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WHEN DOES PERSONHOOD BEGIN?

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WHEN DOES PERSONHOOD BEGIN?

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For my parents, Daniel and Carol

TABLE OF CONTENTS

	Page
LIST OF FIGURES	ix
PREFACE.....	x
Chapter	
1. INTRODUCTION.....	1
Thesis	2
Background	3
Personal Interest.....	3
History of Research	6
Methodology	12
2. THE BEGINNING OF LIFE: THE BIOLOGICAL PERSPECTIVE	15
Sperm-Ovum Binding and Embryonic Development	15
The Biological Dimension of Human Personhood	17
Twinning, Fusion, and Embryonic Development	23
“Pre-embryo”?	24
Accessory Tissues.....	25
Identical Twinning.....	26
Chimerization	27
Fertilization, Conception, and Pregnancy	29
3. PERSONHOOD AND THE SOUL	32
The Historical Development of Personhood	33
Ancient Philosophical-Religious Background.....	33
View of the Soul in Eastern Cultures	35

Chapter	Page
Influence of Judeo-Christian Theology.....	36
The Contribution of the Early Church Fathers	36
Development in the Understanding of “Person”	37
The Western Latin Churches	38
The Eastern Greek Churches	39
Modern Philosophical Concept of Personhood.....	40
The Composition of a Human Person: One, Two, or Three Parts?.....	42
What is a Soul?.....	48
The Words in Scripture that Refer to the Soul.....	50
The Image of God	53
4. THE ORIGIN OF THE SOUL	58
The Origin of the Soul and the Doctrine of Original Sin.....	60
Original Sin.....	60
The Relation Between Adam’s Sin and Ours	60
Creationism	62
Biblical Evidence Supporting Creationism	63
Critiques of Creationists’ Use of Biblical Data	65
Theological Challenges Against Creationism	67
Traducianism.....	73
Biblical Evidence Supporting Traducianism	73
The Meaning of the Sabbath.....	77
Summary of Traducianist Arguments.....	78
Theological Challenges Against Traducianism	79
Other Points to Consider.....	89
Conclusion	92

Chapter	Page
5. WHEN DOES PERSONHOOD BEGIN? A BIBLICAL PERSPECTIVE	94
An Infant is a Person	94
An Unborn Fetus is a Person.....	95
John the Baptist: Filled with the Holy Spirit from His Mother’s Womb	95
Paul the Apostle	96
Jeremiah.....	98
The Servant in Isaiah’s Prophecy	100
Jacob, Esau, and Cain	102
The Viable Premature Infant is a Person.....	104
<i>Yasia</i>	105
<i>Shikkel</i>	105
<i>Yeled</i>	105
<i>Ason</i> 106	
A Quickened Fetus is a Person	110
An Unformed Embryo is a Person	111
Personhood Begins at the Moment of Conception.....	114
Samson.....	114
David.....	116
Conclusion	119
6. AN INTEGRATED RESPONSE: MEDICAL, BIOETHICAL, AND THEOLOGICAL PERSPECTIVES	121
Viable Apart from the Womb (Around 23–24 Weeks Gestational Age)	121
Quickening (Around 16–20 Weeks Gestational Age)	124
“Unformed” Embryo (Around 7–8 Weeks Fetal Age)	125

Chapter	Page
Embryo Develops a Heartbeat or Brainwaves (Around 3–6 Weeks Fetal Age).....	129
Heartbeat.....	129
Brainwaves	130
Primitive Streak Appears (Around 2 Weeks Fetal Age).....	138
Primitivism	139
Arguments Against Primitivism	140
Implantation (About 7–10 Days After Conception).....	143
A Medical Response to the Pre-Implantation Argument.....	144
A Philosophical Response to the Pre-Implantation Argument.....	147
Conclusion	148
7. REFLECTIONS FROM A SYSTEMATIC THEOLOGY PERSPECTIVE: PERSONAL ESCATOLOGY AND CHRISTOLOGY	149
A Theological Reflection on Embryonic and Fetal Deaths	150
The Eternal Destination of Miscarried and Stillborn Children	155
Christ Incarnated	161
Christ: The Word Became an Embryo.....	162
Incarnated Embryo: Fully Man and Fully God.....	166
Conclusion	171
8. WHY PERSONHOOD MATTERS: TWO CURRENT ISSUES.....	172
Assisted Reproductive Technology	172
Applying Scriptural Wisdom to Contemporary Matters	173
Lives Conceived by ART	175
Lives Conceived by Somatic Cell Nuclear Transfer	178
Other Ethical Considerations Related to ART.....	181

Chapter	Page
Stem Cell Research	187
Embryonic Stem Cells	189
Adult Stem Cells.....	189
Applying the Biblical Perspective to Embryonic Stem Cell Research.....	190
9. CONCLUSION	192
BIBLIOGRAPHY.....	194

LIST OF FIGURES

Figure	Page
1. Timeline of Elizabeth's and Mary's Pregnancies.....	163

PREFACE

I would like to thank my teachers at the Southern Baptist Theological Seminary. A special thanks goes to Dr. Ken Magnuson for his invaluable guidance. Thanks to Luann Van Campen for reviewing this manuscript and offering insightful comments. Finally, I would like to thank my daughters, Jessica and Cynthia, for proofreading and editing this manuscript, and my wife, Rachel, for her unfailing love and support.

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CHAPTER 1

INTRODUCTION

Humans are created in the image of God (Gen 1:26–27) and every human life is precious in God’s eyes. God prohibits the arbitrary killing of humans (Gen 9:5–6)¹ and reiterates this command with the Sixth Commandment, “you shall not murder” (Exod 20:13). In human developmental biology, the embryonic stage begins with a fertilized ovum’s first mitotic division and ends with eight weeks after fertilization.² Does the Sixth Commandment’s protection extend to a human embryo? How ought we to view a tiny human life in its earliest stage of development? Is an embryo a person that bears the image of God, or merely a “potential person,” as some Christian ethicists suggest?³

Modern technology allows scientists to carefully examine embryonic development and even create embryos in the laboratory. Yet these advancements also give rise to serious ethical questions. For example: Upon creating human embryos by

¹ “And for your lifeblood I will surely demand an accounting. I will demand an accounting from every animal. And from each human being, too, I will demand an accounting for the life of another human being. Whoever sheds human blood, by humans shall their blood be shed; for in the image of God has God made mankind.” (Gen 9:5–6) All Scripture quotations are taken from the NIV, unless otherwise noted.

