

The Moral Status of the Oocyte

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ABSTRACT

With the rise of reproductive technologies, women's bodies have come to be seen in a new light. Rather than considering the whole woman as essential to the act of conception and gestation, an atomistic and mechanized notion of the oocyte as a tool in generating a child has arisen. Cloning technologies have further reinforced this view by "disassembling" the "parts" of the ovum (removing its nucleus) in order to insert genetic material required to generate new (albeit, cloned) life. Genetic engineering will inevitably focus on the ovum as science seeks to control all aspects of generation. It is imperative that we develop a more comprehensive understanding of the oocyte in relationship to the woman as bearer of life. Rather than viewing the egg as an object of manipulation, we need to consider its value, and whether this necessarily has ethical implications.

THE SIGNIFICANCE OF THE OOCYTE has only recently become a topic of public debate.¹ Prior to the birth of the first *in vitro* baby, Louise Brown, in 1978, conception had always taken place inside a woman's body. With the advent of *in vitro* fertilization (IVF), there arose a new need to "harvest" women's eggs, and hence a new relationship to the ovum. Once viewed as an intimate part of a woman's reproductive system, science had now found a way to extract eggs for the use of "making babies" in a petri dish. Eggs came to be seen as necessary "materials" in the production of children. At this time scientists began considering the prospect of mining these *in vitro* embryos for their embryonic stem cells. Not long after, the possibility of cloning a human being was proposed in light of the remarkable potential of the egg to reprogram a somatic cell nucleus into another human being.

Today, new technologies such as Altered Nuclear Transfer (ANT)

¹ Biologists define the "oocyte" as a female germ cell (reproductive cell) produced in the ovary and in the process of developing into an ovum, or egg.

and Oocyte Assisted Reprogramming (ANT-OAR)² attempt to offer a moral solution to our primarily politically driven push for embryonic stem cells.³ These proposals rest on the premise that the normal reprogramming ability of the oocyte to create life can be derailed and redirected towards the end of creating stem cells. Abstracting from the issue of whether these new techniques are morally acceptable in themselves, the question that I wish to consider here is the moral relevance of the oocyte. Does the oocyte have a nature and a *telos* (or finality)? If so, are there interventions that violate this nature?

While current literature refers to the oocyte in terms of “property,”⁴ a “cytoplasmic sac,”⁵ a “therapeutic power,”⁶ and even a “time machine,”⁷ there is a certain hesitation to reduce it to just any other cell. Ruth Macklin affirms:

Sperm and egg are similar to one another and different from other bodily products. Gametes are human bodily materials from which other humans can be created. Whether this fact confers some distinct moral status on human gametes is unclear. It is surely true that people may care more about what happens to their donated gametes than to their donated blood.⁸

² See <http://www.alterednucleartransfer.com>.

³ See David L. Schindler, “A Response to the Joint Statement: Production of Pluripotent Stem Cells by Oocyte Assisted Reprogramming,” *Communio* 32/2 (2005): 379-80.

⁴ The Ethics Committee of the American Society for Reproductive Medicine, “Financial Incentives in Recruitment of Oocyte Donors,” *Fertility and Sterility*, 82, Supp. 1 (September 2004): 240-44.

⁵ Nicanor Austriaco, “The Moral Case for ANT-Derived Pluripotent Stem Cell Lines,” *The National Catholic Bioethics Quarterly* 6/3 (2006): 517-37.

⁶ Joseph Mauceri, “Evolution and the Embryo,” 2006, <http://www.cephasinstitute.org> (last accessed April 10, 2007).

⁷ Gregory M. Fahy and Saul Kent, “Therapeutic Cloning Under Fire: An Interview with Michael D. West, Ph.D.,” *LifeExtension Magazine* (March 2002), http://www.lef.org/magazine/mag2002/mar2002_cover_west_01.html (last accessed April 20, 2007).

⁸ Ruth Macklin, “What is Wrong With Commodification?” in *New Ways of Making Babies* (Indianapolis IN: Indiana Univ. Press, 1996), p. 110.

To say that an entity has moral status implies that human beings, as moral agents, have obligations to that entity. What can be our human obligation to the oocyte?

