THE CONCEPTION VIEW OF PERSONHOOD: A REVIEW

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Introduction

Man's metaphysical pretensions . . . are preposterous. A miserable bit of protoplasm, full of ugly little concepts and mean little emotions – and it imagines itself important! Really, you know, that is the root of all the troubles in the world (Rand, 1957, p. 129).

Ayn Rand's imaginary philosopher Dr. Pritchett summarizes the dominant mood of modern society in its understanding of human nature. There is a general cynicism about man's condition in today's world, a view derived from two sources: philosophical naturalism in the scientific community and the postmodern drift of popular culture.

In the first case, naturalism has led to a devaluation of human beings, who no longer have inherent dignity and worth, and there is no ultimate purpose for man.i Since we are all just the random result of evolution, there is no basis for law or morality, and death is the end of personal existence. In the second case, postmodernism has promoted the idea that meaning and purpose are illusory goals not even worth pursuing.

The Christian worldview offers a startling contrast, with a view of human beings made in God's own image, the highest achievement of God's creative impulse. Such a view gives us worth, dignity, and hope. It is the basis of all law, morality, philosophy, art, and science, and offers hope to a jaded, materialistic society.

So the philosophical battle rages between a naturalistic worldview that defines man in the most reductionist terms, and a high Judeo-Christian perspective that defines him as a valued person. The personhood question is central to biomedical ethics, where the nature of humanity touches every issue at hand: abortion, reproductive technologies, human stem cell research, cloning, assisted suicide, euthanasia, genomics, and resource allocation.

By *personhood*, I mean something more than mere biological life. *Person* denotes a being that is a member of "the moral community" (Fieser & Dowden, 2002). This implies having rights and duties of a moral nature. This paper will analyze and defend the conception view of personhood: a human being is a person from the moment of conception and at every subsequent moment.

I will examine the biblical bases of this view, and show how Scripture affirms man's value through the image of God. I will then show the biblical evidence for the conception view, as well as the limitations of using Scripture in this regard.

I will next discuss the philosophical underpinnings of personhood, and show how secular, functionalist views are basically flawed. I will compare this with an ontological view that sees personhood as intrinsic to man, a perspective compatible with Judeo-Christian thought.

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Finally I will examine the biological bases of the conception view and will look at several "decisive moments" in biological history. I will show that syngamy, the moment when the full complement of genetic material is established in human beings, is the only biologically unique point in time on which to base personhood. This moment corresponds with the union of sperm and egg in conception.

My goal is a comprehensive, holistic view of personhood, intrinsic to the nature of human beings, and beginning at conception.

The Biblical Basis of Personhood

Psalm 8 begins and ends as a hymn of praise to the Creator God: "O LORD, our Lord, How majestic is Your name in all the earth, Who have displayed Your splendor above the heavens! (NASB)" David then considers himself in light of God's awesome creation: "When I consider Your heavens, the work of Your fingers, The moon and the stars, which You have ordained; What is man that You take thought of him . . ." (vv. 3, 4a). David's awe in light of God's creation does not, as might be expected, diminish man; rather it makes man the greater for it. He is saying that the all-powerful God Who created the universe nonetheless values man highly. This is reiterated in v. 5: "Yet You have made him a little lower than God, And You crown him with glory and majesty!" The word translated here as "God" is the Hebrew word *'elohim*, which in the King James tradition was rendered as "the angels," an understanding dating back to the Septuagint. Leupold, in his classic commentary on the Psalms, has said: "We are strongly of the opinion that *'elohim* should here be translated in its plain and regular meaning 'God,' a meaning which it has almost without exception" (1981, p. 107). Another Old Testament scholar put it this way:

> The rendering "angels" for the Hebrew term *'elohim* seems to have been a desperate attempt on the part of the translators of the Septuagint to avoid what they determined to be a difficulty in their own culture. Had they translated "a little lower than God," would not their pagan neighbors accuse them of worshipping demigods? Where would the great Jewish declaration of monotheism go if they admitted to this high view of man? (Allen, 2000, pp. 64-65).

Modern translations have not all relied on this traditional rendering. Whereas the New King James (NKJV) and New International (NIV) Versions retain the sense as "angels" or "heavenly beings," the New American Standard (NASB) and Revised Standard (RSV) translate the term as "God." This implies that man has so much worth that he is only a little lower than God Himself. This idea is amplified by the subsequent context: "And You crown him with glory and majesty! You make him to rule over the works of Your hands; You have put all things under his feet." (vv. 5b, 6a).

Regardless of the interpretation of *'elohim*, Psalm 8 is clearly a song of praise to God Who has given great worth and authority to man. This value comes not through man's effort, but is a gift from the Lord of creation.

The value of man is also seen in the Genesis account of creation, where God's creative work on each day is declared good, but with the creation of man

on the sixth day, He declared it "very good" (Gen. 1:31). The passage that outlines man's creation is Genesis 1:26-27:

> Then God said, "Let Us make man in Our image, according to Our likeness; and let them rule over the fish of the sea and over the birds of the sky and over the cattle and over all the earth, and over every creeping thing that creeps on the earth." God created man in His own image, in the image of God He created him; male and female He created them. God blessed them; and God said to them, "Be fruitful and multiply, and fill the earth, and subdue it; and rule over the fish of the sea and over the birds of the sky and over every living thing that moves on the earth."

The word translated "image" is the Hebrew *tselem*. It appears sixteen times in the Old Testament, five of which refer to man as created in God's image. In most of the other cases, *tselem* refers to an idol (Zodhiates, 1990). The root sense is that of a representation or resemblance (Harris, Archer, & Waltke, 1980).

"Likeness" comes from the Hebrew root *demûth*. This appears twenty-six times in the Old Testament, often in conjunction with theophanies, or appearances of God. It is worth noting that Ezekiel and Daniel never claimed to have seen God, only the likeness of God as in Ezek. 1:26, 28 or Dan. 10:16 (Harris et al., 1980). Two key uses of *demûth* to describe man's resemblance of God are in Gen. 1:26: "Let Us make man in Our image, according to Our likeness" and Gen. 5:1: "In the day when God created man, He made him in the likeness of God." Additional insight comes from Gen. 5:3 where Adam's son Seth is "in his own likeness."

Thus man resembles God, yet not in any physical or visible characteristics and not so as to make man equal to God. That being said, there has been considerable historical debate over the concept of the "image of God." It is clear, however, that this is some quality or aspect whereby created man is like God. This makes man distinct from animals, for the Bible declares that only man is made in God's image.

In the Jewish tradition, the term "image" denotes a resemblance, yet clearly of lesser degree than God Himself. This has been interpreted most often as the capacity for rational thought (Goldberg, 1990). Among the early Church Fathers, Irenaeus made a distinction between "image," which he related to man's reason and volition, and "likeness," referring to man's holiness and relation to God (Ware, 2002).