² J. K. Findlay, M. L. Gear, P. J. Illingworth, S. M. Junk, et al., “Human Embryo: A Biological Definition,” *Human Reproduction* 22, no. 4 (2007): 905–11. Some biologists further divide the embryonic period into two stages: the first two weeks is the germinal stage whereas the third through the eighth week is the embryonic stage. The fertilized ovum is also called a zygote. However, in this dissertation, I will use the word *embryo* to represent a human that is anywhere between fertilization and the end of its eighth week. This will be further discussed in chapter 2.

³ Robert A. Boomsma, “Embryonic Stem Cells and a Reformed Christian World View,” *Perspectives on Science and Christian Faith* 56, no. 1 (2004): 38–48; Dolores Dunnett, “Evangelicals and Abortion,” *Journal of the Evangelical Theological Society* 33, no. 2 (June 1990): 215–25; Lo Ping-cheung, *Christian Ethics: Principles and Applications* (Hong Kong: China Alliance Press, 1992), 170. The concept of “personhood” will be elaborated in chapters 2–3 of the dissertation.

assisted reproductive technology (ART), is it ethical to implant some of the embryos into the womb and use the other embryos in stem cell research? This weighty decision rests on the definition of *person*. If the human embryo is not a person, then destroying the embryo merely stops a “potential person” from developing into a person.⁴ But if the human embryo is a person, then destroying the embryo would be an act of murder. As this scenario illustrates, how we define the personhood of a human embryo can shift decisions that have life-altering consequences.

Thesis

This dissertation explores the question: “When does personhood begin?” Moving beyond normative ethics and natural law tradition, I will use biblical, scientific, and philosophical evidence to reason that personhood begins at conception.⁵ At conception, when a biological human body comes into being, a human soul with an inherent dignity and moral status is also generated. I will use evidence to demonstrate that even the tiniest human embryos are complete persons in God’s eyes, that the image of God is engraved in their very beings and their lives protected by God’s laws.

Although no biblical text explicitly addresses the personhood of human embryos, the Bible has several relevant passages and clear principles that can help Christians navigate this topic. Understandably, biblical passages that indicate the personhood of a late-stage fetus are less obscure than passages that assume the personhood of an early embryo. However, I will explain how authors of the Old Testament (OT) and of the New Testament (NT) alike assume full personhood of humans in their mothers’ wombs.

⁴ Linda J. Heffner, “Advanced Maternal Age—How Old is Too Old?” *New England Journal of Medicine* 351 (2004):1927–29; Bengt Källén, *Epidemiology of Human Reproduction* (Boca Raton, FL: CRC Press, 1988), 16. Ten to 50% of human pregnancies end in natural miscarriages. Suppose embryos are not humans, they only have a 50–90% chance to develop into humans.

⁵ “Conception” and “fertilization” will be defined in chapter 2.

This dissertation has significant ethical and legal implications. If each human embryo has a soul and is a person in God’s eyes, then his or her life must be treated with dignity and full respect. God’s protective Sixth Commandment, “you shall not murder,” must be extended to these tiny individuals.

Background

Personal Interest

I am motivated to explore this topic for two reasons. First, Taiwan and Mainland China have high rates of abortion—in fact, two of the highest in the world. This grim reality ironically contradicts the Chinese tradition that newborn babies are considered to be one year old, implying that the babies’ personal beginnings were at conception.⁶ In Taiwan, the Confucianist tradition of ancestral worship has led to a preference of male offspring over female offspring, as only male offspring will bear the family name. Tragically, this preference has caused thousands of baby girls to “disappear” every year.⁷ Whereas people in Mainland China also tend to abort girls for the same reason, the female gendercide in the Mainland has been aggravated by the notorious one-child policy, which claimed the lives of 336 million unborn children over the past forty years.⁸ In the pragmatic and utilitarian Chinese culture, ethical deliberation

⁶ “What is Age Reckoning?” *Voices*, last modified June 23, 2016, <http://www.sbs.com.au/topics/life/culture/article/2016/06/23/what-age-reckoning/>. The Chinese culture believes that a baby’s age starts from its time in the mother’s womb. The practice is also common in Korea, Japan, Taiwan, Hong Kong and Vietnam.

⁷ “Taiwan’s Gender Balance Worsening as More Parents Abort Female Fetuses,” *Taipei Times*, last modified December 8, 2011, <http://www.taipeitimes.com/News/front/archives/2011/12/08/2003520201/>.

⁸ “336 Million Abortions under China’s One-Child Policy,” *Telegraph*, last modified March 15, 2013, <http://www.telegraph.co.uk/news/worldnews/asia/china/9933468/336-million-abortions-under-Chinas-one-child-policy.html/>; Ling Chai, “End Gendercide now, rescuing China’s missing girls in Jesus’ name! Testimony to the Congressional Executive Commission on China,” last modified Feb 3, 2016, <http://www.cecc.gov/sites/chinacommission.house.gov/files/CECC%20Hearing%20-%20Gendercide%20-%203Feb16%20-%20Chai%20Ling.pdf/>. According to All Girls Allowed, there are over 100 million

is not encouraged, and the lack of ethical education poses a moral threat among Chinese societies.⁹ More alarmingly, Chinese churches speak very little about bioethics, resulting in a schism between the Christian faith and its daily ethical implications.¹⁰

Second, Chinese Christian leaders have displayed a general lack of bioethical knowledge and indifference to bioethical matters. The root cause is the deficiency of bioethics education in Chinese seminaries of all denominations.¹¹ The problem is even worse in Mainland China, where teachings in seminaries are strictly controlled by the ideology and political agenda of the Communist Party. Lo Ping-Cheung, a professor of ethics at Hong Kong Baptist University, expresses his concern: “Chinese churches generally do not have deep knowledge about Christian ethics, not to mention the pervasive insufficiency of seminary teachers equipped with such training. There are no high-quality textbooks in Chinese, neither are plain books available for ordinary readers.”¹² In a survey of 151 students at one evangelical seminary in Taiwan, about 5% of the students answered that abortion was acceptable if the fetus was mentally or physically disabled; 23% said abortion should be recommended if the pregnant woman

“missing” girls in the world, of which about half would have been born in China.

