

Is the Early Human Embryo a Person? A Metaphysical Defense of Personhood

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Abstract

Is it okay to kill human embryos for research? Is it right? Is it possible to legalize embryonic abortion? This paper will defend the personhood of the early human embryo by investigating embryonic human personhood based on these questions. This paper will have four sections. The first section will discuss embryo development over time based on scientific facts about the early embryo. Define the embryo in the second section. To what extent is the embryo human? Two sub-sections will analyze the two possible answers: The immediate animators believe the embryo is a human at conception. The immediate-delayed animation camp claims that every stage of embryonic development is human-free. I discuss delayed animation criticisms and issues in the third part. I challenge the developmental view of personhood criteria in the final section. Based on all this evidence, I believe the embryonic human is a human throughout its life. No attempt must be made to harm or destroy this person.

Keywords: Embryo, Human Being, Personhood, Metaphysics.

Introduction

Do you think it is moral to cultivate human embryos just to test them in the lab? Is it morally permissible to destroy embryos to extract their stem cells? Is it acceptable to use human embryos for scientific study and then kill them? Do you think it is right? Is there a window of opportunity to legally support abortion while an embryo is still developing? The answers to these questions about embryonic human personhood will be explored in this paper. The structure of this paper will consist of four main parts. Based on the scientific facts about the early embryo, we will explore embryo development over time in the first section. The second section will go on to define the embryo. To what extent is the embryo a person? Two sub-sections will be devoted to analyzing the two possible responses to this question: The immediate animators' position is that, at the time of conception (fertilization), the embryo is already a human being. Conversely, proponents of the immediate-delayed animation school of thought argue that every stage of embryonic development does not involve a human being. In the third part, I address some of the criticisms leveled against delayed animation and highlight some of the issues associated with this perspective. In the last section, I offer some challenges to the developmental view regarding the criteria for personhood. In light of all this evidence, I have come to the conclusion that the embryonic human being is a human person throughout its entire life cycle. Consequently, no effort must be made to harm or destroy this human being in any way.

The early human embryo development

This section focuses on the central inquiry of embryo science, also known as embryology, which investigates the characteristics, behaviors, and developmental processes of early embryos in order to discover the truth regarding the genesis of *Homo sapiens* – human beings.

The development of an individual human being begins with fertilization or conception which is a combination of the sperm and the egg (ovum) to form a zygote into an embryo and fetus is a process that goes through several stages that occur during the full-length term of thirty-eight weeks. We can divide this process into five parts: (1) the Pre-fertilization stage Gametogenesis; (2) The fertilization and implantation; (3) the Embryonic stage; (4) the Fetal stage.

Gametogenesis

In this stage, the gametes which are the sperm cell and the egg cell (oocytes) come to be formed and developed, in preparation for conception. Spermatogenesis occurs when sperm are generated in the testes and subsequently deposited in the epididymis. Spermatogonia (primordial germ cells) are transformed into mature sperm through this process. This development commences during puberty. Spermatogonia remains latent in the seminiferous tubules of the testes during gestation and until the time of birth. They increase in quantity throughout puberty. Spermatogonia develops and transforms after multiple mitotic divisions (Moore et al., 2016, p. 12).

The transformation of primordial germ cells (oogonia) into mature oocytes in females is referred to as oogenesis. Oogenesis, as opposed to spermatogenesis, commences at the moment of delivery. It indicates that, following delivery, no oogonia develop into primary oocytes. Until puberty, the primary oocytes (oogonia) remain in ovarian follicles. Female reproductive cells also undergo the meiotic process. The initial meiosis is completed by the primary oocytes prior to the day of ovulation. The secondary germ oocytes initiate the second stage of meiosis at ovulation; this stage is incapable of completion in the absence of fertilization (ibid., 17).

Fertilization and implantation

Fertilization is the procession of events that begins when a father's sex cell – sperm unites with a mother's sex cell - oocyte and ends up with the intermingling of twenty-three maternal and twenty-three paternal chromosomes to form a new single entity, the human embryo. In this procession, the sperm and the oocyte cease to exist, and a new organism. The new organism possesses all the essential genetic material required to guide its further development into a fully developed human adult individual (Cantens, 2019, p. 12). The process of fertilization doesn't happen all at once; it's made up of several steps that happen over time (about 24 hours).