Augustine taught that God's image relates to memory, intellect, and will, capacities that he implied were analogous to the triune persons of God (Augustine, 396). Thomas Aquinas rooted the image of God in man's intellectual capacities (Aquinas, 1274), though theologian Anthony Hoekema reasonably feels this was overly influenced by the writings of Plato and Aristotle (Hoekema, 1986). In his *Institutes*, John Calvin wrote that the human soul is the image of God (Calvin, 1581). More recently, some theologians have emphasized unique aspects of personality, such as self-awareness and emotion, that separate men from animals (Eichrodt, 1967).

In this short historical overview, note that Irenaeus is somewhat unique in his desire to separate "image" from "likeness" as having different meanings,

though some other theologians have also adhered to this idea. A full treatment of this question is beyond the scope of this paper. For my purposes, I will treat "image" and "likeness" as synonyms.

Of interest is the impact of the fall of man on the image of God. Luther, who equated the image with man's original righteousness, taught that fallen man had lost God's image and that the goal of salvation is to restore it in Christ. Calvin took the broader view that the fall of man has corrupted God's image to a greater or lesser degree, but that some aspect of the image of God remains (Hoekema, 1986). Scriptural support for this comes from Gen. 9:6, James 3:9, and Col. 3:9-10, all of which refer to the image after the fall.

The preceding historical ideas come under the category of so-called *structural* views, i.e., ways in which human nature is structurally related to God's nature (Saucy, 1993). More recently, Karth Barth proposed another concept, the *relational* view. This idea emphasizes the social character of man in his ability to relate to God. Others have taught a *functional* view, wherein the emphasis is on man's stewardship over creation as the function for which he was created (O'Mathuna, 1995).

Though there are multiple interpretations of the image of God, one thing is clear: the scriptural context relates to man's high value as taught in Psalm 8. For example, Genesis 9:6 states: "Whoever sheds man's blood, by man his blood shall be shed; for in the image of God He made man." Thus, capital punishment is an appropriate penalty for the destruction of an image-bearer. In the New Testament, James 3:9 condemns the tongue as evil, because it curses men "who have been made in the likeness of God."

Historical Judeo-Christian conceptions of the image of God are *inferences* from biblical texts. It may seem surprising that such an important concept is never explicated in full, until one realizes that such is not the purpose for which Scripture was written:

> Just as one cannot find a biology or geology worked out in Scripture, so one cannot find a psychology or anthropology there either. This does not mean that there are no statements about the human person. Scripture makes it plain that humans are to be seen from the perspective of God and His purposes. But these insights are not developed into a systematic theory about persons considered in abstraction. Philosophical considerations only tacitly underlie other concerns (Anderson & Reichenbach, 1990, p. 199).

If the image of God determines personhood, then there is a great danger in attempts to arrive at conclusions about this important concept from a list of characteristics. This may open up a real temptation to declare some human beings as "non-persons" when they cannot fulfill all the elements of such a list. For example, Christian theologian Robert Rakestraw uses the criterion of rationality to claim that an individual in a persistent vegetative state (unresponsive coma) has lost the ability to be an "imager of God," and thus may be declared dead (Rakestraw, 1992).

On the contrary, the image of God in man must surely be an intrinsic feature, not separable from his humanness. Though the image may be tarnished by sin, it is never lost, and it may be renewed through Christ (Eph. 4:22-24; Col. 3:10).

As shown, the image of God in man has an *ontological* correlation with the Divine nature, such that man is a representation of God, though not equal to God. The New Testament, in such passages as Rom. 8:29 and 2 Cor. 3:18, also teaches the spiritual principle that a Christian is *conformed* to the image of Christ as he or she matures spiritually:

> The goal of our redemption in Christ is to make us more and more like God, or more and more like Christ who is the perfect image of God. The fact that the image of God must be restored in us implies that there is a sense in which that image has been distorted . . . We should think of the image of God in this sense, therefore, not as a noun but as a verb: we no longer *image* God as we should; we are now being enabled by the Spirit to *image* God more and more accurately; some day we shall image God perfectly (Hoekema, 1986, p. 28).

John 1:14 reveals the ultimate validation that God confers great worth on fallen man through His image: "And the Word became flesh, and dwelt among us." Hoekema has again expressed this well:

> That God could become flesh is the greatest of all mysteries, which will always transcend our finite human understanding. But, presumably, it was only because man had been created in the image of God that the Second Person of the Trinity could assume human nature. That Second Person, it would seem, could not have assumed a nature that had no resemblance whatever to God. In other words, the Incarnation confirms the doctrine of the image of God (Hoekema, 1986, p. 22).

In summary, the image of God relates to some way that man resembles his Creator, and defines man as a morally significant entity (person). It is the image of God that separates humanity from the animal world. Among structural views, this includes such traits as intellect, emotion, volition or will, and conscience or morality. Relational views stress the social character of man, while functional views emphasize man's stewardship role over the created realm. All of these concepts are limited expressions of an ontological or intrinsic relationship to the Divine that may not be fully expressed by a list of traits.

In the broader context, then, God as divine Person has given great value to the person of man. Just when does this valuing begin? In other words, at what moment in life does personhood originate?

Scripture teaches that God values persons yet in the womb. A beautiful expression of this is found in Psalm 139, vv 13-16:

> For You formed my inward parts; You wove me in my mother's womb. I will give thanks to You, for I am fearfully and wonderfully made; Wonderful are Your works, And my soul knows it very well. My frame was not hidden from You, When I was made in secret, And skillfully wrought in the depths of the earth; Your eyes have seen my unformed substance; And in Your book were all written The days that were ordained for me, When as yet there was not one of them.

Through rich poetry, David describes God's formation of him in the womb as an intimate and personal process. The word "formed" comes from the Hebrew word '*âsâ*, which means to fashion or to build. This is a different term than the word bârâ' (as in Genesis 1:1), which implies an original creation *ex nihilo* (Harris et al., 1980; Zodhiates, 1990). This sense is amplified in constructive parallelism by the word translated "wove" in the NASB, which is the Hebrew *cakak*, rendered as "knit" in the NIV or RSV (Strong, 1996).

Though not referring specifically to the womb, this same sense of a personal fashioning and weaving of an individual is also seen in Psalm 119:73: "Your hands made me and fashioned me," or in Job 10:10-11: "Did You not . . . clothe me with skin and flesh, and knit me together with bones and sinews?"

Thus, David's sense of awe and wonder in Psalm 139 relates to a personal, intimate, hidden process. Though made in secret, God knew him, and His eyes saw him, before he was completely formed. God also knew David's history, and the length of his days.

Jeremiah also describes God's personal involvement with him as an unborn child (1:5): "Before I formed you in the womb I knew you; And before you were born I consecrated you; I have appointed you a prophet to the nations." Some have criticized this interpretation by saying that the text only refers to God's knowledge of Jeremiah's pre-birth destiny as a prophet. However, the word "formed" here, from the Hebrew *yatsar*, has the primary meaning of "fashioning," as with a potter and his clay (Strong, 1996). This implies an intimate level of involvement.