⁹ This includes China, Taiwan, Hong Kong, Singapore, and Chinese immigrant communities outside of Asia.

¹⁰ Thomas Wong, “Jidujiao Shengming Lunli Zai Wei, Huaren Jiaohui Bixu Yingzhan” [Christian Bioethics at Risk, Chinese Church Must be Prepared to Fight], *Jidu Ribao* [The Gospel Herald], last modified February 27, 2007, <http://www.gospelherald.com.hk/mobile/article.htm?id=1168&code=min/>. Thomas Wong, director of the Chinese Congress on World Evangelization, states that bioethics is “what you do not hear in (Chinese) churches, but what you absolutely need to hear.” He adds, “Chinese churches in general do not respond to contemporary ethical issues.”

¹¹ I recall hearing a seminary teacher in Taiwan saying that Christian Ethics was only a one-hour elective course when he was a seminary student. Currently, among the seven major seminaries in Taiwan, only one has a specialized Christian ethics professor who received formal training in ethics. In most Taiwanese seminaries, Christian ethics courses are taught by theology teachers without ethics training or by guest speakers.

¹² Lo, *Christian Ethics*, 9.

was unable to financially support a new child.¹³ In another survey directed toward Presbyterian pastors in Taiwan, only 57% of 230 respondents believed fetuses were persons; 66% thought the abortion of fetuses with disabilities was acceptable, and 61% said they knew believers who have had abortions.¹⁴ These numbers and the discrepancy between scriptural teaching and believers' practice reflect the disappointing attitudes of contemporary Chinese Christian leaders on this important ethical issue.

My professor at the China Evangelical Seminary in Taiwan asserted that biblical data is inadequate to prove that human personhood begins at fertilization, implantation, or at a later stage. Instead, he deferred to his teacher John Frame's "probability proposal" that based on scriptural evidence, it is probable that a fertilized ovum is a human person; thus, following the principle of prudence, people should abstain from killing fertilized ova to avoid any potential risk of murder.¹⁵ I personally know two

¹³ Hsiu-Chen Hsu-Yu, "Huashen Tongxue men Duiyu Shengming Lunli Yiti de Renzhi he Kanfa—Wenjuan Diaocha Jieguo zhi Zhaiyao [Summary of Survey Results—the Knowledge and Opinion of Students at China Evangelical Seminary on Bioethical Issues,]" China Evangelical Seminary, last updated December 2005, <http://www.ces.org.tw/main/action/message/2005-12/0512-d.htm/>. In 2004, Hsu-Yu Hsiu-Chen of the Center of Religion and Culture Studies of China Evangelical Seminary distributed surveys to students at the seminary. Among the 151 collected surveys, 93% of the seminary students believed a human's life began at the moment the sperm met the ovum; 6% believed it began when the fetus developed a heartbeat.

¹⁴ Hui-Jun Chen, "Shengming Jiazhi suo Miandui de Tiaozhan" [Challenges Against the Value of Life], in *Jidutu Yixue Lunli Xilie (4)—Duotai Yiti Mian Mian Guan* [The Christian Medical Ethics Series Vol. 4—Perspectives on Abortion], ed. Liming Chang (Taichung: Chinese Christian Medical Mission, 2008), 117–19. Lee Yuan-Hao distributed a survey to Presbyterian pastors; approximately 230 surveys were collected. The following are the results. (1) Have believers around you have experienced abortion? Yes 61%, No 37%. (2) Do you think fetuses are humans? Complete humans 57%, potential humans 35%, not humans 4%. (3) When the fetus's right to live conflicts with the mother's right to choose, which one would you support? The fetus's right to live 42%, the mother's right to choose 54%. (4) Who has the right to decide on an abortion? The doctor 13%, the mother 34%, God 48%. (5) Do you support abortion? Unconditional support—the mother has the absolute right to choose 4%; unconditional opposition 8%; conditional support (may select more than one): if pregnancy places the mother's life in danger 68%, if the pregnancy resulted from rape 55%, if the fetus has a disability 66%.

¹⁵ John M. Frame, *Medical Ethics: Principles, Persons, and Problems* (Phillipsburg, NJ: P&R, 1988), 111. Frame further elaborates the concept as the "doctrine of carefulness" in his later publication. John M. Frame, *The Doctrine of the Christian Life, A Theology of Lordship 3* (Phillipsburg, NJ: P&R, 2008), 724–25.

other Chinese seminary professors who teach Christian ethics in Taiwan and the United States. Both intentionally avoided discussing human embryos in class because neither professor was confident in addressing the topic biblically.

Overall, I believe this uncertainty of the personhood of embryos and fetuses among Chinese evangelical professors has left seminary students, pastors, and common believers with ambiguity and ethical ignorance. They tend to remain silent or even encourage abortion in certain circumstances.¹⁶ Without a sound understanding of the moral status of the unborn entity in the womb, their ungrounded prudence may easily give way to pragmatic considerations such as financial difficulties or challenges in raising disabled children.¹⁷ If they believe that even fetuses can be sacrificed for other priorities, embryos must have little to no importance to them. This realization prompted me to develop a systematic biblical foundation to defend the personhood of human embryos. My aim is to use biblical truths to challenge the opinions of current thought leaders, teachers, and physicians, and to inform them of the ills of abortion practices and of the sacrificing of embryos in infertility treatment procedures.

History of Research

Today's philosophers have widely diverse opinions on human personhood. At one end of the spectrum are liberal ethicists who believe a newborn human is less of a

¹⁶ Frame, *Medical Ethics*, 87. John Frame observes a similar reluctance to address this personhood issue among North American Christian leaders in the 1970s because of "the difficulty of demonstrating from Scripture that the unborn child is, from conception, a human person whose right to life is protected by the sixth commandment."

