parts, thou didst knit me together in my mother's womb. I praise thee, for thou art fearful and wonderful. Wonderful are thy works! Thou knowest me right well;"¹⁹ Moreover, "Upon thee was I cast from my birth, and since my mother bore me thou hast been my God"²⁰. The fact that the grace of God acts upon the embryo is a strong indication that the embryo possesses a soul.

Apostle Paul expresses the same notion in his Epistle to the Galatians, where he claims that his calling dates back in the period of his gestation; "But when he who had set me apart before I was born, and had called me through his grace"²¹.

Therefore, God calls, sanctifies, designates and nominates prophets and apostles ever since their embryonic age. Just as Christ our Lord is found behind the humble "babe wrapped on swaddling cloths"²² man, the perfect image of God, is humbly hidden behind every embryo.

The Orthodox Church underlines her faith in the sacredness and significance of the event of conception by honouring and celebrating the conceptions of the persons involved in the divine economy: at first, on March 25, the secret mystery of the conception of the Lord on the day of the Annunciation of the Theotokos; then on December 9, the conception of the Theotokos and finally, on September 23, the conception of Saint John the Forerunner.

The Holy Canons

On this basis, the Orthodox Church has founded the wording of her holy canons that refer to the induced or involuntary miscarriage. So, for example, Saint Basil the Great writes in his 8th Canon: ""those accepting abortion-inducing drugs as much as on those that supply the drugs are killers".²³ Likewise, canons 63 and 68 of the Synod in Elvira (306 A.D.), as well as canon 21 of the Synod in Ankara (314 A.D.), canonise strictly women who have committed abortion.²⁴

¹⁸ Jer. 1:5.

¹⁹ Ps. 139:13.

²⁰ Ps. 22:10.

²¹ Gal. 1:15.

²² Luk. 2:12.

²³ Saint Basil the Great, PG 32.677A.

²⁴ Canons 63 and 68 of the Synod of Elvira (ca. 306 A.D.) ordain that a woman who committed abortion was refused Holy Communion, even on her deathbed. For the same case and under

From the very first centuries, abortion constituted a serious sin for the Church, similar to homicide, thus implying indirectly that the embryo is a living soul. The tradition of the Church,²⁵ discerns in the embryo the sanctity of God's perfect image, a person who struggles to live eternally in the kingdom of God through his survival in this world.

All of the above indicate that fertilisation constitutes the most significant stage of man's biological life, because during this stage he acquires both his entity and irrevocable identity. All other stages form phases of his development no matter how important they are. No other moment, not even the moment of implantation, or the 14th day, or the day of the formation of the primitive streak, or of the completion of organogenesis, or the moment that the embryo acquires human form could be considered as the day of the embryo's ensoulment. The soul is not placed inside the body at some specific moment, but it is born with it; soul and body are congenital.

Patristic tradition and teachings

The patristic teachings on the embryo are derived basically from texts referring to the bond between body and soul. Actually, Saint Gregory of Nyssa speaks extensively on the simultaneous birth of soul and body, "But as man is one, the being consisting of soul and body, we are to suppose that the beginning of his existence is one, common to both parts, so that he should not be found to be antecedent and posterior to himself, if the bodily element were first in point of time, and the other were a later addition; ...and in the creation of individuals not to place the one element before the other, neither the soul before the body, nor the contrary".²⁶ St. John Damascene has a respective viewpoint, namely that body and soul are created simultaneously²⁷.

The Fathers of the Church, without treating the issue with scientific scholasticism, but wishing to refute the theory of Plato and Origen on the pre-existence of souls, proceeded to the writing of the above texts. The belief in the simultaneous birth of the soul and body and the significance of their coexistence is clearly demonstrated in their writings. In this sense, the biological beginning marks

the condition that the crime was committed by a catechumen, the latter prescribes that the woman be baptised at the end of her life only. Canon 21 of the Synod of Ankara (ca. 314 A.D.) provides for a penalty of a ten-year period of excommunication.

²⁵ *Teachings of the Apostles* (in Greek – Didachai ton Apostolon) II, 2 VEPES 2, 215.

Epistle to Varnava XIX, 5 VEPES 2, 242.

Athinagoras of Athens, *Embassy of the Christians* (in Greek - Presveia ton christianon) 35 VEPES 4, 309 (19-20).

²⁶ Saint Gregory of Nyssa, *On the making of man*, EPE 5, 206.