My methodology for this paper will include proposing several avenues for defending the integrity of the oocyte against manipulations that would attempt to divert it from its normal teleology. Starting with a social analysis on the use of oocytes, I will examine the intuitions and inadequacies in the current debate based on a traditional feminist approach. From there, I will attempt to develop a more integrated Catholic feminist approach, drawing on both Scripture and Tradition, within a framework that respects the nature and *telos* of the oocyte in its relation to the woman in her unique ability to welcome, love, nurture, and protect life.

The social analysis over the ethical use of ova has arisen over the past thirty years primarily in response to biotechnologies such as artificial reproductive technology (ART), embryonic stem cell research (ESCR), and cloning (SCNT). A woman's egg is required for all of these technologies. Given this necessity for eggs, most arguments against their use narrowly focus on the ethics of egg donation. Should women donate their eggs? Is it ethical to receive payment for these "donations?" Does a postmenopausal woman have a *right* to receive eggs donated from other women? How can we ensure equal and just distribution of eggs to those who are economically disadvantaged?

Beyond these questions, the primary arguments opposing egg donation focus on the potential harm and exploitation to women. The process in which a woman's eggs are retrieved from her body not only involves the chemical suppression of her menstrual cycle but also subjects her to large doses of hormones to hyperstimulate her ovaries to mature the multiple egg follicles required to produce sufficient numbers of eggs. After a woman's eggs have ripened, she is injected with additional hormones to induce ovulation artificially, and then she must undergo surgery to extract her eggs.

The health risks associated with the artificial inducement of ovulation, euphemistically referred to as egg "harvesting," must not be minimized. Excessively stimulating the ovaries in this way can cause serious side effects including strokes, blood clots, and infertility as a result

of Ovarian Hyperstimulation Syndrome (OHSS). A recent study found that one in ten women undergoing fertility treatment suffer from milder forms of OHSS, while there is a one percent risk of developing a life-threatening condition.⁹ In the UK alone, at least three women have died as a result of complications arising from this syndrome.¹⁰

In addition to the serious health risks of extracting eggs from women, opponents argue that the high demand for eggs will lead to the exploitation of women. Even abortion rights feminists, such as Judy Norsigian, have spoken out against these dangers.¹¹ Finding women to submit to the time-consuming and potentially dangerous process of egg retrieval will likely require financial incentive, which will inevitably attract those who are economically disadvantaged. With a need for so many eggs, the next logical step would be to target women from impoverished countries, for they would require less compensation. According to this line of argument, women are already being coerced and exploited for their eggs, and the increased push for cloning and embryonic stem cells will likely only heighten this abuse.

Looming in the background over whether egg donors should receive payment or not is the ominous prospect of the commodification of women's eggs. Currently, several countries and states forbid payment to women for eggs used for research purposes, while still allowing payment for IVF treatments. Why should women be allowed to receive payment for one use of their eggs, but not another? Is it proper to compare monetary exchanges for ova to the illegality of selling organs? Is selling eggs similar to acting as a "surrogate mother"? Why should a woman who is able to capitalize on selling her "services" in this way be prohibited from

⁹ A. Girolami and others, "Arterial Thrombosis in Young Women After Ovarian Stimulation: Case Report and Review of the Literature," *Journal of Thrombosis and Thrombolysis* (Jan. 30, 2007), <http://www.springerlink.com/content/r3l7r0876508610x/> (last accessed June 20, 2007).

¹⁰ Lois Rogers, "Fertility Research Drugs Put Egg Donor at Risk," *Sunday Telegraph* (Feb. 19, 2007), <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2007/02/18/negg18.xml> (last accessed June 20, 2007).

¹¹ Judy Norsigian, Testimony Before U.S. House of Representatives (March 7, 2006), <http://www.ourbodiesourselves.org/uploads/pdf/norsigiantestimony.pdf> (last accessed May 31, 2007).

selling her eggs, which would require less time and arguably be less emotionally taxing?

While it is the tendency of traditional feminist models that oppose the use of women's eggs to focus on the harms and possibilities of exploitation and coercion, most maintain that the ultimate issue is one of properly informed consent.¹² Many contend that as long as a woman fully understands the risks involved, she should not be subjected to "paternalistic" prohibitions. One group entitled "Hands Off Our Ovaries" is seeking "a moratorium on egg extraction for research purposes until such time as global discourse and scientific research yields information sufficient to establish *adequate informed consent*."¹³

Although these traditional feminist concerns hint at some basic intuitions against the manipulation of oocytes, they fail to get to the heart of the matter. Beyond the ethical problem of subjecting women to possible health risks and exploitation, can we speak of an integrity to the oocyte that warrants respect? Even if someday we are able to retrieve eggs from the bodies of dead women¹⁴ or create oocytes from other somatic cells, as some scientists suggest, is there a limit to what we may do with these sex cells?