¹⁷ Influenced by the Buddhist concept of reincarnation, traditional Taiwanese culture tends to regard congenital diseases with little sympathy. It is believed that physical handicaps are curses or retributions that the affected children and their parents deserve, presumed because they committed wrongdoings in their previous life cycles. Although this unspoken superstition has faded with the advancement of public education, it remains pervasive among the uneducated elderly in Taiwan. The resulting social stigma often aggravates the pressure felt by parents who are raising disabled children.

person than a primate is.¹⁸ As an extreme example, Alberto Giubilini and Francesca Minerva claim that fetuses and newborns are not persons and that “‘after-birth abortion’ (killing a newborn) should be permissible in all the cases where abortion is, including cases where the newborn is not disabled.”¹⁹ Among other advocates of abortion, some define personhood by function. Mary Anne Warren states that persons are capable of several functions: sentience, emotionality, the capacity to communicate, self-awareness, and moral agency.²⁰ Warren asserts that although not every person possesses *all* of these functions, those who do not possess *any* of these functions cannot be persons. Warren belongs to the camp Bruce A. Ware calls “functionalists,” who assert that some minimal level of functioning must be present for an individual to be considered a person.²¹

In the middle of the spectrum are the United States Supreme Court and some Roman Catholic ethicists. The former defines personhood by viability, which fetuses acquire at a later stage in pregnancy. The latter camp claims that personhood develops throughout the early stages of pregnancy. They have proposed various criteria to determine the moment of “ensoulment,” when the embryo acquires personhood.²² Thomas Aquinas, who was heavily influenced by the science and logic of Aristotle, proposed that a human does not acquire its human soul at conception but sometime

¹⁸ Peter Singer, *Practical Ethics* (Cambridge: Cambridge University Press, 1979), 122–23.

¹⁹ Alberto Giubilini and Francesca Minerva, “After-birth Abortion: Why Should the Baby Live?” *Journal of Medical Ethics* 39, no. 5 (2013): 261–63. Parentheses in original.

²⁰ Mary Anne Warren, “On the Moral and Legal Status of Abortion,” *Ethics in Practice: An Anthology*, Hugh LaFollette ed. (Oxford: Blackwell Publishers, 1997), 79–90.

²¹ Bruce A. Ware, “Human Personhood: An Analysis and Definition,” *Southern Baptist Journal of Theology* 13, no. 2 (Summer 2009): 18–31; F. Earle Fox, “Two Kinds of Personhood: A Reply to Clifford Grobstein,” *Perspectives on Science and Christian Faith* 45 (March 1993): 45–56. F. Earle Fox proposes a similar division of the two camps—namely, the operational definition and the substantive definition of personhood.

²² Rose Koch-Hershenov, “Totipotency, Twinning, and Ensoulment at Fertilization,” *Journal of Medicine & Philosophy* 31, no. 2 (April 2006): 139.

between conception and birth.²³ Carrying on this tradition, most Roman Catholic thinkers attempt to determine the moment of “ensoulment,” when a human soul enters the body, in order to affirm or deny a developing embryo’s personhood.²⁴ Carol A. Tauer rightly observes that although the official Magisterium of the Roman Catholic Church asserts that human life must be protected from the moment of fertilization, it never affirms the personhood of those tiny lives.²⁵ Tauer highlights three challenges against embryonic personhood which many Catholic theologians face: the possibility of twinning and recombination, the lack of a structured human organic whole, and the high probability of miscarriage in the early stages of pregnancy.²⁶ Norman Ford argues that part of an early blastocyst may later develop into the placenta, which, unlike an embryo or fetus, lacks ontological individuality.²⁷ He asserts, “A human person cannot exist before the formation of a distinct living ontological individual with a truly human nature that retains the same ontological identity throughout successive stages of development.”²⁸ He proposes the appearance of the primitive streak, at approximately fourteen days of embryonic age, as the starting point of an embryo’s personhood.²⁹ Joseph F. Donceel, following Thomas Aquinas, asserts that the embryo’s developing body must attain a

²³ Thomas Aquinas, *Commentary on the Book of Sentences*, 3.3.5.2, *Responsio*, quoted in John Haldane and Patrick Lee, “Aquinas on Human Ensoulment, Abortion and the Value of Life,” *Philosophy* 78, no. 304 (April 2003): 255–78. Aquinas believes, following Aristotle, that the rational soul is infused at 40 days for males, and at 90 days for females after conception. The rational soul is what defines a human person, in contrast with the lower vegetative life and sensitive life.

²⁴ Lisa S. Cahill, “The Embryo and the Fetus: New Moral Contexts,” *Theological Studies* 54, no. 1 (1993): 124–42; Carol A. Tauer, “The Tradition of Probabilism and the Moral Status of the Early Embryo,” *Theological Studies* 45, no. 1 (1984): 3–33.

²⁵ Tauer, “The Tradition of Probabilism,” 9.

²⁶ Tauer, “The Tradition of Probabilism,” 5–6.

²⁷ A blastocyst is an embryo at its early stage of development (around 5–9 days old).

²⁸ Norman Ford, *When Did I Begin? Conception of the Human Individual in History, Philosophy and Science* (Cambridge: Cambridge University Press, 1988), 168–77.

²⁹ Ford, *When Did I Begin?* 170–77.

certain level of complexity before it can be ensouled;³⁰ for example, the cerebral cortex, which performs the most advanced sensory activities, must be adequately developed. He writes: “Since these organs are not ready during early pregnancy, I feel certain that there is no human person until several weeks have elapsed.”³¹

Although evangelical Christians in North America generally oppose abortion, the church nevertheless lacks a clear stance on the personhood of human embryos, especially of early embryos that have yet to implant within the womb.³² Some evangelical Christians are troubled by a theodical question based on the claim that only 30% of fertilized human ova are successfully implanted while the remaining 70% are miscarried.³³ Hessel Bouma, a professor of biology at Calvin College, says in an interview, “if we consider the fertilized egg as a person, then take all the other causes of death and multiply them by three—that’s the number of so-called persons who are dying before developing.”³⁴ Based on claims like this, some Christians deduce that if God is good and still allows 70% of all human embryos to die before implantation, pre-

³⁰ Thomas Aquinas, *Quaestiones Disputatae de Potentia Dei*, 3.12.