After fertilization, the new cell zygote continues its development by way of cell division called cleavage before moving to the uterus. In this process, one cell of the zygote divides into two, then four, eight, and so on. These cells are called blastomeres. Three days after fertilization, the embryo contains about sixteen cells, and its name at this stage is morula which has two layers: an inner group of cells called inner layer, and outer layer. The distinction between the two layers more clearer after four days of fertilization. The inner layer is called the embryoblast, and the outer layer is called the trophoblast. The whole embryo at this time is called the blastocyst.

On the sixth day after fertilization, the embryo begins the process of implantation, and this procession finishes ten to twelve days after fertilization. After implantation, the embryo begins to take nourishment (oxygen and nutrition) from its material tissues (Tollefsen and George, 2011).

Embryogenesis: gastrulation and neurulation

As mentioned above, after fertilization, the embryo has two layers: the inner layer and the outer layer. During the second week, the embryo continues its development in some ways. Inside the inner layer, there is a division that divides the inner cell layer into two-layer embryonic discs – hypoblast and epiblast. This disc will help to form all the tissues and organs of the embryo (Moore et al. 2016, p. 44). In addition, inside the hypoblast layer, there is one of the most important things that indicates the site of the mouth and organizes the head region- the prechordal plate (ibid.).

At the beginning of the third week, the third layer will be formed in the embryo through the process

of gastrulation. The gastrulation's procession begins with a migration of cells from the epiblast to the center and back of the embryonic disc. This is called the primitive streak. Consequently, the embryo has transformed into a trilayered disk composed of upper-facing ectodermic cells, lower-facing endodermic cells, and central mesodermic cells. The positioning of cells within each layer is pivotal in determining the specific parts of the human body that a cell will contribute to developing (Ibid., p. 52). Following gastrulation, the embryo undergoes further development until the conclusion of the eight weeks, including processes such as neurulation, gut development, and cardiovascular system development.

In summary, during the embryonic period, the embryo undergoes the formation of significant internal and exterior structures, thereby preparing for the subsequent stage of fetal development that will take place in the coming weeks.

Fetal development stage

Critical developmental processes occur from the ninth week until birth, primarily involving rapid body growth and the division of tissues, organs, and systems. During this phase, the external genitalia emerge at the ninth week and reach their fully developed state by the end of the twelfth week. The primary ossification center and bones also emerge by the end of the twelfth week. Fetus's eye can move and limb movement occurs at week fourteen and his kidneys begin to function at around week sixteen. Between seventeen and twenty weeks, a fetus can hear voices from outside. Lungs and the nervous system develop their functions between weeks twenty-six through twenty-nine (Moore et al., 2016, p. 94-97; Cantens, 2019, p. 15017). According to Cantens (2019), these functions are related to the operation of the brain which indicates human consciousness and the capacity for cognitive sapient awareness (p. 17). Since, the human brain has three major parts: cerebrum, cerebellum, and brain stem. Each of them controls some functions of humans. The cerebrum is the part of the brain that gives us the ability to think, reason, remember, and feel. It is the cerebellum's job to control motor skills and actions. Heart and breathing are very important functions that are controlled by the brainstem (ibid.). These functions cannot occur before the week of twenty-six of gestation (Jones, 2004, p. 22-31).

From the standpoint of embryo science, I wish to conclude by emphasizing several essential facts about the human embryo. First, the human embryo is a human being at a very early stage of development. Second, the genesis of human beings (specifically, human embryos) occurs during conception, when sperm and oocyte combine to form a single cell known as the human organism. Third, the embryo is completely separate from any cells originating from either the mother or the father. This is evident as the embryo is developing in a unique and independent trajectory. She experiences internal growth that is focused on her own survival and personal development. Fourth, the embryo possesses a genetic composition that is distinctive to human beings. Finally, the embryo is a completely mature organism, although it is still in the embryonic stage (Lee and George, 2008, p. 120).

What are early human embryos?