Moving closer to understanding the relational implications of the oocyte is a new more child-centered approach that focuses on inherent problems with ART. Here considerations of the relationship between the egg "donor" and her "biological" child are raised, bringing to light the unprecedented situation of truly "anonymous" parents.¹⁵ In response to these disturbing developments, *Donum Vitae* asserts the right of a child to

¹² Andrea L. Bonnicksen, "Private and Public Policy Alternatives in Oocyte Donation" in *New Ways of Making Babies*, ed. Cynthia B. Cohen (Bloomington and Indianapolis IN: Indiana Univ. Press: 1996), p. 170.

¹³ See <http://handsoffourovaryes.com/mission.htm> (emphasis added).

¹⁴ See Tadeusz Pacholczyk, "Ethical Considerations in Oocyte Assisted Reprogramming," *The National Catholic Bioethics Quarterly* 5/3 (2005): 446-47.

¹⁵ Cynthia B. Cohen, "Parents Anonymous" in *New Ways of Making Babies*, ed. Cynthia B. Cohen (Bloomington and Indianapolis IN: Indiana Univ. Press: 1996), pp. 88-105.

be born within the conjugal love of his mother and father.¹⁶ The technological possibility of a child having as many as five “parents”¹⁷ results not only in confusion for the child thrust into this situation, but also introduces a disorder that strikes at the very heart of the family. The issues arising from this child-centered focus essentially lead us to the most foundational questions about the meaning of marriage, motherhood, and fatherhood. While pointing to the serious underlying disorder in ART, they reveal the fundamental and necessary relationship between a woman and her child. This relationship is objectively disregarded once the project of making a child in a petri dish begins. We first embark upon this slippery slope when we consider the oocyte in abstraction from the woman and disconnected from its *telos* to create life within the context of the conjugal act.

While both the feminist and child-centered approaches to the issue of egg donation offer insights into the value of the oocyte, they remain partial and incomplete. I propose a third model in light of the “new feminism” that John Paul II encourages, a model that approaches the oocyte in a more holistic manner by encompassing the entire body-soul unity of the woman, including her reproductive organs. This view recognizes the integrity and *telos* of the oocyte within the sacred dimension of a woman’s reproductive capacities. The power of the oocyte to create life is respected, which translates to the totality of the woman being respected. We cannot think of the oocyte in isolation from the woman. To do so risks treating her body as a machine and oocytes as nothing more than manipulable matter.

The first place we must start in attempting to grasp the nature of the

¹⁶ *Donum vitae*, Part II, §8: “A true and proper right to a child would be contrary to the child’s dignity and nature. The child is not an object to which one has a right, nor can he be considered as an object of ownership: rather, a child is a gift, ‘the supreme gift’ and the most gratuitous gift of marriage, and is a living testimony of the mutual giving of his parents. For this reason, the child has the right, as already mentioned, to be the fruit of the specific act of the conjugal love of his parents; and he also has the right to be respected as a person from the moment of his conception.”

¹⁷ This includes the biological mother and father, surrogate mother, and the parents who will raise the child.

oocyte is within the integrity of the unitive and procreative dimensions of the conjugal act. What can this constant teaching of the Catholic Church tell us about the moral status of the oocyte? It is imperative that we first understand the beauty of the Church's teaching on sexuality. Intercourse is an act that encompasses the person in his or her body-soul unity. The ability for a human to give and receive love is most fully expressed in the sexual act where "the two become one flesh." The Church maintains that in order for the sexual act to maintain its integrity, fertility must be understood as a constitutive part of a person's being. The openness of the husband and wife to each other necessarily implies an openness to a third.¹⁸

Contraception presupposes a dualistic anthropology. One of the warnings issued by Pope Paul VI in *Humanae Vitae* was that with the use of contraception a man "may forget the reverence due to a woman, and, disregarding her physical and emotional equilibrium, reduce her to being a mere instrument for the satisfaction of his own desires, no longer considering her as his partner whom he should surround with care and affection."¹⁹ Contraception allows the body to be seen as separate from the person, thereby making both women and men susceptible to instrumentalization. Fertility then becomes a threat to the freedom of engaging in the pleasure of sexual activity without the "unintended" consequences of pregnancy. Rendering the conjugal act infertile through contraception closes the union to the creative intervention of God and treats a profoundly spiritual and bodily act as merely physical. In the end, persons become objects to be manipulated rather than subjects to be loved.