³¹ Joseph F. Donceel, “Immediate Animation and Delayed Hominization,” *Theological Studies* 31 (1970): 101; Jason T. Eberl, “The Beginning of Personhood: A Thomistic Biological Analysis,” *Bioethics* 14, no. 2 (April 2000): 134. I will elaborate more about the thoughts of Catholic scholars in chapter 6.

³² Alan J. Branch, “Answers to Common Pro-Abortion Arguments,” *Alan Branch Blog*, last modified September 14, 2017, <https://www.alanbranchethics.com/s/9-Answers-to-common-abortion-arguments.pdf/>.

³³ Thomas A. Shannon and Allan B. Wolter, O. F. M., “Reflections on the Moral Status of the Pre-embryo,” *Theological Studies* 51, no. 4 (1990): 603–26; Cahill, “The Embryo and the Fetus,” 124–42. The rate of natural abortion (i.e., miscarriage) varies among different authors. Shannon and Wolter estimated a rate of 55% while Cahill estimated a rate of 60%. In reality, it is impossible to give a precise rate of natural abortion because there are no robust clinical trials to confirm the true statistic. The scientific context of embryonic loss will be elaborated in chapter 6.

³⁴ Bob Smietana, “When Does Personhood Begin?” *Christianity Today* 48, no. 7 (July 2004): 24–28.

implantation embryos must not be persons. For them, denying the personhood of human embryos is an easier path to support their version of theodicy.

Finally, at the conservative end of the spectrum are ethicists who either assert full personhood of an embryo at the moment of conception³⁵ or, even though uncertain, advise prudence to “assume” the embryos’ personhood.³⁶ Those evangelical Christian thinkers defend the moral status of human embryos through various approaches.

John Feinberg employs a biological-philosophical approach. First, he uses genetics and embryology to show that a human embryo is a human being because it possesses human deoxyribonucleic acid (DNA).³⁷ He then argues philosophically that “the one identified as a human being also qualifies as a human person.”³⁸

Norman L. Geisler’s methodology is comprehensive. He first supports the personhood of unborn fetuses with biblical passages and scientific facts, then refutes philosophical challenges against his position. Geisler concludes that “[both] Scripture and science support the view that an individual human life begins at conception, and both special and general revelation declare that it is wrong to kill an innocent human life.”³⁹

Wayne Grudem lists several key biblical passages to demonstrate the personhood of an unborn child. By comparing society’s treatment of unborn fetuses to society’s treatment of born infants, Grudem argues against abortion in the case of a birth

³⁵ Scott B. Rae and Paul M. Cox, *Bioethics: A Christian Approach in a Pluralistic Age* (Grand Rapids: Eerdmans, 1999): 128–39.

³⁶ Frame, *Medical Ethics*, 109–10.

³⁷ John S. Feinberg and Paul D. Feinberg, *Ethics for a Brave New World*, 2nd ed. (Wheaton, IL: Crossway, 2010): 89.

³⁸ Feinberg and Feinberg, *Brave New World*, 101; Robert Spaemann, *Persons: The Difference Between ‘Someone’ and ‘Something,’* trans. Oliver O’Donovan (Oxford: Oxford University Press, 2006), 238. Robert Spaemann presents a series of arguments to “argue for the truth of our intuitive conviction that all human beings are persons.”

³⁹ Norman L. Geisler, *Christian Ethics: Contemporary Issues & Options* (Grand Rapids: Baker, 2010), 158.

defect or a pregnancy resulting from rape. He refutes the notion that abortion is merely a personal moral matter and reminds Christians about their political responsibility to restrict abortion.⁴⁰

John Frame approaches the issue through systematic theology and offers a less definite outlook. In his earlier publication, *Medical Ethics: Principles, Persons, and Problems*, he asserts that “there is *no way to demonstrate*, either from Scripture or from science or from some combination of the two, that the unborn child *is* a human person from the point of conception.”⁴¹ At the same time, he states that no scriptural or scientific proof explicitly denies that the unborn child has been a person since conception. Frame argues, as mentioned previously, that Christians must prudently *assume* the personhood of unborn children.⁴² However, he seems to change his position in a later publication, *The Doctrine of the Christian Life*, and affirms that Scripture supports embryonic personhood from conception, he never withdraws his previous statements but cites those in his subsequent works.⁴³

The purpose of my dissertation is to systematically analyze relevant biblical passages and theological teachings, present those in conjunction with scientific evidence and bioethical reasoning, and argue that personhood begins at the moment of conception. I will also address the debate over ensoulment and respond to several Roman Catholic ethicists’ assertions. My intention is to develop a holistic and systematic argument that integrates biomedicine, theology, philosophy, and bioethics, in order to clarify for Christians what has been treated as ambiguous: the status of embryonic personhood.

⁴⁰ Wayne Grudem, *Christian Ethics: An Introduction to Biblical Moral Reasoning* (Wheaton, IL: Crossway, 2018), 566–86.

⁴¹ Frame, *Medical Ethics*, 105. Italics in original.

⁴² Frame, *Medical Ethics*, 111.

⁴³ Frame, *Doctrine of the Christian Life*, 717 footnote.

Methodology

The research on embryonic personhood is a part of theological anthropology. It became a pressing ethical topic for contemporary Christians a few decades ago, as ART and stem cell research began to advance. The research of this topic is interdisciplinary, involving scriptural exegesis, systematic theology, philosophy, and biomedical science.

One theological topic I will address in this dissertation is the debate over the origin of the human soul, because in theological tradition, the soul presupposes personhood.⁴⁴ Two theories have been proposed to explain the origin of the human soul: traducianism and creationism. Traducianists assert that, with the exception of Adam and Eve, “both body and soul of every individual are immediately formed and propagated by the natural generation effected by the sexual union of the human male and female.” By contrast, creationists believe that each human soul is directly and immediately created by God and then “united to the body either at conception, at birth, or at some time between these two events.”⁴⁵ Both theories are supported by some biblical evidence and have been held by major theologians, yet both theories also face logical challenges when examined against theological tradition. If traducianism is true, it can be inferred that human embryos possess souls at conception, when their physical bodies are formed. If creationism is true, the human soul may be created by God sometime between conception and birth. I have noticed that few evangelical scholars participate in the ensoulment argument that haunts most Roman Catholic bioethicists.⁴⁶ Some evangelical scholars

⁴⁴ Augustine, *The City of God*, 13.23–24; Walter Glannon, “Tracing the Soul: Medical Decisions at the Margins of Life,” *Christian Bioethics: Non-ecumenical Studies in Medical Morality* 6, no. 1 (2000): 49–69.