²⁷ Saint John Damascene, *On man*, PG 94.922, EPE 1.210.

the psychosomatic birth of man. Actually, it is interesting that the Fathers do not associate the embryo's soul with the mother's body but with its own body. This means that the term "conception", is not identified with implantation, namely the organic tie between the embryo and its mother's body, but with fertilisation, namely the beginning of human life. This truth is also expressed by Saint Athanasius the Great when he writes that man is known as consisting of noetic soul and physical body; the former not existing apart from the latter; ...the beginning of being occurs in the womb.²⁸

This is a generally accepted belief that is not questioned by the Patristic tradition. Moreover, Saint Maximus the Confessor supports that soul and body cannot exist separately,²⁹ but their relationship is permanent and lasts forever;³⁰ in fact, it is not optional but mandatory,³¹ according to the archetype of the union of the two natures in Christ. In regards to the relationship between soul and body, he rejects their "pre-existence", or the "existence of the one before the other", but accepts their "coexistence".³²

If the first element of the Patristic reasoning is the psychosomatic coalescence, the second one is that each man is created in the image of God. The roots of Christian anthropology are found in the true Christology. Thus, all knowledge regarding human nature can be derived by divine revelation that informs us about the human nature of Christ. The Logos of God assumed all human elements except sins, and became "consubstantial" with man as far as human nature is concerned, even if "his human elements were above all humans", according to Saint Maximus the Confessor.

According to Saint Kyrill of Alexandria and the statements of the 3rd and 4th Ecumenical Synods, the incarnated Logos of God assumed the entire human nature "from womb" or "in the womb", "from conception" or "from the very beginning of conception"³³ and "we confess our Lord Jesus Christ as a perfect human being" and the Mother of God "as the Theotokos, for the Logos of God was incarnated, and He

²⁸ Saint Athanasius the Great, PG 26.1233.

²⁹ Saint Maximus the Confessor, PG 91.1100D.

³⁰ Ibid, PG 91.1101C.

³¹ Ibid, PG 91.488D.

³² Ibid, PG 91.1325D.

Saint Anastasios of Sinai, PG 89.724D.

Saint Meletios of Antioch, PG 64.1081B, 1089B.

³³ Mitsopoulos, E.N.: *The Teaching of the Church on the Psychosomatic Nature of the Human Embryo and its Christological Foundation*, 2nd ed., Athens 1986, p.20, Saint Kyrill of Alexandria, Letter 17, PG 77.109.

united Himself, at the moment of His conception, with the temple(the body) that He received from her".³⁴

D. SCIENTIFIC CONFIRMATIONS

In a recent statement of the Vatican, great importance is given to the fact that the presence of the soul in man from the moment of conception is confirmed by modern scientific data.³⁵ Certainly, scientific research is not qualified to determine the ontological status of the embryo, i.e. if it is a person, because the concepts of *being* and *person* are neither biological concepts, nor are they subjected to empirical testing and verification.

Despite the fact that according to the Orthodox Christian perception, scientific confirmation is not absolutely necessary to support the relevant teachings of the Church, it is interesting that modern scientific discoveries are compatible with them. Thus, genetics and developmental biology demonstrate that the embryo at all stages of its development is an individual of the human kind at its initial life cycle, and that, after a coordinate, continuous and gradual process, it will become an adult like us, because it is already one of us: "he who will be a human being is already a human being".³⁶

With fertilisation we have the restructuring of the diploid phase of life, an element that surely attributes to the embryo the characteristics of a human being.³⁷ Human identity is determined neither by implantation nor by the various anatomical formations; all these constitute phases of the life cycle of the embryo.

The full human nature of the embryo, which right from its zygotic stage is verified by contemporary genetics, "has demonstrated that from the very first instant there is an established program of what this living being will be".³⁸ Without wishing to become excessively scholastic, we could add that, right after fertilisation, the karyotype of the embryo is, in fact, composed of DNA molecules containing special human polydeoxyribonucleotide sequences, which, since the very first moment, are immediately, yet gradually expressed within the embryonic cells.

³⁴ Karmiris, I.: *The Dogmatic and Symbolic Classics of the Orthodox Catholic Church*, 2nd ed., Athens 1960, pp. 154-155.

³⁵ "Even if the presence of a spiritual soul cannot be ascertained by empirical data, the results themselves of scientific research on the human embryo provide a valuable indication for discerning by the use of reason a personal presence at the moment of the first appearance of a human life: how could a human individual not be a human person?" Pope John Paul II, Encyclical Letter, *Evangelium Vitae*, March 25, 1995, 101:AAS 87 (1995), 469.