This same dualism is introduced when an oocyte is regarded outside of the context of its integral relationship with the woman. The body is no longer viewed as an expression of the person but is reduced to parts of a machine that can be utilized for the service of other ends. The oocyte's natural *telos* is intentionally diverted to achieve whatever purpose a biologist deems worthy.

In speaking of the non-technological approach to the body of natural

¹⁸ For more on this, see John Paul II, *Man and Woman He Created Them: A Theology of the Body* (Boston MA: Pauline Books and Media, 2006).

¹⁹ *Humanae vitae* §17.

family planning methods, John Paul II states:

The choice of the natural rhythms involves accepting the cycle of the person, that is the woman, and thereby accepting dialogue, reciprocal respect, shared responsibility and self-control. To accept the cycle and to enter into dialogue means to recognize both the spiritual and corporal character of conjugal communion and to live personal love with its requirement of fidelity.²⁰

In emphasizing the acceptance of the woman's cycle as essential to the integrity of the conjugal act, John Paul II shows the intrinsic value of the woman's fertility to her person. The cyclical nature of the woman's menses connects her with the rhythms in nature and also with other women. Research shows that women who are not exposed to artificial light at night often ovulate during the full moon,²¹ and when women live together, their cycles often synchronize.²² A woman's fertility fundamentally involves relationality in a way that complements her feminine receptivity. Each month, a new cycle begins. The entire reproductive cycle centers on the event of ovulation when an ovum is released. The combined increases of various hormones such as FSH, LH and estrogen induce ovulation. Once the ovum is released, another hormone, progesterone, is secreted to prepare the uterine wall for implantation of an embryo. An unfertilized egg will live for approximately twelve to twenty-four hours after ovulation occurs and will be discharged during the next menses, which occurs approximately two weeks after ovulation. This entire process depends upon the delicate balance of hormones required to sustain and support new life.

A woman's fertility is part of her identity. A female is born with all of the oocytes that she will ever have. Soon after birth, hundreds of thousands of these immature oocytes die, leaving her with approximately 250,000 by puberty. However, only about 500 of these precious eggs will ever reach full maturation through ovulation. Stages of a woman's life are

²⁰ *Familiaris Consortio* §32.

²¹ S. Cohen, "Melatonin, Menstruation and the Moon," *Townsend Letter for Doctors and Patients* (Feb-March, 2005).

²² K. Stern, M.K. McClintock, "Regulation of Ovulation By Human Pheromones," *Nature* 392 (1998): 177-79.

marked in relation to her fertility, from the onset of menarche in puberty through her childbearing years to menopause. During her fertile years, a woman's whole body awaits in anticipation for the conception of a child. Each month she is preparing to receive life in that narrow twelve to twenty-four hour lifespan of the egg. The intricate orchestration of events within her body during any part of her cycle reveals the central place of the ovum. Her body is always preparing, releasing, receiving, or expelling an egg. Treating the egg in abstraction from the reproductive process is an act of alienation that violates both the *telos* of the oocyte and the dignity of the woman as bearer of life.

The manipulation of oocytes is necessarily linked to contraception. Once the Pill was designed to impede a woman from ovulating, the procreative element in the sexual act became accidental, while the unitive aspect became primary. Inversely, ART allows the procreative dimension of the conjugal act without the unitive. In ART, scientists isolate sperm and egg by taking procreation out of the bedroom and into the laboratory. This new view of the egg as simply the "material" of reproduction reduces it to yet another thing to be dominated and controlled.