⁴⁵ Robert L. Reymond, *A New Systematic Theology of the Christian Faith* (Nashville: Thomas Nelson, 1998), 424.

⁴⁶ Moreland and Rae, *Body and Soul*, 220–23; Stephen P. Greggo, “Soul Origin: Revisiting Creationist and Traducianist Theological Perspectives in Light of Current Trends in Developmental Psychology,” *Journal of Psychology & Theology* 33, no. 4 (Winter 2005), 262. Ensoulment is scarcely discussed among contemporary evangelical thinkers. Moreland, Rae, and Greggo are a few rare examples.

believe that traducianism and creationism are both acceptable because the Bible does not provide a definite verdict;⁴⁷ some even say that this controversy will never be resolved⁴⁸ and that investigation is unnecessary.⁴⁹ However, I believe the question of ensoulment is inseparable from the argument concerning when personhood begins and must be addressed in my thesis. In this dissertation, I will systemically analyze biblical evidence that undergirds the two ensoulment theories. I will argue that traducianism is supported with biblical evidence and equipped to respond to its theological challenges, while creationism is not. My methodology is different from Catholic ethicists who ground their arguments solely on Aristotelian-Thomistic philosophy.⁵⁰ My Scripture-supported conclusion will not only equip evangelical thinkers with Scripture-based evidence to respond to philosophical challenges, but will also help evangelical ethicists reconcile theological traditions with their views toward embryonic personhood.

Another unique methodology of this dissertation is the integration of biblical data with human developmental biology. I will provide a systematic outline of embryonic and fetal development, with six developmental stages investigated in a reverse chronological order: after birth, before birth, viability, quickening, unformed stage, and conception. Logically, personhood in a later stage does not exclude personhood in the earlier stages, while personhood in an earlier stage always implies personhood in the later

⁴⁷ Ken Hamrick, "Origin of the Soul: A Defense of Paternal Traducianism," *SBC Open Forum*, last modified October 11, 2014, <http://kenhamrick.com/2014/10/11/origin-of-the-soul-a-defense-of-paternal-traducianism>.

⁴⁸ Greggo, "Soul Origin," 258–67.

⁴⁹ G. C. Berkouwer, *Man: The Image of God*, trans. Dirk W. Jellema (Grand Rapids: Eerdmans, 1962), 292–93.

⁵⁰ Samuel B. Condic and Maureen L. Condic, *Human Embryos, Human Beings: A Scientific and Philosophical Approach* (Washington, DC: The Catholic University of America Press, 2018); Jason Eberl, *The Nature of Human Persons: Metaphysics and Bioethics* (Notre Dame, IN: University of Notre Dame Press, 2020); Patrick Lee and Robert P. George, *Body-Self Dualism in Contemporary Ethics and Politics* (Cambridge: Cambridge University Press, 2009), 118–50.

stages. Once the personhood of early-stage embryos is affirmed, their personhood at later stages can be assumed. I will discuss biblical passages that mention embryos and fetuses in their mother's wombs, as well as soon-to-be-born and newborn infants. I will start with an explicitly stated concept in the Bible—that born infants are persons—and conclude with the biblical view on the soul of a newly formed embryo. Although many of these biblical passages have been cited in literature by several evangelical authors, this dissertation will be the first to systematically and chronologically examine those through the lens of embryonic and fetal development.

CHAPTER 2

THE BEGINNING OF LIFE: THE BIOLOGICAL PERSPECTIVE

Science and theology, two different investigations of truth, are both directed toward God’s revelations.¹ Science is the study of God’s general revelations throughout the universe, while theology is the study of God’s special revelations in the Bible. Because truth comes from one God, science and theology should not contradict one another.² However, because the Bible was not written for scientific purposes, one needs to consult other sources when investigating biological subjects such as the beginning of life. Conversely, because many scientific writings are tainted by anti-religious presuppositions,³ readers must reference the Bible to discern erroneous assumptions.⁴ In this dissertation, I will discuss the science, theology, and ethics related to the beginning of life, starting with science in this chapter.

Sperm-Ovum Binding and Embryonic Development

Morris Krieger, author of *The Human Reproductive System*, writes, “All organisms, however large and complex they may be when full grown, begin life as but a single cell. This is true of the human being, for instance, who begins life as a fertilized

¹ Alister McGrath, *A Scientific Theology*, vol. 2 (Edinburgh: T&T Clark, 2001), 227.

² Albert Einstein, *Ideas and Opinions*, ed. Carl Seelig, trans. Sonja Bargmann (New York: Bonanza, 1954), 46. Albert Einstein once said, “Science without religion is lame; religion without science is blind.”

³ John M. Frame, *The Doctrine of the Christian Life, A Theology of Lordship 3* (Phillipsburg, NJ: P&R, 2008), 745 footnote.

⁴ Peter S. Heslam, *Creating A Christian Worldview: Abraham Kuyper’s Lectures on Calvinism* (Grand Rapids: Eerdmans, 1998), 183.

ovum.”⁵ The ovum, the largest cell of the human body, is enveloped by a thin, transparent layer, called the zona pellucida, and several layers of follicle cells. The sperm, the smallest cell of the human body, carries DNA in its head and travels with the powerful whip of its tail. Immediately after the ejaculation of semen during sexual intercourse, tens of millions of sperm cells swim vigorously up the vagina, through the uterus, and into the fallopian tube toward the mature ovum, but only the fastest sperm cell will penetrate the zona pellucida and fuse with the ovum. Once the ovum is penetrated by one successful sperm cell, the zona pellucida immediately undergoes structural transformation, changing its electrical charge from negative to positive, to prevent more positively charged sperm cells from entering. This transformation is the first action of an independently functioning life.⁶

Twenty-four to thirty-six hours pass between the sperm’s penetration of the zona pellucida and the fusion of the sperm’s and the ovum’s chromosomes. Subsequently, the fertilized ovum, also known as the zygote, cleaves into two tightly bound cells in a process called mitosis and becomes a two-cell embryo. Researchers discovered that the zygote sends imperceptible signals to the mother’s body as early as the first time it undergoes mitosis. Those signals prevent the mother’s immune system from rejecting the zygote. The signals also induce the growth of a soft lining inside the mother’s uterus, where the embryo will later be implanted.⁷

The embryo undergoes mitosis once every twelve hours, each time doubling its

⁵ Morris Krieger, *The Human Reproductive System* (New York: Sterling, 1969), 88.