³⁶ Tertullian, *Apologia IX*, 8 PL, 1:371-3.

³⁷ Kazlaris, H.: *Written memorandum to the Working Group of the Greek Ministry of Health and Welfare* (in Greek) (ΔΥ 1δ/Γ.Π. 37046/01, 9.1.2002).

³⁸ Colombo, Roberto: *The nature and status of the embryo*, *3rd Symposium on Bioethics*, Strasburg 15-18 December 1996,

Recent studies demonstrate that the initial genomic silence of the embryo is not absolutely correct. Thus, for example the SRY gene, whose position is found in the telometric region of the short arm of human Y chromosome, is expressed and transcribed right from the beginning of embryonic development even before the pro-nuclear phase.³⁹

The recent research finding that from conception, -the first moment of the embryo's existence- specific parts of DNA transport information through a biochemical process known as methylation confirms that the formation of the embryo's genetic identity begins with fertilisation.⁴⁰

Therefore, we could repeat the statement of the Warnock Committee of the Department of Health and Social Security, 1984: "while, as we have seen, the timing of the different stages of development is critical, once the process has begun, there is no particular part of the developmental process that is more important than another; all are parts of a continuous process and unless each stage takes place properly, at the correct time, and in the correct sequence, further development will cease".⁴¹

There is a contradiction to all of the above that is basically expressed by three arguments:

a. Some people claim that the embryo, during the first stages of its development (7th-8th day, or up to the 14th day), on the one hand, has a genetic identity and individuality, but on the other it lacks final organismic identity. The question in this case is whether we can specify the moment when it acquires this identity and what exactly this identity is. If the beginning of man is identified with the moment of the formation of the organismic identity, then, evidently, the embryo does not have a clear beginning.

b. The fact that 70% of the embryos are destroyed before implantation could imply that the pre-implantation embryo is not yet a human being. Is it possible that so many human beings die so that only one may survive?

The question, however, is reversible: does the fact that many embryos cannot survive, give us the right to destroy the ones that may ultimately live? Perhaps,

³⁹ Erikson R.P., Winston R.M.L. and Handyside, A.H.: Transcription of paternal Y-linked genes in the human zygote as early as the pronuclear stage, *Zygote*, 2:281-288, 1994.

Fiddler M., Abdel-Rahman B., Roppolee D.A. and Pergament E.: Expression of SRY transcripts in preimplantation human embryos, *American Journal of Medical Genetics* 55:80-84, 1995.

⁴⁰ Breck, John: *The Sacred Gift of Life, Orthodox Christianity and Bioethics*, SVS Press, New York 1998, p. 136-138.

⁴¹ Department of Health and Social Security, *Report of the Committee of Inquiry into Human Fertilisation and Embryology* (Chairperson: M. Warnock), Her Majesty's Stationery Office, London, 1984, 11.19).

some could have survived, under better conditions that are still unknown. We should in no way convert the increased probability of someone's death to certainty and simultaneously deny his identity. The fact that we will all die some day –and this is a certainty- does not mean that we are not human beings.

Finally, from the theological viewpoint, we could say that the dynamics detected in the struggle for survival of these embryos is a strong indication that “divine likeness” has already begun to operate within the embryos, even invisibly.

c. A third interesting parameter is the probability of a further division of the embryo during pre-implantation stage that creates monozygotic twinning or, in fewer cases, their reunion, or the creation of chimeric aggregation. This leads to the conclusion that we cannot yet speak about the final formation of the person.

This argument is not theologically strong. On the contrary, it would mean that, since the person exists within the embryo in latent form, by destroying one embryo we could be destroying two persons. In addition, when we deal with life, there is always lack of knowledge of how it will finally develop, a fact that we humbly accept. The viewpoint that a zygote is not a person because it may end up one or two persons or no person at all (if it is destroyed) could also raise the following odd question: does the fact that a human being might eventually be cloned mean that he/she is not a person?

E. THEOLOGICAL CONCLUSIONS

A. The embryo is a perfect human being from the moment of fertilisation. The distinction between “perfectly formed and imperfectly formed”⁴² made in the Old Testament is rejected by the 2nd Canon of Saint Basil the Great.⁴³

Some theologians, based on the description of the creation of man in the book of Genesis, which says that God formed first the body of Adam “of dust from the ground”, and then “He breathed into his nostrils the breath of life”⁴⁴, claim that the body is created first and then the soul.