A subtler, though nonetheless valid, example is in Genesis 25:21-24:

> Isaac prayed to the LORD on behalf of his wife, because she was barren; and the LORD answered him and Rebekah his wife conceived.
>
> But the children struggled together within her; and she said, "If it is so, why then am I this way?" So she went to inquire of the LORD.
>
> The LORD said to her, "Two nations are in your womb; And two peoples will be separated from your body; And one people shall be stronger than the other; And the older shall serve the younger."
>
> When her days to be delivered were fulfilled, behold, there were twins in her womb.

The word translated "children" is the common Hebrew word for son or child, though here they are still in the womb. Their struggle presages a lifetime of conflict (Keil & Delitzsch, 1978). A sense of personality and character is clearly in view for the yet unborn Jacob and Esau.

The New Testament also teaches the personhood of the unborn. The most notable instance of this is in Luke 1:41-44, where Elizabeth, five months pregnant with John (who would become the Baptist), meets Mary, the pregnant mother of Jesus:

> When Elizabeth heard Mary's greeting, the baby leaped in her womb; and Elizabeth was filled with the Holy Spirit. And she cried out with a loud voice and said, "Blessed are you among women, and blessed is the fruit of your

> womb! And how has it happened to me, that the mother of my Lord would come to me? For behold, when the sound of your greeting reached my ears, the baby leaped in my womb for joy."

Two issues become clear from this marvelous passage. Though the events have miraculous overtones, the personhood of John the Baptist is evident from his expression of joy at the Savior's presence. Furthermore, Jesus is seen as a person as well.

Though it affirms the value of persons before birth, nowhere does Scripture explicitly declare that personhood begins at conception. Attempts to make it do so commit the error of interpreting biblical data from a modern scientific framework. The Scripture writers, though infallibly inspired by the Spirit of God, wrote within their own cultural context, and would not, for example, have been familiar with such modern concepts as *embryo*, *sperm*, and *ovum*, nor the term *person* as it is used in modern bioethical debate.

An example of this error can be seen in interpreting in Psalm 51:5, where David expresses his repentance for his great sin with Bathsheba: "Behold, I was brought forth in iniquity, And in sin my mother conceived me." It is tempting to claim that sin is here assigned to the unborn child from conception. Since sin is a moral quality, so the argument goes, it can only apply to persons. Therefore, this implies that David was a person from the moment of conception.

This would be true if the Hebrew term translated "conceived" were used in some technical sense, e.g., as in the biological joining of gametes. However, there are a variety of Hebrew words used to denote the idea of conception, and the meaning is never that technically precise. For example, the word translated "conceive" in Psalm 51:5 could be translated "mated" in Gen. 30:30 (NIV). The word "conceive" in Judges 13:3 and 13:7 comes from a Hebrew word that means "to become pregnant" or "to be with child." This same word is used metaphorically in Job 15:35 to refer to conceiving trouble (NIV) or mischief (NASB). The word "conceive" in Numbers 5:28 comes from a Hebrew word that means "to bear" or "to yield" (Strong, 1996). Literally or metaphorically, these Hebrew words all refer simply to the state of pregnancy resulting from sexual union (Harris et al., 1980). In some contexts, to "conceive" is separated from actual birth (i.e., it is an earlier stage of life). But to make these Hebrew terms imply more than this would be overreaching.

In summary, the Bible affirms that man has great value to the Creator-God, and that he is made in God's image. In both the Old and the New Testament, personality is ascribed to the unborn child, whom God forms in the womb by an intimate and personal process. Although the Bible does not directly state that personhood begins with conception (in the technical sense), such a conclusion is warranted by an appeal to common sense and continuity. In order to make this point clear, I turn next to philosophical considerations.

The Philosophical Basis of Personhood

Empirical functionalism is the view that human personhood may be defined by a set of functions or abilities. Such abilities must be present in actual, not potential form. The classical expression of this view is that of Joseph Fletcher,

who in 1972 outlined twenty criteria for human personhood. These included such hallmarks as minimum intelligence, self-awareness, a sense of time, and the capacity to relate to others (Fletcher, 1972). In response, Michael Tooley weighed in with the idea of self-awareness (1972), and McCormick with the concept of "relational potential," based on the ability to interact socially with others (1974). Fletcher then decided, based on feedback from these and other writers, that the *sine qua non* for human personhood was neocortical functioning (Fletcher, 1974). Neocortical functions are those "higher brain" processes of the cerebral cortex necessary for active consciousness and volition. This should be contrasted with whole-brain functioning, which includes activities of the brainstem as well as the cortex.

Note that there is no significant disagreement over "whole-brain" definitions of personhood, or more properly, when it has ceased. For example, at the end of life, when both higher centers *and* the brainstem no longer function, the individual falls under the guidelines now legally accepted in most states for brain death ("President's Commission," 1981). This means that death has occurred in the same sense as when the heart has stopped beating and respirations cease. Disagreement arises, however, in using neocortical functioning as the determining factor for death while the brainstem and many autonomic bodily functions are still intact. Such a criterion might be used, for example, to determine the end of meaningful personhood in someone in a persistent vegetative state (PVS), i.e., a state of deep, irreversible coma. At present, the law does not permit such persons to be declared dead. Some secular bioethicists have proposed that neortical definitions of death be adopted, on the basis of a presumed loss of personhood (Veatch, 1981).

Functionalists would extend the above argument to deny personhood to the unborn child, since she lacks rationality or self-awareness. However, by this criterion, one could argue that adults also lack self-awareness when asleep or under anesthesia, yet no one questions their personhood during such moments. One way to circumvent this objection is to use Tooley's idea that only "continuing selves" have personhood, which includes both self-awareness and a sense of the future (Tooley, 1983). This would nonetheless deny personhood to the unborn and justify abortion on that basis.

Michael Tooley, and more recently, the Princeton philosophy professor Peter Singer, have both advocated the next logical step: infanticide (Veith, 1998). If the fetus has no right to personhood because it is not yet self-aware, then neither does the newborn: "Infanticide before the onset of self-awareness . . . cannot threaten anyone who is in a position to worry about it" (Singer, 1985, p. 138).

Wennberg finds such a position objectionable, and argues that there is a difference between those beings with a *potential* capacity for rationality and those with a *developed* capacity. Though the former are not persons (in his view), both are entitled to a right to life, with that right growing with greater and greater development of potential (Wennberg, 1985). Becker compares personhood to a process: "When can we say that the fetus is a human being rather than a human becoming? Surely only when its metamorphic process is complete" (Becker, 1988, p. 60). Both Wennberg and Becker would imply, therefore, that there are *degrees* of personhood, i.e., that some human beings have more of it than others. On this view, there can be such an entity as a *human non-person*.