⁶ Grant R. Jeffrey, *Creation: Remarkable Evidence of God’s Design* (Colorado Springs: Waterbrook, 2003), 45–47. It is important to prevent more than one sperm cell from entering the ovum, because if an ovum combined with more sperm cells, it would turn into a polyploid with too many copies of DNA and would not survive.

⁷ E. R. Barnea, Y. J. Choi, and P. C. Leavis, “Embryo-Maternal Signaling Prior to Implantation,” *Early Pregnancy* 4 (July 4, 2000): 166–75. These signals are transmitted by molecules called pre-implantation factors (PIF). After the embryo is implanted in the uterine lining, PIF signals increase in strength to ensure a smooth pregnancy.

number of cells. As it travels through the fallopian tube toward the uterus, it absorbs rich nutrients excreted by the tube lining. At this stage, the embryo is known as a blastomere. Within three to four days, the blastomere grows into a solid ball consisting of tens to hundreds of cells and is called a morula. The cells on the morula's surface divide more rapidly than the cells within; soon, a sac-like gap forms between the two layers, and the embryo is now called a blastocyst. From this time on, embryonic cells gradually differentiate into two categories. The embryoblast, the inner cell mass, will develop into the fetus, whereas the trophoblast, the outer cell mass, will become the placenta and the chorion. At this time, the embryo is immotile; it relies on the contractions of the fallopian tube and the movement of hair-like cilia inside the tube to travel toward the uterus. When the embryo is seven to ten days old, it finally implants onto the endometrium, the soft lining of its mother's uterus. The process of implanting involves an intricate biochemical "cross-talk" between the embryo and the mother.⁸ A large number of estrogen- and progesterone-mediated molecular mediators must be present for implantation to happen.

All of the terms above only represent the stages of the embryo's development. The common definition of a human "embryo" is the developed fertilized ovum from its first mitosis until it is eight weeks old; this will also be the definition of "embryo" in this dissertation.⁹

The Biological Dimension of Human Personhood

The human species, *Homo sapiens*, is characterized by its forty-six human chromosomes. On a basic level, taxonomists can use chromosomes to distinguish humans

⁸ Professional Ethics Committee of AAPLOG, "Embryocidal Potential of Modern Contraceptives," American Association of Pro-Life Obstetricians & Gynecologists, accessed September 14, 2019, <http://aaplog.org/wp-content/uploads/2019/09/CO-7-Embryocidal-Potential-of-Modern-Contraceptives-nexplanon-update.pdf>.

⁹ J. K. Findlay, M. L. Gear, P. J. Illingworth, S. M. Junk, et al., "Human Embryo: A Biological Definition," *Human Reproduction* 22, no. 4 (2007): 905–11.

from other organisms.¹⁰ But a detailed biological definition of a human is no simple matter, because human traits can vary widely by sex and age. If we only defined the human by the biological traits of pre-menopausal women, we would have neglected to describe girls, post-menopausal women, and males. It is difficult to give a comprehensive biological description of humans. Therefore, I will begin by describing what is *not* a biological human person.¹¹

First, sperm and ovum, collectively called gametes, are not persons. Sperm cells and ova are haploid cells; each one carries twenty-three chromosomes, half the number compared to a diploid cell.¹² Hence, neither the sperm cell nor the ova is a person.¹³

Next, the placenta is not a person. Part of the placenta shares its origin with the fetus, but the placenta only plays a transitional role.¹⁴ During pregnancy, the placenta carries nutrients and oxygen to the fetus and helps the fetus excrete metabolic waste. Soon after the fetus's birth, the placenta detaches from the uterus and no longer serves a

¹⁰ Most humans carry forty-six chromosomes in each cell. Human chromosomes have shapes, sizes, and genetic sequences that are unique to our species, which enables scientists to distinguish human cells from the cells of other organisms that also have forty-six chromosomes. Some people have fewer or more than forty-six chromosomes because of hereditary disorders; however, since their chromosomes are distinctly human chromosomes, those individuals are still considered to be humans under medicine and law.

¹¹ The terms "human person" and "person" are used interchangeably in this dissertation.

¹² In humans, a cell that carries forty-six chromosomes (twenty-three pairs) is called a diploid cell, whereas a cell that carries twenty-three chromosomes (one half of each pair) is called a haploid cell.

¹³ When ovum or sperm cells are taken out of human bodies for assisted reproduction and later destroyed, the destruction is not the killing of humans. However, as I will discuss later, the destruction of a fertilized ovum is a different matter. "Then Judah said to Onan, 'Lie with your brother's wife and fulfill your duty to her as a brother-in-law to produce offspring for your brother.' But Onan knew that the offspring would not be his; so whenever he lay with his brother's wife, he spilled his semen on the ground to keep from producing offspring for his brother. What he did was wicked in the LORD's sight; so he put him to death also." (Gen 38:8–10) Onan was put to death, not because he killed his own sperm cells but because he was not willing to produce offspring for his brother.