⁴² “And if two men strive and smite a woman with a child, and her child be born imperfectly formed, he shall be forced to pay a penalty: as the woman's husband may lay upon him, he shall pay with a valuation. But if it be perfectly formed, he shall give life for life, eye for eye, tooth for tooth, hand for hand, foot for foot, burning for burning, wound for wound, stripe for stripe” (Ex. 21:22-25)

⁴³ 8th Canon of Saint Basil the Great, 21st of Ankara (4th c.) and 91st of Quinisext Council.

⁴⁴ Gen. 2:7.

However, although God created Adam in this way, He does something entirely different in the creation of Eve. He does not give her life by breathing, but He gives her life at the moment He creates her out of Adam's rib. Therefore, the making of Eve, which is characterised by the simultaneous creation of soul and body, and not that of Adam, constitutes the image of the creation of every human being. All human beings are born to human beings; only Adam was created directly by God.⁴⁵

B. Based on the aforementioned witness of the Holy Scripture and of the Fathers, the Church insists that the beginning of man is "from the very moment of conception". The psychosomatic nature of man is a theological argument supporting this viewpoint. The soul exists from the very moment that the body begins to be constructed.

All fertilised ova are embryos and, therefore, human beings as per their identity. The same applies for those that were unable to implant. Their relationship with the maternal body does not give them a new identity, but moves them to a different developmental stage. In any case, all have managed to be fertilised, to become human beings. The winner of such a selective struggle is worth our respect.

C. Life constitutes the greatest gift and that is why its duration is of utmost importance. Our Church discerns in the mystery of the psychosomatic coalescence the need for prolonging biological life as long as possible, either towards its beginning or towards its end. She cannot and should not cut short time in man's earthly course.

Biological death is placed at the furthest possible limit. In essence, there is no end. Life is eternal; it has a beginning but no end. The beginning of life is the very first moment when the new and unique human being is being identified. He is not identified in the gametes, but for the first time he is genetically identified in the zygote. The zygote incorporates the union of the spouses and conceals the new person.

This mentality reflects the need of man for eternity, namely for his liberation from the suffocation of time. Time is too limited to fit man. The desire of man is to prolong his life as much as possible. This does not only mean to live longer, but also to place his beginning at the earliest moment possible. The scholastic effort for the exact chronic determination of spiritual realities is foreign to the Orthodox Christian tradition and *phronema*. However, based on the revelation of God, the Orthodox Christian Church places the beginning of every human being at the moment of fertilisation, because there is no other moment before this related to his/her existence.

⁴⁵ Scholarios, Georgios: *Collected Works*, Maison de la Bonne Presse, Paris, 1928, p. 462.

D. The attempt to determine the identity and nature of the embryo is based on the fact that it is a human being under development. Saint Gregory of Nyssa⁴⁶ has elaborated first on this viewpoint and Saint Nicodemus the Athonite supports it by commenting on the 2nd Canon of Saint Basil the Great: the embryo “even if it were not a perfect human being then, it intended, however, as per the necessary sequence of the laws of nature, to be perfected”⁴⁷. The embryo is a perfect human being as per its nature, even if it is imperfect and constantly being perfected as per its phenotypic expression and development.⁴⁸

The embryo is not a “potential human being”, as some people claim; it is a human being. The Lord as an embryo was not a “potential theanthropos”, but “the Lord” of Elizabeth,⁴⁹ and as a babe, He was “Christ the Lord”⁵⁰, “Mighty God, Everlasting Father, Prince of Peace”,⁵¹ the Theanthropos Lord.

Nevertheless, we could say that the embryo is a human being with a potential to become a person; namely, it possesses the divine image but has the potential to live according to the divine likeness.⁵² If the divine image is given by God and preserved by man even if he sins,⁵³ divine likeness presupposes man’s free will⁵⁴ and his predisposition towards the good. The fact that the embryo is a human being under development constitutes the first indication that divine likeness functions inside it and anticipates its completeness. Destruction of the embryo means destruction of the concealed divine image and divine likeness.

⁴⁶ “Since then we see that of which we are speaking to be warm and operative, we thereby draw the further inference that it is not inanimate; but as, in respect of its corporeal part, we do not say that it is flesh, and bones, and hair, and all that we observe in the human being, but that potentially it is each of these things, yet does not visibly appear to be so; so also of the part which belongs to the soul, the elements of rationality, and desire, and anger, and all the powers of the soul are not yet visible; yet we assert that they have their place in it, and that the energies of the soul also grow with the subject in a manner similar to the formation and perfection of the body” Saint Gregory of Nyssa, *On the Making of Man*, ch. XXIX, 6.