All of these variants of empirical functionalism suffer from the same defect as discussed earlier with Christian perspectives on the image of God. If a list of functions or abilities defines personhood *or* the image of God, then those who lack such traits may be declared non-persons. Of course, a functionalist would not see this conclusion as morally defective. However, as I have attempted to show earlier, functionalism is incompatible with a scriptural view of persons. I will now try to show why it is untenable philosophically.

Ontological personalism states that all human beings are human persons. On this view, the intrinsic quality of personhood begins at conception and is present throughout life (O'Mathuna, 1996). Such individuals are not potential persons or "becoming" persons; they are persons by their very nature. There is no such thing as a potential person or a human non-person.

In order to understand this it will be helpful to reflect on the worldview assumptions that underlie both personhood views. Since the Enlightenment, society in general has been dominated by a high regard for science and the secular tradition of naturalism. Naturalism is the concept that only observable data has reality. A scientist who adheres to this view is free to have any metaphysical or philosophical opinion he would like, as long as it does not influence his practice. In other words, he need not hold to naturalism as a philosophy, but he must adhere to it in his methodology (Plantinga, 1997). However, the Christian scientific community should not be bound by the constraints of methodological naturalism.

Herein lies the tension between the two ideas of personhood. The influence of naturalism has led secular science away from a reverence for life, replacing it with a reductionism that claims the human organism is no more than the sum of its chemical parts. The empirical functionalism idea of personhood is compatible with this view, which makes man simply a collection of parts and functions, or a *property-thing*. Put together enough chemical molecules in the right way, and you have a human being; put another set of parts together, and you have a 1957 Chrysler. Philosophically, it makes no difference.

Ontological personalism, on the other hand, is based on the premise that a human being is a *substance*. A substance is a distinct unity of essence that exists *ontologically prior* to any of its parts. This traditional concept dates back to Aristotle and Thomas Aquinas. This view has been well summarized by the Christian philosopher J. P. Moreland (1995), and is discussed in great detail in the book *Body and Soul* (Moreland & Rae, 2000). For this review, I will focus on two implications of the idea of substance: the parts v. whole distinction, and continuity.

To expand on my earlier illustration of a classic automobile, consider a nicely restored 1957 Chrysler. Many of the original parts have rusted away and have been replaced, so that this vintage car is a collection of old and new. Although many will refer to it as the same car as when it was new, intuition tells us that this is not the case. In fact, as stated earlier, remove the wheels, the motor, the seats, and the body, and the result is no longer a 1957 Chrysler; it is not even a car. To go still further, imagine adding other parts to the original chassis, such that the result (God forbid) is a 1972 Volkswagen Beetle! There was no continuity of essence between the two vehicles; each is nothing more than a collection of parts (my apologies to VW lovers).

Try to do the same kind of thought experiment on a human being. Remove an arm or a leg from John Doe, and he remains a person, in fact, the *same* person. You can amputate all of John's extremities and even remove many internal organs; as long as he remains alive, his substance will never change. You can even "add new parts," by transplanting organs from other persons, yet John Doe will never become James Smith; his substance is not defined by his component parts. He will always remain the same person.

Consider the argument from continuity. The cells of the human body are constantly being replaced. As nutrients are taken in and waste products given off, new chemical molecules enter and leave on a daily basis. The outer skin is completely replaced every four weeks. The lining of the gastrointestinal tract is replaced even more rapidly, every 5-7 days (Tortora & Grabowski, 2003). It is reasonable to claim that all of the chemical parts of the body are completely replaced, say, every few years.

Yet an individual, as substance, has continuity from one moment to the next. She is the same person as she was one week ago, one year ago, or ten years ago. She has memories that give her continuity with her present state. She relates to her childhood; she can give the date of her birth. Even if she lacks such memories because of disease or injury, she has a continuing self that is identical to her earlier self.

Naturalism has its greatest difficulty here. To hold to a property-thing view of persons is to deny the commonsense understanding of personal continuity, with a host of attendant problems for law and morality. Mortimer Adler has cited the denial of human nature as one of the great philosophical mistakes of our age, with serious consequences for moral philosophy (1985).

A concrete example may make this clearer. On June 11, 2001, Oklahoma City bomber Timothy McVeigh was executed by lethal injection in Terra Haute, Indiana. As a society, we held him morally accountable for an act committed on April 19, 1995. Even though over six years had elapsed, there was moral continuity. In other words, the *same* Timothy McVeigh that committed the crime was the person punished. If a property-thing view is applied, then there was no continuity over time, and McVeigh was a different person (in that he was made up of different molecules) in the intervening period, and the "wrong person" was executed. This is clearly nonsense, and flies in the face of intuition.

Though it has limitations, intuition can be a powerful guide, even in discussing abstract metaphysical principles. The English philosopher John Locke called our shared intuition "natural law" (Budziszewski, 1997). Even Scripture affirms that the Gentiles, ignorant of the Hebrew God, have an internal law they all hold in common: a "law written in their hearts" (Rom. 2:14-15).

Turning our attention to the unborn child in the womb, we can use intuition and continuity arguments to persuasively argue for personhood. For example, Francis Schaeffer used such an argument when he posed a rhetorical question: "Would you kill this infant a minute before he was born, or a minute before that, or a minute before that?" (Schaeffer & Koop, 1979, 37) Using common sense, there is no *prima facie* (at first impression, or self-evident) reason to assume that a baby changes its essential nature by virtue of geography (namely, in the womb

or out of it). And there is no *prima facie* reason not to extend such humanity further back in time. In fact, the continuity argument argues for the personhood of the fetus all the way back to the moment that it became a *substance*, i.e., the moment of conception.

The continuity argument is also consistent with the biblical data on personhood. Although I am uneasy about using Psalm 51 to directly affirm the conception view, David clearly has an intuitive idea of moral continuity in mind when he states, "in sin my mother conceived me" (v. 5). He relates his sinful nature to his origin in the womb. Likewise, Jer 1:5 (the call of Jeremiah) expresses moral continuity with the womb, as does the story of the yet-unborn Jacob and Esau in Gen. 25: 21-24. Luke 1:41-44 clearly depicts *the persons who will become the* adult John the Baptist and Jesus.

In summary, the idea of ontological personalism avoids the error of viewing persons as property-things. It relies on the substance view of persons, which, far from being an esoteric philosophical construct, follows from simple intuition: persons are more than the sum of their parts, and have continuity with their past. This is compatible with the scriptural portrayal of persons.

I might add that this view is also compatible with biblical teaching on the image of God. It allows us to explore the way human beings resemble the Divine (rationality, volition, social nature, etc.), while helping us to avoid the dangers of a strictly functional definition. On this view, the image of God is *intrinsic* to the nature of persons. Thus, Scripture teaches the value of man from the womb, whereas intuition and philosophy help us to affirm that such valuation begins at conception.