In accordance with the analysis presented in the preceding section, the human embryo is a human being. Nevertheless, it might be argued that an embryo possesses human characteristics yet lacks the status of a human being. They differentiate between human beings as completed organisms at any level of human development and human persons who acquire some characteristics of personhood. "Personhood is a foundation concept in ethics, including both pure philosophical ethics and the applied field of ethics," state Farah and Heverlein (2007), who also note that establishing criteria for personhood and defining the concept of person are crucial tasks in the field of ethics (p. 39). Do human embryos possess personhood or not? Two contradictory hypotheses (*immediate human person and delayed human person*)¹¹Adapted from the theory of immediate animation, which was put forth by a significant majority of Catholic thinkers, the phrase "immediate human person" signifies that a spiritual soul is present in the fertilized ovum from the moment of conception. However, the term "delayed human person" originates from the theory of delayed animation, which posits that the infusion of the human soul occurred at some point during the interim period following conception rather than at the instant of conception. Anselm, Aquinas, and a multitude of eminent scholastic

intellectuals all endorsed this theory. In this paper, the term “immediate human person” indicates that the embryo is a human person at the moment of conception. Human beings are human persons. The phrase “delayed human person” means human beings are not human persons at conception, but they are human persons at some point after fertilization. that pose a philosophical conundrum regarding the definition of personhood are put forth in response to this inquiry.

Immediate human person or standard view

The initial perspective, known as the immediate human person (standard view), posits that the emergence of a human person occurs instantaneously upon conception. According to John Gallagher (1984), “looking at all of the likely evidence suggested in the literature ... none of it gives reason to believe that the human person begins to exist at any other point than fertilization”. In this perspective, a human person is considered to be a human being. Put simply, personhood is an innate quality that exists in every human being at every stage of their development (Miklavic and Flama, 2017, p. 130). A human being does not become a human person at some point during the development of the embryo after conception. Consequently, a human person is already present at the moment of fertilization, but they undergo further development over time, progressing through various stages including zygote, embryo, and fetus. Thus, the distinct phases of growth following conception, namely zygote, embryo, and fetus, merely delineate the various stages of a human person’s life as infant, baby, toddler, child, teen, and adult, rather than elucidating the process by which an entity transforms into a human person. This is because, at the moment of fertilization, the zygote or early embryo possesses all the genetic material necessary for its maturation and progression into a significantly larger organism. The advocate of this perspective posits that the attainment of personhood occurs at the moment of conception (ibid., 131). Consequently, it can be inferred that the embryo obtains the characteristics of a human person throughout all stages of its developmental trajectory, beginning from the point of fertilization. In the following section, I will examine another personhood position.

Delayed human person or developmental view

In contrast to the early hypothesis positing that human individuals are human beings, wherein an embryo is considered a human person upon conception, some proponents argue that human beings acquire human personhood at a certain stage subsequent to fertilization. It signifies that human beings do not possess the characteristics of being human at the very first moment of conception. It follows that not all human beings are human persons (Miklavic and Flaman, 2017, p. 131). Defenders of this viewpoint argue that human embryos and fetuses possess the characteristics of human beings. Nevertheless, they differentiate between a human being and a person and assert that embryonic human beings have not yet attained the status of human persons. Advocates of this hypothesis contend that human beings in the embryonic phase, including the zygote, embryo, and fetus, are merely intermediate stages in the progression of human existence and possess the capacity to develop into human beings. However, they argue that embryos do not possess personhood due to their lack of advanced cognitive abilities or functions. According to Lee and George (2007), proponents of this perspective assert two fundamental concepts related to the status of personhood. Firstly, it is necessary to identify certain fundamental characteristics or criteria that define personhood. Furthermore, the attribution of personhood occurs as an incidental characteristic during the early stages of embryonic development (p. 131-133).