⁴⁷ Saint Agapius Saint Nikodemus the Hagiorite: *The Rudder* (in Greek - Book of Sacred Canons of the Church), Athens, 1841, p. 351.

⁴⁸ Hatzinikolaou, (Fr.) Nikolaos: *Free from the Genome*, (in Greek), Hellenic Center for Biomedical Ethics, Athens, 2002, p.180.

⁴⁹ Lk 1:43.

⁵⁰ Lk 2:12.

⁵¹ “For us a child is born, to us a son is given; and the government will be upon his shoulder, and his name will be called Wonderful Counselor, Mighty God, Everlasting Father, Prince of Peace” (Is. 9:6).

⁵² Sacharov (Fr.) Sophrony: *Ascesis and Theory*, Greek edition, Stavropegic Monastery of Saint John the Baptist, Essex, England, 1996, p. 125.

⁵³ Trembelas, P.N.: *Dogmatics, Vol. 1, “Zoi”*, Athens 1959, pp. 493-494.
Saint Basil the Great, PG30.29.

⁵⁴ *Ibid.*

The embryo's biological development gives us the image of its psychosomatic growth in its mother's womb. For example, it is proven by embryology that nutrition, exercise, the taking of medicines, and the mother's illnesses affect the embryo's bodily development and health; respectively, the mother's mental state (agony, fears, stress, unrest, etc.) forms the mental environment of its development. At the same time, prayer, spiritual life, participation in the Church's mysteries, the experience of a pilgrimage or of a miraculous event, the offer of a vow for the child's sake, inner peace, etc. facilitate the impact of divine grace upon the embryo and offer the possibility of growing in His likeness.

The embryo struggles to acquire form, speech, thought and reasoning, volition and free will, the expression of its otherness, all the characteristics of human nature that were honoured by the Saints and sanctified by the incarnate Lord, who was "born in the likeness of men".⁵⁵ The interruption of the expression of divine likeness is theologically unacceptable, a mistreatment of the creative work of God and thus the worst insult.

The embryo whether it is perfectly formed or imperfectly formed, namely whether it has the form of a human being or not, always constitutes the image of God and always conceals the potential of freely becoming like Him.

Finally, just as the integration of man's body requires a nine-month biological preparation, namely pregnancy, the process of his ensoulment and the manifestation of his soul also require a certain time; it begins with the conception and is completed thereafter. The more the process of man's biological integration is completed, the greater the degree of manifestation of the soul's functions. According to Saint Gregory the Theologian "as the body grows and becomes perfect, more and more the wisdom, prudence and virtue of the soul is being unfolded".⁵⁶

E. The sacred character of life and of the human person does not allow scholastic arguments or any doubts on the nature of the embryo and the beginning of life, but requires respect. The probability of being disrespectful towards the gift of life that does not belong to us but was given to us by God makes us stand with awe before the uncertainty of facts. We prefer that science finds clear cut pathways that will not raise ethical dilemmas so as to assist our health, our body, and our life. "The mere probability that a human person is involved in experiments would suffice to justify an absolutely clear prohibition of any intervention aimed at killing a human embryo".⁵⁷

⁵⁵ Phil 2:7.

⁵⁶ Saint Gregory the Theologian, PG 37.453-454.

⁵⁷ Pope John Paul II, Encyclical Letter, *Evangelium Vitae*, March 1995, 60: AAS 87 91995), 469.

The more human identity is concealed or is uncertain the more unprotected it is and thus, requires our great respect and care. The embryo's struggle to become a person or, likewise, the effort of seriously ill people to preserve their personhood should be respected. It is best to sacrifice our scientific knowledge and capabilities before the sacred unknown. The protection of the other person's life is a greater act of respect for life than the selfish improvement of our own life. In the babe of Bethlehem godliness was hidden. Herod's slaying of infants was not an act against the king of Jews but an action against God.

The sacredness of man leads to acceptance of solutions that limit doubts as much as possible.

F. Science can prove the uniqueness of man. Modern genetics has succeeded in this. The embryo itself is destined to prove its otherness, to reveal its original unique person that is an unprecedented expression of the godly countenance in this world. Therefore, we should allow it to do so.