The philosophical idea of a human being as substance arises out of a broader philosophical principle, that of *substance dualism*. Substance dualism holds that there is an entity called a *soul*, and that the mind is a faculty of the soul. Body and soul (mind) are *functionally holistic*, which means that the two entities are deeply integrated and functionally interdependent. Yet they are *ontologically separate*, which means that the soul can exist independently of the body. This allows for a personal existence after death (Moreland & Rae, 2000). Another implication of this idea is that if personhood begins at conception, then that is when the soul originates as well.

What exactly is conception? What happens at this key moment? Are there other moments worthy of consideration as to when personhood begins? I now turn to the viewpoint of biology, with insights derived from anatomy, physiology, embryology, and genetics.

The Biological Basis of Personhood

In an earlier era, common terminology implied personhood in the womb, and this habit has continued to the present. Imagine a pregnant woman visiting her physician and saying, "Doctor, is my fetus healthy?" Or, "Is this a male fetus or a female fetus?" No, she will ask, "How is my baby?" And, "Is it a boy or a girl?" These are terms that relate to a person, not a thing.

Yet advancements in science and medicine have led to the ability to peer into the womb and to manipulate the pre-born to an amazing degree. This has led to

the impulse to derive a functional / biological definition of personhood based on the level of fetal development.

In this discussion, I have argued in favor of ontological personalism, which holds that human beings are persons from conception onward. Yet empirical functionalism derived from naturalistic presuppositions has been the dominant view of secular science. It will therefore be useful to use these two viewpoints to analyze various biological "decisive moments." I will begin with the moment of birth and work backwards. Wennberg has presented a similar analysis from the viewpoint of functionalism (1985), though my approach is presented in the reverse order.

A few definitions are in order before I begin. The period from *conception* (fertilization of an human egg) to birth is a 38-week span of time called the *gestation* period. Although these terms are sometimes used interchangeably, the conceptus is properly referred to as an *embryo* up to two months of development, and as a *fetus* after that (Tortora & Grabowski, 2003).

Birth

It seems intuitively evident that a newborn baby is a person. Yet Wennberg does not concede this commonsense idea, arguing from a functionalist perspective: "While the newborn infant is on the verge of personhood, it is not yet a person in the strict sense. It will shortly begin to acquire personal characteristics, but at birth its mental and sensory functioning is often below many newborn animals (the horse, for example)" (1985, p. 78).

For Wennberg, a human person is defined by a list of functional traits that exclude a newborn baby by definition. And as mentioned earlier, Tooley, Singer, and others would use this as a justification for infanticide. However, Beckwith would counter that human beings have certain inherent capacities, which may currently not be fully realized: "It does not make sense to say that a person comes into existence when human function arises, but it does make sense to say that a fully human person is an entity who has the natural inherent capacity to give rise to human functions" (1993, p. 109). In this respect, the newborn will realize its inherent capacity in the near future, just as will the reversibly comatose and temporarily unconscious. The idea of natural inherent capacity may be the *biological equivalent* of the substance-dualism of Moreland and Rae.

It seems clear then, that the newborn baby is a person. This is a position on which Christians and (most) secularists can agree. What is unique about this decisive moment?

Prior to birth, the baby is completely dependent on the mother for oxygen, nutrients, and for the elimination of carbon dioxide and other wastes. The lungs are collapsed and partially filled with fluid, and there are no breathing movements. Exchange of gases, nutrients, and wastes takes place in the blood that passes through the umbilical cord and placenta, attached to the side of the uterus.

At the moment of birth a number of fascinating changes take place. The umbilical cord is clamped or tied off at delivery, and the placenta separates from the uterus. This complete cessation of blood from the mother stimulates the respiratory center in the brainstem, and the baby takes his first breath. At the same time, changes take place within the heart that allow blood to flow to the lungs (Tortora & Grabowski, 2003). The newborn baby is now "on his own."

Ethically it may seem attractive to make biological independence a determinant of personhood. In other words, it may appear that a baby immediately prior to birth does not have an independent existence, and therefore should not strictly be considered a person. This would have the added appeal of conforming to current legal usage, which attaches legal rights such as inheritance and property ownership to the time of birth.

Yet a moment of reflection will show the fallacy of this approach. The actual moment of birth is not totally dependent on biological maturity. For a number of reasons (not all of them medical), a woman may undergo Caesarian section or induced labor to deliver a baby at a predetermined moment and not strictly by "nature." Legal rights accrue from the moment the newborn appears. Furthermore, ascribing legal rights to a newborn is merely a Western social convention. Certainly that which is legal is not necessarily ethical (abortion is a good example of this).

Therefore, independent biological existence cannot be a morally relevant criterion for personhood. From the standpoint of abortion, the arbitrary nature of this moment is clear. Recall Schaeffer: "Would you kill this infant a minute before he was born, or a minute before that, or a minute before that?" (Schaeffer & Koop, 1979).

Before leaving this part of the discussion, it is interesting to note the viewpoint of some, that the first breath determines personhood, from the biblical account of the creation of Adam: "Then the Lord God formed man of dust from the ground, and breathed into his nostrils the breath of life; and man became a living being" (Gen. 2:7). However, this case is unique, in that it was the creation of the first man, whose first breath coincided with his biological origin. This would not be true, of course, of any other human being except Eve. Also, as we have already discussed, other scriptural texts affirm the personhood and value of those in the womb, i.e., before the first breath.

Viability

One reason that the 1973 Roe v. Wade abortion decision denied personhood to the fetus was its lack of "independent viability:"

> With respect to the State's important and legitimate interest in potential life, the "compelling" point is at viability. This is so because the fetus then presumably has the capability of meaningful life outside the mother's womb. State regulation protective of fetal life after viability thus has both logical and biological justifications. If the State is interested in protecting fetal life after viability, it may go so far as to proscribe abortion during that period, except when it is necessary to preserve the life or health of the mother (Roe, 1973).

Yet as we have pointed out elsewhere, the decisive moment of viability is a "moving target" (Sullivan, Francis, & Sellers, 1999). In 1973, the presumed limit on viability was 28 weeks, with an occasional infant surviving birth at 24 weeks gestation. Now such survivals are much more routine and some can live outside the womb as early as 20 weeks.

Although there are many complications related to prematurity, the most significant issue is inadequate lung maturation. Surfactant, a detergent-like

chemical that aids in lung flexibility, is lacking in lung tissue too undeveloped to produce it. This makes the lungs stiff, making it difficult for "preemie" babies to breath on their own. Newer developments in drug therapy, as well as the use of artificial surfactant, have greatly improved the function of premature lungs (Sweet & Halliday, 1999).