Criteria for personhood

Several philosophers have put forward a set of criteria for determining personhood that encompasses human abilities, physical growth, and psychological and cognitive abilities (Miklavic and Flaman, 2017, p. 134). It means that there are several criteria such as rationality, self-consciousness, self-awareness, and only these properties constitute the fundamental attributes of a being that we could designate as a person. Boethius is the first one who give an explicit definition of personhood: “an individual substance of a rational nature” (Boethius n.d., chap. 3). In this definition, the cognitive ability – rationality is a significant component of personhood account. Following Boethius, Locke and Kant also claim that intelligence is an essential characteristic of personhood (Locke, 1996; Kant, 1948). Several contemporary thinkers also propose a series

of criteria to decide which entities are persons and which are not. Tooley (1972) argues that something is a person “if it possesses the concept of a self as a continuing subject of experiences and other mental states, and believes that it is itself such a continuing entity.” Like Tooley, Warren (1975) argues that to be considered a person, an entity must possess at least some of the following characteristics: consciousness, reasoning, self-motivated activity, the capacity to communicate an indefinite variety of types of messages, and the presence of self-concepts (151-160). Feinberg (1980, p. 189): “persons are those beings who are conscious, have a concept and awareness of themselves, are capable of experiencing emotions, can reason and acquire understanding, can plan ahead, can act on their plans, and can feel pleasure and pain.” Englehardt (1986, p. 107): “What distinguishes persons is their capacity to be self-conscious, rational, and concerned with worthiness of blame or praise.”

Based on the aforementioned attributes of personhood, previous philosophers and thinkers posit that the human embryo or fetus possesses the genetic or biological attributes of a human being, yet it does not possess the characteristics of a person. They contend that a fetus or human embryo lacks the requisite characteristics necessary for an entity to be classified as a person. They conclude that unborn human beings, specifically human embryos, lack the characteristics of personhood and therefore cannot be considered persons.

Others believe that a fetus or human embryo is a person when its physical appearance is similar to the fully development human at week nine of gestation. Others contend that a human being may attain personhood when the central nervous system and organs are fully developed or when some critical functions such as breathing and kidney filtration are established at twenty-six weeks of gestation (Moore et al., 2016, p. 97). Following these analyses, defenders of the criteria of personhood point out some problems of the standard view.

Criticism of the standard view

Proponents of the developmental view perspective offer a critique of the standard view viewpoint, which holds that human beings are defined by the fact that the zygote or early embryo contains all the genetic material required for its development and growth into a substantially larger organism at the moment of fertilization.

First, for proponents of the delayed human person, a similar genetic code is not unproblematic. According to Singer (1994), being a member of the species *Homo sapiens* is not ethically relevant; some nonhuman animals may have any trait or set of traits that we think give humans a right to life or make it generally wrong to end a human life. In another way, Laintinen (2007) claims that to be a member of the species *Homo sapiens* for personhood, some nonhuman animals will become people if they reach a certain level of development. Glenn (2002) argues that “most of our genome consists of the genes we share with other species - chimps, fruit flies and that barriers between the species begin to blur and blend” (p. 9). Consequently, non-humans may qualify as persons based on the similarity in their genetic codes with humans. However, this conclusion may result in complications effect. According to this conclusion, primates with 98 percent genetic similarity to humans may evolve into human beings, if the genetic code is an essential component of personhood. Wilson and Brown (2006) argue that if a comparable genetic code is adequate to warrant personhood, then it is possible to incorporate other nonhuman primates into this classification if their genetic composition is comparable to that of humans; alternatively, we must be willing to acknowledge them as moral counterparts and bestow upon them personhood as well (pp. 602-610).

Second, proponents of the concept of the standard view encountered an additional challenge when they acknowledged that human embryos possess human personhood from the moment of conception, a phenomenon known as spontaneous abortion. Spontaneous abortion refers to the occurrence of early embryonic loss due to their failure to successfully implant following fertilization. According to Karl Rahner (1972), it is extremely illogical to refer to spontaneous abortion as a “person” (pp. 225-252) with moral standing. Based on the current prevalence of early spontaneous abortion stands at approximately 55 percent, Shannon and Wolter (1990) argue that “such vast embryonic loss intuitively argues against the creation of a principle of immaterial individuality [ontological personhood] at ... conception” (pp. 618-619).

Following these facts, proponents of the delayed human person contend that the early human embryo at the stage of preimplantation is not a human person. In other words, spontaneous abortion is great evidence to support the developmental view's argument that early human embryos before implantation are not yet persons.

Twinning is another problem for the standard view. As mentioned before, when fertilization is complete, the embryo can split and become two or more new embryonic which is capable of developing toward two or more distinct human beings before the implantation. The potential occurrence of twinning restricts us from identifying the early embryo as a human person.