SCRIPTURE AND CHURCH TRADITION

In addition to its principled and constant stance against contraception and ART, the Catholic Church has maintained a special regard for the "generative faculties as such because of their intrinsic ordination to the bringing into being of life, of which God is the source and origin" (HV 13). In developing a Scriptural analysis of the respect afforded to gametes, it is important to remember the understanding of conception in earlier times. The ovum was not discovered until 1827. Prior to this it was thought that the woman passively received the seed of the man that became the child in her womb. She did not contribute anything other than her womb (and, it was thought, menstrual blood) to the development of the child. Thomas Aquinas explained this view in the thirteenth century:

Now, such is the law of nature that in the generation of an animal the female supplies the matter, while the male is the active principle of generation.... Now, this matter, according to the Philosopher [*De Gen. An.*], is the woman's blood, not any of her blood, but brought to a more perfect stage of secretion by the mother's

generative power, so as to be apt for conception.²³

Although Thomas mentions the “generative power” of the woman that “prepares the matter,” he still regards the seed of the man as the “active power” that forms the child in the womb.²⁴ The “seed” is always mentioned in reference to the man’s semen. Paradoxically, however, Genesis 3:15 mentions the “seed” of the *woman*:

And I will put enmity between you and the woman,
And between your seed and her seed;
He shall bruise you on the head,
And you shall bruise him on the heel.

While most commentators explain that this “seed” means “offspring,” it is interesting to note that a woman’s egg could be regarded as her “seed” or contribution to the creation of life. Another verse referring again to the woman’s seed is the literal translation of the Hebrew in Leviticus 12:2:

Speak unto the sons of Israel, saying, “A woman when she giveth seed, and hath born a male, then she hath been unclean seven days, according to the days of separation for her sickness she is unclean.”²⁵

The active tense is used to explain that a woman “giveth seed” and seems to recognize her own active contribution to the coming to be of a child. In reviewing other passages in Scripture that help illustrate the Church’s tradition in giving special accord to reproductive organs and gametes, we must examine the classic sin of Onan in Genesis 38: 9-10:

But Onan knew that the offspring would not be his; so when he went in to his brother’s wife he spilled the semen on the ground, lest he should give offspring to his brother. And what he did was displeasing in the sight of the Lord, and he slew him also.

²³ *Summa theologiae* III, 31, 5.

²⁴ Thomas Aquinas, *Summa theologiae* III, 32, 4 ad 2.

²⁵ Robert Young, *Young’s Literal Translation of the Holy Bible* (Grand Rapids MI: Baker Book House, 1956).

While many recent Biblical scholars tend to regard Onan's sin as violating the levirate marriage custom to provide an heir for his deceased brother, other commentators argue that the classical Christian and Jewish interpretation holds that the condemnation of Onan resulted from the unnatural nature of the sexual act whereby "[Onan] misused the organs God gave him for propagating the race to unnaturally satisfy his own lust, and he was therefore deserving of death."²⁶

Confirming the Church tradition of this classic interpretation, Pope Pius XI, in his encyclical on Christian marriage *Casti Connubii*, states:

Small wonder, therefore, if Holy Writ bears witness that the Divine Majesty regards with greatest detestation this horrible crime and at times has punished it with death. As St. Augustine notes, "Intercourse even with one's legitimate wife is unlawful and wicked where the conception of the offspring is prevented. Onan, the son of Juda, did this and the Lord killed him for it."²⁷

Developing Augustine's thought, Thomas Aquinas affirms the notion of a proper *telos* for sperm:

But the other superfluities of the human body are such as not to be needed, so that it matters not how they are emitted, provided one observe the decencies of social life. It is different with the emission of semen, which should be accomplished in a manner befitting the end for which it is needed.²⁸

Additionally, Thomas states in *Summa contra gentiles*:

Nor, in fact, should it be considered a slight sin for a man to arrange for the emission of semen apart from the proper purpose of begetting and bringing up children... The inordinate emission of semen is incompatible with the natural good of preserving the species. Hence, after the sin of homicide whereby a human life already in existence is destroyed, this type of sin appears to take next place, for by it the generation of human nature is impeded.²⁹

²⁶ Brian W. Harrison, "The Sin of Onan Revisited," *Living Tradition, Organ of the Roman Theological Forum*, No. 67 (November 1996).

²⁷ *Casti Connubii* §55.

²⁸ *Summa theologiae* II-II, 153, 3.

²⁹ *Summa contra gentes* III, 122.