In short, viability as a criterion for personhood is arbitrary and depends on the current state of medical therapy: "Viability measures medical technology, not one's humanity" (Beckwith, 1993). Yet even if one would grant this criterion of personhood, it has not been legally determinative in the abortion issue. From a legal perspective (as reaffirmed by the 1992 Casey decision), there has always been an exception clause that operates after the point of viability, for "pregnancies endangering a woman's life or health" (Casey, 1992). This has made abortion essentially legal up to any moment before physical birth.

Quickening

Quickening is the traditional term for the decisive moment when fetal movement is first detectable by the mother. This usually corresponds to 16 to 20 weeks gestational age. From a pre-scientific viewpoint, this decisive moment was often when the fetus was first considered "alive," in the sense that it gave mother an emotional identification of her unborn child. This moment might resonate with such writers as Marjorie Maguire, who believes that a fetus only becomes a person when emotionally accepted by the mother (Maguire, 1988).

Nonetheless, scientific knowledge has demonstrated quickening to be an arbitrary measure of fetal personhood. Indeed, a simple ultrasound examination may demonstrate fetal movement as early as 9 weeks. Whether or not the mother detects such movement should have only emotional significance.

Of course, the idea of quickening has enormous practical importance in the abortion issue: the emotional bonding that results from quickening may help prevent second-trimester abortions. As Furedi points out, "There is much anecdotal evidence to support the claim that even women who are quite determined that their pregnancy was unwanted at the beginning may find, where access to abortion is delayed to the point when they can feel fetal movements, that they become more ambivalent in their attitude to abortion" (1997). Though quickening has no merit in the defining of personhood, it has great impact from a practical perspective in reducing the number of abortions.

Sentience and Neurological Functioning

Some have proposed that sentience, or the ability of the fetus to experience pain, should be a determinant of personhood. However, since pain is a subjective phenomenon, it would be difficult to be certain at what stage it may be experienced by the unborn. Certainly, the perception of pain depends upon the development of spinal cord sensory pathways (e.g., the spinothalamic tracts) to carry such impulses to the brain. Further, the thalamus, which is the major sensory coordinating center of the central nervous system, must be sufficiently developed to allow for *cognition*, that is, the conscious awareness of pain or any other sensory signal. Cognition depends, in turn, on an intact cerebral cortex. Anand and Hickey have pointed out that functional maturity of the cortex may be revealed by electroencephalographic (EEG) information. Since short bursts of

EEG activity begin as early as 20 weeks (1987), this may be the earliest possible moment that pain may be experienced by the fetus.

There are two major reasons to consider the decisive moment of sentience/neurological development in our discussion of human personhood. First of all, some have argued that an entity that does not experience pain cannot be harmed. But this confuses the awareness of harm with actual harm. Real injury can take place to a person without her awareness, such as stealing, bodily damage to a loved one, etc. Furthermore, as Beckwith points out, "If sentience is the criterion for full humanness, then the reversibly comatose, the momentarily unconscious, and the sleeping would have to be declared non-persons" (1993, p. 103). This idea is clearly absurd.

A second major reason to consider sentience / neurological development as determinative is because of the use of neurological criteria for declaring a person dead. The idea here is that, for transplant purposes, "brain death" (a better expression is "death by neurological criteria") is defined as the cessation of brain function. This can be determined by an EEG or by cerebral blood flow studies. By analogy, Goldenring proposes that "brain birth," the beginning of a fully integrated nervous system, is the point at which humanness begins: "When the coordinating and individuating function of a living brain is demonstrably present, the full human organism exists" (1993, p. 45).

Yet the analogy fails because the two situations are vastly different. As one writer points out, "There is a world of difference between no brain activity in the sense of no more and in the sense of *not yet*"(Schwarz, 1990, p. 52). In other words, the brain dead person has ceased to have any potential for brain activity, while the unborn child has a future capacity, yet unexpressed, for mental functioning.

It is worth reminding the reader at this point that the decisive moments we have considered as possible criteria for personhood are examples of empirical functionalism, i.e., landmarks for protectable humanity that depend upon a list of functions. I have argued on the other hand for the viewpoint of ontological personalism, which sees personhood as an intrinsic or inherent property of being human. This distinction is important in any discussion of sentience/neurological development because of the problem of *anencephaly*.

Anencephaly (meroanencephaly) is a congenital anomaly that occurs in about one in 1000 births. It usually involves the complete absence of the cerebral cortex, with the presence of only a rudimentary brainstem. Infants with this lethal disorder are often stillborn, or survive at most for a few hours after birth (Moore & Persaud, 1998). Some have proposed that the absence of sentience or of the possibility of it ever occurring argues strongly for declaring the anencephalic a non-person. This would allow some "good" to come from a bad situation, and allow the baby's organs to be used by other infants in need. This extends the brain death / brain birth argument, for it would treat an anencephalic infant as brain dead. Indeed, in 1994 the Council on Ethical and Judicial Affairs of the American Medical Association gave its approval to remove organs from infants with this condition prior to their death ("AMA Council," 1995). Though the Council has since reversed its decision, the functionalist approach remains persuasive in general bioethical discourse.

As persuasive as this argument is, and as sympathetic as I am with the terrible dilemma such infants present, I must object to this conclusion. From the viewpoint of ontological personalism, an anencephalic infant is fully human, therefore fully a person. It is unacceptable to deny such infants status as persons for the same reason that such status cannot be denied to those in a persistent vegetative state. Anencephalics, like PVS patients, are not *dead*, i.e. they still have brain-wave activity (however abnormal). In philosophical terms, the ontological substance is present, even if the full expression of its potential cannot take place.

Further, the functionalist view devalues such lives, claiming that the only way they can have value and dignity is for the *parts* they can provide to others. This is the ultimate functionalist error that treats persons as commodities. Such a view is an offense to the God Who allows anencephalics to be born, and implies that He can make mistakes.

I would not argue for extraordinary medical measures to maintain the life of anencephalic infants. These children are terminally ill, and should not be subjected to futile treatment. Such a stance does not deny their inherent dignity.

Human Appearance

By the end of the eighth gestational week, the developing embryo has a distinctly human appearance (Moore & Persaud, 1998). As mentioned earlier, this is when the scientific term changes from embryo to fetus. Could this be an indicator of personhood?

There is no doubt that, like quickening, human appearance causes an emotional response. I can confirm this from personal experience. I once worked in sub-Saharan Africa as a missionary surgeon, and ran a hospital that was the only medical center for a large region. On several occasions, a young woman would present in profound shock from blood loss. Such a patient was usually in her middle twenties, with a very low blood pressure and an abdomen full of blood. The disorder is called an ectopic or tubal pregnancy, where scarring of the Fallopian tubes has caused a fertilized egg to implant there rather than in the uterus. Unfortunately, as the pregnancy grows, it ruptures the tube, leading to massive bleeding. Treatment of the mother involves a blood transfusion, followed by immediate exploratory surgery to remove the ruptured tube containing the (now dead) embryo.