To elucidate this issue, Condit (2018) provides the subsequent illustration: A zygote (A) splits into two different organisms (B and C). There is a causal connection between A and B and between A and C. However, it is impossible to say that A is identical to either B or C. We can therefore conclude that B and C are identical if this holds. However, this is illogical in nature because of the fact that B and C are two separate human organisms (p. 36). Proponents of developmental view defense contend that, as a result, an early embryo is not a human being, but a mere mass of cells at the time of fertilization.

Up to this point, it seems that the early human embryo is not a human person at the moment of conception contrary to the assertions made by defenders of the concept of a standard view. In the next section, an analysis will be conducted to investigate the validity of these criticisms are true and examine whether the delayed human person is not unproblematic.

Some responses to developmental view criticisms

In this section, I will give some responses to the criticism mentioned above. First, I argue that the assertion that a similar genetic code is an adequate standard for determining personhood is invalid. Then, I assert that the argument based on spontaneous rate is flawed

In response to the first criticism, I will show that extending personhood beyond humans is flawed. There are two problems in the argument that the opponents of the standard view's view supposes. In the first place, the fact that nonhuman primates and humans share 96 percent of genetic material does not mean that the primates can be considered persons. Gilad et al. (2012) say that even though human and chimpanzee genomes are about 96% similar, they have important genetic differences that affect phenotypes and the frequency of diseases. His study also shows that up to 40% of the differences in gene expression between humans and chimpanzees can be attributed to regulatory mechanisms that control how a gene's instructions are transcribed into RNA molecules. Aside from that, epigenetic changes like DNA methylation and histone modifications are very important in controlling gene expression levels in primates (Sadler, 2012, p. 3-129).

Denying personhood to those who have a genetic code that is less than 98 percent similar to a (normal) person is another problem for those proponents of the personhood of nonhumans. What will happen to individuals with serious chromosomal anomalies (e.g., Turner or Down syndrome - less than 98 percent similar), if a similar genetic code is deemed adequate for personhood? Does this mean those individuals do not qualify as human persons? Therefore, it appears that the assertion that a similar genetic code is an adequate standard for determining personhood is invalid (Miklavic and Flaman, 2017, p. 137).

To reply to the second problem with spontaneous abortion, I contend that the argument based on Shannon and Wolter's research is fallacious. Miklavic and Flaman (2017) contend that judging personhood based on an estimated spontaneous abortion is not unproblematic since having an approximate rate is not easy. According to the statistics provided by ArmMed Media, the rate of spontaneous abortion varies greatly from 15 percent to 60 percent²²Spontaneous abortion. ArmMed Media. <http://www.health.am/pregnancy/more/spontaneousabortion/>. Accessed on March 8, 2024.. According to Moore (2016), early embryos undergo spontaneous abortion, at an approximate rate of 45%. In another passage, he says that spontaneous abortion typically happens during the initial 12 weeks of pregnancy and has a prevalence ranging from 10% to 20% (p. 34, 49). Even if we have an exact number, it does not mean that these human embryos are not persons. What was the result of Shannon and Wolter's research if the

spontaneous abortion rate was less than 10 percent (Miklavic and Flaman, 2017, p. 138)? According to Tollefsen and George (2011), the argument presented, which relies on these statistics, can be classified as a natural fallacy. They give an example based on the historical record of the high rate of infant mortality in the past (which still happens today). According to the reasoning of Shannon and Wolter's argument, these babies could not be full human persons with the right not to be killed for the good of others. However, undoubtedly, it is wrong. Therefore, the argument fails (Chapter 5).

Another objection to the standard view is that embryo A is one whole thing before it splits. When it splits, there are two: B and C. Both B and C can be traced back to the early embryo where they came from. This means that the zygote is not yet a human being. According to Patrick Lee (2005), the fact that A can split into B and C does not lead to the conclusion that A was not a human being before twinning as a conceptual matter and an empirical matter (p. 123-14). As a conceptual matter, the possibility of twinning does not show any evidence against the existence of an individual before twinning. In case A splits into B and C, there are three possibilities for the existence of A. First, A is an aggregate of B and C. Second, A ceases to exist after B and C are formed. Third, A is identical to B or C. In these possibilities, a division does not mean that A could not have been a single person before the division (ibid., p. 123). As an empirical matter, Lee uses evidence of plants and flatworms to indicate that before twinning, there is a single, developing organism. He contends that in most cases of monozygotic twinning, there is only one embryonic human being until some cells from the first embryo split apart. This creates a second embryo (ibid., p. 124).