The purpose of sperm in “begetting and bringing up children” is clearly articulated here, along with the grave prohibitions against the misuse of this end. The “inordinate emission of semen” directly contravenes the goodness of procreation and violates the *telos* of the generative faculties. In comparing the frustration of semen to the evil of homicide, Thomas unequivocally affirms a definite end for the sperm. Since Thomas is clearly speaking of the sperm in reference to its ability to generate life when the egg had not yet been discovered, this reverence given to sperm should apply equally to the egg.

As biological discoveries have allowed us to understand better the process of conception, and subsequently, the use of contraception has become widespread, there have been further developments in church teachings on sexuality. In *Humanae vitae* (1968), Paul VI acknowledges the design of God in the generative process, explaining that man has “no such dominion over his generative faculties as such” (HV 13). The teleology of the gametes toward procreation is necessarily implied in this affirmation.

Continuing this tradition, *Donum vitae* (1987) defends the integral unity of the person as a spiritual and corporeal being. Countering accusations of physicalism, this document defends the moral significance of the body and recognizes the need for a unified anthropological vision of man, especially “in the field of sexuality and procreation.”³⁰ Man has a responsibility to recognize that any “intervention on the human body affects not only the tissues, the organs and their functions but also involves the person himself on different levels.”³¹ Any intervention must be in service to the person *corpore et anima unus*. This further illumines the constant teaching of the Church in its special regard for reproductive organs and gametes.

A more recent Church document issued by the Pontifical Academy for Life entitled *Prospects for Xenotransplantation* (2001) recognizes the intrinsic link between gametes and personal identity. It stresses the importance of safeguarding the gonads [ovaries and testes] as “an

³⁰ *Donum vitae* §3.

³¹ *Ibid.*

expression of the unrepeatable identity of the person.”³² Insofar as the gonads are “charged with *gametogenesis* (the production of gametes), they represent, in a manner of speaking, the ‘transmitter’—by means of procreation—of the subject’s personal identity (genetic patrimony) to offspring.”³³ Because of this, the possibility of a gonad transplant would be considered morally illicit “if performed for the purpose of supplying the gametogenetic function.”³⁴ While reaffirming the Church’s tradition of defending the *telos* of the gametes towards procreation, this document also develops their relational aspect as “transmitters” of personal identity. It further maintains the Church’s continual objection to interventions that might thwart the personal conjugal communication of husband and wife in the act of giving themselves to one another.

TELOS OF THE OOCYTE

Hans Jonas concedes that “foremost among the exclusions” in scientific inquiry “will stand that of teleology, i.e., of final causes.”³⁵ In the early stages of modern science, Descartes urged suspicion about ideas that were not “clear and distinct.” First and final causes were among the primary casualties. This has left some scientists bereft of an ethical framework in which to guide their pursuits. Many are prone to approach the body mechanistically and thereby fail to acknowledge its inherent meaning and nature. This reductionist understanding conceives of the oocyte as merely matter that can be manipulated for any purpose.

Arguing against the possibility of a *telos* for an oocyte, some scientists contend that the oocyte is simply another cell that can become an embryo, a teratoma, or a hydatidiform mole. Because so many

³² Pontifical Academy for Life, *Prospects for Xenotransplantation: Scientific Aspects and Ethical Considerations* (September 26, 2001) §11.

³³ *Ibid.*, §61.

³⁴ *Ibid.* An exception is noted in this footnote, however, for “a gonad transplant performed exclusively for hormonogenetic purposes (that is, to restore a sufficient hormonal function); once the integrity of the subject's personal identity has been ensured, and once the disassociation with procreation has been established.”

³⁵ Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (New York NY: Delta, 1966), p. 73.

pregnancies end up in miscarriage due to serious abnormalities in the embryo, they suggest, there can be no proper trajectory and end for an oocyte. However, possessing a *telos* does not eliminate the possibilities of developmental deformations. The finality of the oocyte still allows for the possibility that sometimes it fails to work properly. Tending towards a mechanistic account of the oocyte, Nicanor Austriaco explains:

The process of cloning is relatively straightforward. The cloner extracts the nucleus of an adult human cell (the nucleus is the part of a cell that contains its genetic information encoded in its genes), and then inserts it into a cytoplasmic sac (a cytoplasmic sac is the remnant of a cell after its nucleus has been extracted) containing the molecular contents normally found in a human egg.³⁶