There is a rhythm to the routine in a busy operating room. Our African nursing staff would rush in and out with supplies and equipment. Many in the room would be speaking at once, as together we bent our efforts toward saving the woman's life. But as we stabilized the patient, and sent her to recovery, there was invariably a hush in the room. All eyes would turn to me, as I walked to the supply table. There, in the bottom of a metal basin, was the discarded Fallopian tube. My habit was to cut it open, exposing the embryo inside. There, in a tiny, fluid-filled sac, was a tiny, usually perfect-appearing human being, not much longer than an inch in length. The reaction of those crowding around me was always to gasp in awe and wonder.

I do not lightly regard this emotional connection to unborn humanity. Our Creator has given us such intuition, sometimes called natural law, otherwise known as conscience. It is a powerful, internal reminder of the humanity of the

unborn. Yet appearance can be deceptive, for other mammalian species may resemble human beings in their embryonic form, and we would not grant them personhood. Further, congenital defect or disease may cause certain adult persons to be so disfigured that they no longer *appear* human. I do not wish to support simple prejudice, as in the case of certain disfiguring diseases of adults. Nor do I wish to encourage abortion of the early embryo / fetus, simply because it does not *yet* appear human. There is therefore a limit to the human appearance argument, even though it may help our intuition to appreciate the humanity of the unborn.

Blood Circulation

In this survey of decisive moments in gestational development, surely an important landmark is the formation of the embryonic circulation and blood cells. Angiogenesis, or blood vessel formation, begins in the third week after conception, and blood cells begin to form in the embryonic liver, spleen, and bone marrow around the fifth week. At this time also a heartbeat can be detected by ultrasound (Moore & Persaud, 1998).

In the Christian tradition, the blood is an important biblical metaphor for life itself:

> Lev. 17:11: "For the life of the flesh is in the blood . . ."
>
> Lev. 17:14: "For as for the life of all flesh, its blood is identified with its life."
>
> Gen. 9:6: "Whoever sheds man's blood, by man his blood shall be shed, for in the image of God He made man."

As discussed earlier, the "shedding of blood" is equivalent to the taking of human life, as prohibited by Gen. 9:6. Since blood is so intimately tied to life, could a Christian position allow abortion at an earlier point, on the basis that blood cells and a heartbeat have not developed before say, five weeks? In other words, would we be justified in declaring the embryo a non-person prior to this decisive moment because "the life of the flesh is in the blood?"

In response, let us take note of the biological functions of blood. Fresh oxygenated blood from the mother brings oxygen and valuable nutrients (glucose, amino acids, etc.) to the embryo, and removes wastes such as carbon dioxide and urea. This function is present *whether or not* blood circulation is present. In other words, in an earlier stage of development, gases, nutrients and wastes pass to and from the embryo via simple diffusion. When the embryo is small enough, it does not need blood and vessels to carry these products to and fro, but it is still vitally dependent on them. Without such nutritive and eliminative functions, the developing embryo would perish.

Biblically, the rich imagery of blood in the Old Testament is a prophetic type of the bloody death of Jesus Christ on the cross of Calvary. Both in the sacrificial system of animals and in the death of Christ, the main issue is the substitutional atonement for sin by way of a bloody death. In its context, these portions of scripture were never intended to denote the moral status of an individual nor to comment on the technical functions of blood. To attach such moral or scientific significance to the words of Hebrew writers would be overreaching (see the earlier discussion on Psalm 51: 5). Further, the declaration of personhood of the

embryo based on blood circulation would be just as arbitrary as any of the other decisive moments I have already discussed.

Implantation

The decisive moment of implantation is of great interest in the personhood debate. Implantation of the embryo into the wall of the uterus occurs at seven to ten days after conception (Ahokas, 1998). We have discussed elsewhere our objection to defining personhood from this point:

> Conception, defined as fertilization of the egg, has historically been considered the beginning of life. Yet there has been an attempt, in recent years, to redefine the point at which human life begins, an attempt driven more by social ideology than science. This is no mere philosophical question, for society must understand how far to extend the right to life to an individual (Sullivan et al., 1999).

Ideological commitments to the right to abortion have driven a movement in the medical community to define "pregnancy" as the moment when implantation takes place, relegating the embryo to inconsequentiality prior to that point. In fact, the pre-implantation embryo is often called a "pre-embryo," which may serve as a helpful euphemism to justify its destruction: "A legal and ethical consensus is emerging that preembryos are not legal persons or moral subjects" (Robertson, 1992). Notice how this distinction is the key to promoting emergency "contraception" on a Princeton University Web site:

> Emergency contraception does not cause an abortion. In fact, emergency contraception prevents pregnancy and thereby reduces the need for induced abortion. Medical science defines the beginning of pregnancy as the implantation of a fertilized egg in the lining of a woman's uterus. Implantation begins five to seven days after fertilization (and is completed several days later). Emergency contraceptives work before implantation and not after a woman is already pregnant. When a woman is already pregnant, emergency contraception does not work. Emergency contraception is also harmless to the fetus and the mother. (*Emergency Contraception*, 2002).

Obviously, "harmless" would not apply to what happens to the pre-implantation embryo, the fate of which is not mentioned here.

Some might argue that the hormonal interaction of an implanted embryo is necessary for a woman to "feel" pregnant. This is surely true. Yet this cannot be the basis for the ontological determination of personhood. Beckwith has summarized this well: "There is no essential difference between an unknown conceptus and a known conceptus . . . it seems counterintuitive to assert that one's essence is dependent on another's knowledge of one's existence" (1993, p. 95).

In fact, basing personhood on implantation is merely a variation on the viability argument discussed earlier. The naturally conceived pre-implantation embryo is totally dependent on the possibility of implantation. Without this event occurring, it will die. This is also true for embryos conceived by artificial means (e.g. in-vitro fertilization). Unless they are frozen (which in effect "freezes them in time"), they must be implanted to continue developing, or they will die.

Ontological personalism would claim that such embryos are de facto persons by nature. As stated earlier, there is no such thing as a potential person or a human non-person. Thus the mere fact of implantation, just like the awareness of its existence, cannot reasonably be a determinant of personhood.

Conception

Conception is the only true, unambiguous decisive moment for personhood. For one thing, it is the only true *moment*, unlike all the other "moments" that represent poorly or vaguely defined ranges or periods of time (even implantation takes several days to occur). For another thing, conception is when *syngamy* is established, a moment unlike any other. This is one of several terms that I will define in the following discussion.

To begin with, *chromosomes* are structures within the nucleus of each cell that contain the genes responsible for human hereditary characteristics. Most body cells have 46 chromosomes, or 23 pairs. In terms of heredity, one set of 23 chromosomes comes from the father, the other from the mother. This pairing, technically referred to as the *diploid* condition, is necessary for life.