In sum, in this discussion, I gave some responses to some objections raised by the developmental view. I demonstrate that these objections cannot stand anymore since their argument are fallacy and invalid. In the next section, I will raise some objections to the development point of view.

Challenges to the developmental view

The perspective of the delayed human person posits that human beings do not possess the status of human persons. Put simply, personhood necessitates certain attributes, including human capabilities, physical development, and psychological and cognitive capacities. Based on the aforementioned criteria, I argue that these criteria are not free from challenges.

The appearance and development of organs

Opponents of personhood contend that the complete development of organs at some stages is a criterion for an entity to become a person. Before that point, we had an organism but not a person. For instance, an embryo at twenty-six weeks with a brain, heart, lungs, and kidneys is a person, before that point, there is no person. However, this criterion implies some obstacles. One primary concern is the arbitrary nature of determining when organismic development is adequate to warrant personhood since the human body develops at different rates at different points in time. Another problem is that the human body cannot reach a definite point of development since it is always changing until death. All organs (cells or tissues) in our body continue to be remodeled even when they are completely formed. If this is the case, one can lose his personhood status if his organs continue to differentiate (it always changes in adults).

In another way, Michael Gazzaniga, who is on the President's Council on Bioethics, has said that a brain is the only thing that makes a person human. Before that, we had a human body that did not have the rights and dignity of a person. Following this theory, an embryo with an undeveloped brain is not a person. However, Tollefsen and George (2011) contend that an embryo with a not-yet-developed brain is not like a person with a dead brain. An embryo does not have a brain but it has the potential to develop one. It is similar to an infant has ability to develop sufficiently her thinking in the future. Embryos are potential adults in the same way that fetuses, babies, kids, and teens are potential adults. A human embryo is not dead, but still alive. An embryo is a living person whose life is still ahead of her, but a brain-dead body is a person whose life is over. A human being in the embryonic stage of development is a complete, unified and self-integrating human organism (Chapter 5, Brain Death).

These arguments show that the appearance and development of organs cannot be a criterion for personhood

(Miklvić and Flaman, 2017, p. 136).

The cognitive abilities

Proponents of the developmental view argue that being a person entails more than just a human being (organism), it requires many sophisticated cognitive functions: consciousness, reasoning, self-determination, communication, and self-awareness. In her “On the Moral and Legal Status of Abortion” essay Warren claims five traits are central to the concept of personhood: (1) consciousness, (2) reasoning, (3) self-motivating activity, (4) communication, and (5) self-awareness (p. 55). Without these traits, a human being should not be considered a person. Feinberg (1980,189) also argued the criterion for personhood as follows: “persons are those beings who are conscious, have a concept and awareness of themselves, are capable of experiencing emotions, can reason and acquire understanding, can plan ahead, can act on their plans, and can feel pleasure and pain.” On the same page, Englehardt (1986, 107) claims that “What distinguishes persons is their capacity to be self-conscious, rational, and concerned with worthiness of blame or praise.” These criteria are proper and essential functions of human adults. The notion of personhood employed by those thinkers, according to Schwarz (1990), depends on how a person functions rather than on the definition of a person. He argues that the following human capacities are present in persons: rationality, thinking, autonomy, consciousness, and sentience. However, Schwarz maintains that the nature of an object is quite distinct from its function. The properties or functions of an object do not invariably correspond with its nature. The problem with the developmental view is that they consider the functions of human beings as human persons. In other words, for the proponent of the delayed human person, the essential criteria for human persons are based on these functions. In the following subsections, I contend that there are some problems in their point of view.