The *only* “cell” that has the ability to reprogram a nucleus in order to clone a human being is the ovum. Malcolm Byrnes criticizes Austriaco’s characterization of the egg as “extreme(ly) reductionist” in its failure to take into account the vast intricacies of the cytoplasm. Rather than simply being a “remnant of a cell,” this cytoplasm “plays a critical role in early development.”³⁷

This brings up the claim that the oocyte provides no more than an external environment for the formation of an embryo. How does the egg change if enucleated? For example, to what extent does it still continue to strive to form new life, in keeping with its original nature? It seems mechanistic to assume that in cloning technologies the enucleated oocyte remains merely external to its (newly conceived) nucleus. Rather, this putatively “merely external” environment consisting of the egg’s cytoplasm seems in fact to be intrinsic to this nucleus, thus forming what is an entity substantially different from the original (somatic cell) nucleus.³⁸ This presumption should caution us against any attempts to “disassemble” an ovum in the hopes of utilizing its cytoplasm for therapeutic ends, as is required in ANT and ANT-OAR.

³⁶ Austriaco, p. 519.

³⁷ W. Malcolm Byrnes, “ANT-OAR Misrepresents the Scientific Facts,” *National Catholic Bioethics Quarterly* 7/2 (2007): 226-27.

³⁸ I owe this point to David L. Schindler, Ph.D. (Pontifical John Paul II Institute).

Dr. Joseph Mauceri states that “the gift of new life is especially assigned to the woman even at the earliest ‘stages’ beginning with the oocyte which...holds an aspect of the life-giving power; it is not a therapeutic power, it is an ontological power. Gametogenesis exists in the service of embryogenesis.”³⁹ Fr. Tad Pacholczyk confirms the “very *raison d’etre*” of the ovum is “to struggle to sustain an organismal trajectory once cleavage begins.”⁴⁰ I would suggest that the essential purpose of the ovum to bring new life into the world is present in the egg as a passive potentiality *even prior* to cleavage when an embryo is already in formation. A woman’s egg naturally tends toward the end of creating life through the process of fertilization, and any attempt to manipulate the egg *towards a different end* violates this *telos*. Cloning is the first misuse of the egg as it triggers the egg to develop into an embryo without the contribution of sperm. Technologies such as ANT further frustrate the egg’s normal goal, for they rely upon this same logic of cloning.

Any discussion about the *telos* of the oocyte must guard against the tendency to isolate the oocyte from its relationship to the embryo. A primary critique of modern science is its atomistic approach to nature and the body. The gametes only make sense in relation to each other. As mentioned earlier, “Gametogenesis exists in the service of embryogenesis.”⁴¹ Sperm and egg together form a teleological whole. When an egg joins with a sperm, the newly created life achieves an *entirely* different moral status, far beyond the original status of the oocyte and sperm individually. Yet, in order to avoid collapsing the distinction, we still must maintain a teleological path for the oocyte that yet cannot be fully realized without the contribution of sperm. I would argue that cloning technologies and ART, while potentially producing life, cannot fully realize the *telos* of the oocyte since they remain outside of the unitive and procreative bond of conjugal love.

We must always remember that the purpose or end of the oocyte is to create a child within the context of an embodied conjugal act. The

³⁹ Mauceri, p. 16.

⁴⁰ Tadeusz Pacholczyk, “The Substantive Issues Raised by Altered Nuclear Transfer,” *The National Catholic Bioethics Quarterly* 5/1 (2005): 18.

⁴¹ Mauceri, p. 16.

oocyte, whether through normal fertilization or cloning, strives to form a child. This is precisely the danger of technologies that attempt to harness this power. Because the natural predisposition of the egg is to create life, there is too great a risk that a human being has been created. Furthermore, in *attempting* to derail the egg's natural ability to develop life, these technologies treat the ovum as a mere therapeutic tool by abstracting it from its higher purpose in service of new life. The oocyte must be respected in its inherent relation to the woman, the child, and hence, the man within the context of love and marriage. This relationality is at the core of the new Catholic feminism.⁴²

⁴² I want to thank W. Malcolm Byrnes, Dolores Meehan, Peter Colosi, and Tara Seyfer for their review and comments on this manuscript.