Reproduction, either through sexual intercourse or assisted procreation, involves the union of male and female *gametes* (reproductively capable cells). Male gametes, or *sperm*, develop within the male testicle, and are genetically *haploid*, in that they contain only one set of chromosomes. Female gametes, or *ova* (singular *ovum*, often referred to loosely as a female egg) develop within the female ovary, and are also genetically haploid.

Left to itself, an individual sperm or ovum is incapable of cell division; it cannot exist for more than a short time (48 hours for sperm, 24 hours for the ovum). However, when fertilization (conception) occurs, sperm and ovum unite, and their nuclei fuse. This restores the full complement of chromosomes (46 pairs). The two formerly haploid cells have united to form a genetically new and distinct diploid cell. This new cell has the full potential to become a new individual, and begins to divide within 24 hours.

The restoration of the diploid number of chromosomes is an event called *syngamy*. Only one sperm can combine with one ovum. In fact, within three seconds of penetration by a sperm cell, the cell membrane of an ovum "hardens," so that no other sperm can combine with it. This so-called block to polyspermy (fertilization by more than one sperm) ensures that the new entity will be diploid (Tortora & Grabowski, 2003). No twinning can occur at this moment, and triploidy (having three sets of chromosomes instead of two) is prevented.

Syngamy is the biological moment when human life begins – there is no scientific disagreement about this fact. Does human personhood also begin at this moment? The following five reasons argue for syngamy as the true decisive moment.

Unlike other decisive "moments" we have considered, syngamy takes place over a short period of time, and is truly unique. Syngamy results in the formation of a genetically new individual, where prior to this moment one did not exist.

If substance dualism is true, then human beings are greater than the sum of their parts. No gradualist or functionalist approach could assemble parts to later

become a person. In other words, human beings are persons by their very nature.

If substance dualism is true, then the idea of continuity with the later born child or adult makes sense. All human persons can date their origins to one moment, and one moment only. Stopping to consider any decisive moment during gestation, we will always find that the human substance (person) was ontologically prior to that moment, except at syngamy.

Scripture affirms the value of persons in the womb, even from their earliest origins (even if this is not precisely defined in the Bible). In the light of science, it is only logical to date such metaphysical value from conception.

Intuition tells us that persons begin at their biological origins. In other words, since biological life begins at conception, it is reasonable to date personhood from that moment.

Several objections might be raised against this view. First of all, about 45% of all conceptions are lost by early spontaneous abortions. In many cases, these early embryos are abnormal and could not have developed normally (Moore & Persaud, 1998). This high rate of loss has led some to argue that embryos cannot be persons. However, a brief comparison will show the weakness of this assumption. In some countries of the world, waves of "ethnic cleansing" take place on religious or nationalistic grounds, wherein many children are killed. No one would seriously argue that American or British children are persons, whereas these other unfortunates are not, simply because they were born elsewhere, or because they were less valued by certain members of their society. Also, many more children in developing countries die of infectious diseases than in the Western world, yet we do not seriously claim that they are not persons. If a higher mortality rate does not affect the moral standing of children, how can it be used to argue for the moral standing of children at an earlier stage, when they are still embryos?

Sometimes this argument is expressed as a theological dilemma: how can a good God allow the loss of so many human persons? Or, will there be huge numbers of unborn embryos / children in heaven? These are interesting and difficult questions, but they are theological ones that the Bible does not address. One cannot argue persuasively against the personhood of human embryos from theological silence.

Another objection is the matter of identical twins. Some may claim that, since an embryo can split at seven to ten days to produce twins, this casts doubt on the personhood of the original embryo. At the very least, they claim, personhood can only attach to the twins from the moment that they split. Once again, a brief counterexample may help to show the defect in this argument.

Let us perform another thought experiment. Imagine, if you will, a day in which cloning has been medically perfected, and that I have consented to be cloned (in fact, I would never give such consent, for cloning is morally repugnant to me, but this is only imaginary). One of my skin cells is removed, and its diploid nucleus (containing all the potential for a new human being) is inserted into a female ovum whose nucleus has been removed. If successful, the resulting clone would be genetically my twin, albeit created many years after my own birth. Could one seriously argue that I was not a person prior to the creation

of my twin? A small part of my body "split" away to create a new embryo (the female ovum was just a passive carrier).

In a similar way, an embryo that splits is fully a person prior to twinning; a *second* person (also possessing the diploid condition) begins at the moment of the split. One of the two resulting embryos (it does not matter which) is ontologically continuous with the original fertilized ovum.

By the way, it is worth noting that if human embryos are ever created by cloning they would be full human persons. A cloned embryo's existence would begin at the moment *equivalent* to syngamy (i.e., the moment that the diploid order is established) even if such were achieved outside the normal bounds of human reproduction.

Earlier, I stated that intuition infers that persons begin at their biological origins. Intuition, however, also raises another objection, namely that of appearance: a tiny embryo does not *look like* an adult human being. Yet our society places strong moral value on inclusion and tolerance; those with handicaps should be fully welcome. Prejudice on the basis of color, religion, or ethnicity has no place. How then can we justify prejudice on the basis of *size*? Clearly, if we exclude some members of the human family on the basis of appearance or size, we are being morally inconsistent.

Conclusion

In this paper, I have attempted to outline the major reasons for the conception view of personhood. I began with the biblical basis, analyzing how Scripture affirms the inherent value and dignity of man, and that this value begins in the womb. I then discussed philosophical ideas of personhood, and showed that functionalist views are inadequate, and that a substance / dualist view of persons is philosophically and intuitively consistent, and conforms to Judeo-Christian thought. Finally, I examined several decisive moments in the biological development of human beings, and showed that syngamy is the only unique point in time on which to base personhood. In short, a human being is a person from the moment of conception. This unique dignity attaches to every subsequent moment.

There are many forces driving a desire to redefine humanity. There are many apparent goods to be obtained, from the elimination of genetic defects to the cure of a whole host of diseases through embryonic stem cell manipulation. However, in all of our discussion about human nature, we must never succumb to the objectification or commodification of persons. We cannot allow the cold calculus of utilitarianism influence our inherent, intrinsic understanding of who and what we are. The eighteenth-century philosopher Immanuel Kant saw this clearly, when he argued from non-theological grounds: "Now I say that human beings, and in general every rational being, *exist* as ends in themselves, *not as mere means* for arbitrary use by another will." (Kant, 1793).

This age of moral confusion cries out for a reaffirmation of that which makes human beings unique and worthy. Such "metaphysical pretensions" are not preposterous, as Ayn Rand would have us believe, but are the only basis for human dignity. E&M

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NASB. All Scripture references are from the New American Standard Bible (1995, Lockman Foundation), except as noted.

NIV. New International Version (1984, International Bible Society).

NKJV. New King James Version (1982, Thomas Nelson).

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1 By man, I refer here to humanity, without distinction between male and female. Where possible, I will use *humanity* or *humankind* to refer to human persons collectively.