Unconscious and comatose persons

Warren posits that the prerequisites for personhood encompass cognitive abilities that are conscious, rational, self-motivated, communicative, and self-aware. Nevertheless, there are occasions in which these functions fail to operate, resulting in the brain being deactivated. During such instances, an individual lacks consciousness, rationality, self-motivation, and self-awareness. Does he lack personhood during these instances?

In his book entitled *The Moral Question of Abortion*, Stephen Schwarz argues that it is morally wrong when we kill someone if she is not acting like a person when she is asleep or under anesthesia.

Imagine a person in a deep dreamless sleep. She is not conscious, she cannot reason, etc.: she lacks all five of these traits. She is not functioning as a person. But of course she is a person, she retains fully her status of being a person, and killing her while asleep is just as wrong as killing her when she is awake and functioning as a person (Schwarz, 1990, p. 89).

Based on the content of this passage, it is argued that the act of killing someone is not permissible due to the absence of personhood, as people are unable to exhibit consciousness while asleep or in a comatose condition. The rationale behind this assertion is that despite being unconscious during sleep, she retains her complete humanity and the potential for her consciousness to be reinstated at a later time. Hence, it would be erroneous to assert that the fundamental standards for personhood are based upon the functional aspects of the human being, as advocated by proponents of the developmental perspective (Cantens, 2019, p. 49-50).

Lee and George (2005) raise another criticism of the developmental view in their book entitled *Body-Self Dualism in Contemporary Ethics and Politics*. They contend that the cognitive abilities’ self-consciousness is not the essential criteria for personhood as advocated by McMahan (2002): “Roughly speaking, to be a person, one must have the capacity for self-consciousness”... “and it is equally clear that they may lose the capacity for self-consciousness, and therefore cease to be persons, and yet not only continue to exist but also remain alive and conscious” (4, 24-25). Based on these statements, it appears that an individual can attain varying degrees of personhood and subsequently attain different moral statuses based on their level of consciousness. People vary in their level of self-awareness, which subsequently influences their moral

standing (Lee and George, 2005, p. 13-26). They conclude that the personhood of human beings is the same for everyone, and independent of the level of self-consciousness. Alternatively, someone could lose his personhood, which can subsequently be regained upon the restoration of their self-consciousness. This problem demonstrates the inherent flaw in defining personhood as any specific criterion or set of criteria (Miklavic and Flaman, 2017, p. 141).

In summary, this section presents two arguments regarding the development of appearance and cognitive capacities. It highlights certain issues within the developmental perspective, specifically the assertion that personhood can be attained when a human being meets specific criteria based on their human functions. It can be inferred that the assertions made by proponents of the developmental view regarding the criteria for personhood are untenable. Hence, the assertion made by proponents of the standard perspective regarding the personhood of the early human embryo at the moment of conception is valid.

Conclusion

In summary, this paper addresses the inquiry regarding the personhood of the early human embryo mentioned earlier. This study argues that the early human embryo constitutes a human individual at the point of fertilization, as elucidated by four distinct sections. From an embryological perspective, I demonstrated that an early human embryo becomes a human person at the moment of conception. The early human embryo progresses through various stages of development, starting from the zygote and continuing to embryo and fetus. However, it is important to note that this does not imply that it attains personhood after multiple developmental stages. At the time of fertilization, the human embryo becomes an individual as it acquires a genetic code through the marriage of the mother's cell (oocytes) and the father's cell (sperm). The embryo possesses the capacity to engage in a distinct and autonomous developmental trajectory. In the second section, an examination is conducted on two distinct viewpoints regarding the embryo: the standard perspective, commonly referred to as the immediate human person, posits that the early embryo attains human personhood upon fertilization, and the developmental perspective, known as the delayed human person, contends that the early embryo does not attain human personhood until it meets specific criteria during certain stages of development. In this section, the developmental perspective also offers a critique of the conventional understanding of personhood, drawing upon the established criteria for determining personhood. The third section commences with three proposed responses to the criticism posed by proponents of the developmental view, highlighting the inadequacy of their critique. Finally, I express some challenges regarding the standard for determining personhood according to the developmental perspective. The assertion that the early human embryo possesses personhood at the point of conception is indisputable. Consequently, engaging in actions that undermine the dignity and human rights of the human embryo, which is considered a person, is ethically unacceptable.

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