¹⁴ Part of the placenta is developed from the fertilized ovum, while the other part originates from the mother's body.

purpose. In the history of medicine, the placenta has never been treated as a person. Scientifically speaking, the placenta shows no sign of coordinated development nor blueprints for a body.¹⁵ Therefore, the placenta is not a person but an accessory tissue that aids fetal growth.¹⁶

Third, hydatidiform moles and dermoid cysts are not persons; rather, they are tumors grown from sperm and ova with chromosomal abnormalities. A hydatidiform mole, which resembles a cluster of grapes and can be found in the uterus, results from diploidy or triploidy (doubling or tripling) of sperm DNA. A dermoid cyst, commonly found in ovaries, looks like a disorganized mass of hair, bone, tooth, cartilage, and sebum tissue; it arises from diploidy of ovum DNA. Although both of these structures have diploid DNA like human beings do, neither one was developed from a fertilized ovum like human beings were. Their DNA diploidy alone does not fulfill the criteria of a human. Therefore, neither one is a person.

Fourth, a somatic cell, such as a skin cell, is not a person. This needs to be explained at a few levels. First, common sense tells us that the individual cells that comprise an organism's body are not individual persons. Second, as Francis J. Beckwith states, "possessing a human genetic code is a necessary but not a sufficient condition for human personhood."¹⁷ Unlike an embryonic cell, signs of organized development never exists in a somatic cell: A collection of skin cells will never develop into a fetus, not even when it is placed inside the uterus and supplied with the necessary nutrients. Conversely, when embryonic cells are placed in the same environment, the cells can differentiate and concertedly develop into a fetus; this is organized development, the sign of an

¹⁵ Findlay, et al., "Human Embryo," 905–11.

¹⁶ Helen Pearson, "Developmental Biology: Your Destiny, from Day One," *Nature* 418 (2002), 14–15.

¹⁷ Francis J. Beckwith, "Abortion and Public Policy: A Response to Some Arguments." *Journal of the Evangelical Theological Society* 32 (1989), 507.

independently functioning life.

Some have argued on philosophical grounds that if a fertilized ovum is a person, then a somatic cell must also be a person, because a somatic cell has a complete set of human DNA and can develop into an embryo upon interventions like somatic cell nuclear transfer (SCNT).¹⁸ I will argue against this view for the following reasons. First, SCNT is a complicated procedure which involves breaking apart a somatic cell and fusing its nucleus with the capsule of another cell to produce a zygote.¹⁹ Although the resulting zygote contains the somatic cell's genetic material, it is in no way equivalent to the unadulterated somatic cell.²⁰ Second, in the SCNT process, the somatic cell does not act like an embryonic cell but only carriers of genetic material, like a sperm or ovum does.²¹ The zygote is a human person, whereas the somatic cell is not.²² Third, it is not appropriate to compare the potential of the zygote and the somatic cell to become human beings, because a complicated procedure such as SCNT is necessary to transform the somatic cell into a zygote capable of organized development. In contrast, a fertilized ovum needs no artificial intervention to grow and develop into a fetus; it has intrinsic qualities of life. Fourth, although the somatic cell has a complete set of human DNA, the mere presence of DNA does not make it an individual organism. For example, even

¹⁸ Ronald Bailey, "Are Stem Cells Babies?" Reason, last modified July 11, 2001, <http://reason.com/2001/07/11/are-stem-cells-babies/>.

¹⁹ In SCNT, a nucleus is first extracted from a somatic cell of organism A. The ovum of organism B is emptied so that only the ovum capsule remains, and the nucleus from the cell of A is fused with the ovum capsule of B to form a zygote. Physical and chemical stimulus are applied to the fused zygote so it would divide like a fertilized ovum and develop into an embryo. This embryo, commonly called a clone, is genetically and physically almost identical to organism A. Dolly the Sheep was created by SCNT cloning.

²⁰ Findlay, et al., "Human Embryo," 908.

²¹ Christopher Tollefsen, *Bioethics with Liberty and Justice: Themes in the Work of Joseph M. Boyle* (Dordrecht: Springer Netherlands, 2011), 47–48.

²² See chapter 8 for a discussion on the personhood of a human embryo conceived by SCNT.

though a piano has a complete set of keys, the presence of the keys alone does not produce music.

Now that we have established the biological boundaries for what is *not* a biological human person, we are prepared to investigate: *When does a human's biological life begin?* According to biologists, an organism's life begins when it obtains a unique set of DNA and displays signs of organized development.²³ An embryology textbook states, "The zygote results from the union of an oocyte and a sperm. A zygote is the beginning of a new human being."²⁴ Another textbook reads, "[The zygote,] formed by the union of an ovum and a sperm, represents the beginning of a human being."²⁵ Edwin C. Hui, a medical doctor and a bioethicist, describes the elements that give each zygote a unique identity:

From the physiological perspective, a zygote is an organic entity equipped with all of the functions that it needs during its journey through life. In other words, all of the functions that are required to operate one's life are in the zygote. Neither the sperm nor the egg has this property. These functions are in the genes. The combination of a zygote's genes gives it a genetic identity, an ontological identity. Because of this, our identities can be tested with our DNA; for example, if you committed a crime and murdered someone, people can track you down by your DNA. This identity is crucial to us. The zygote needs thirty-six hours to form, but from the moment of its formation to the day of its death, its genetic makeup never changes. Thus, it is reasonable to say that fertilization, the formation of the zygote, is the most important process that makes each person unique.²⁶

Hui cites four "genetic arguments" in support of conception as the beginning of human personhood. First, there is the genetic uniqueness of the human zygote. Second,

²³ Findlay, et al., "Human Embryo," 905–11.

²⁴ Keith L. Moore and T. V. N. Persaud, *The Developing Human: Clinically Oriented Embryology*, 6th ed. (Philadelphia: W. B. Saunders, 1998), 2.

²⁵ Bruce M. Carlson, *Human Embryology and Developmental Biology*, 6th ed. (New York: Elsevier, 1994), 3.

²⁶ Edwin C. Hui, "Jidutu Kan Shiguan Yinger Yu Rengong Shengzhi Keji De Lunli" [The Christian's Perspective on the Ethics of Test Tube Babies and Assisted Reproductive Technologies], in *Jidutu Yixue Lunli Xilie (6)—Buyunzheng Yu Rengong Shengzhi Keji Lunli* [The Christian Medical Ethics Series Vol. 6—Infertility and the Ethics of Assisted Reproductive Technologies], ed. Liming Chang (Taichung: Chinese Christian Medical Mission, 2010), 44.

there is the genetic continuity of the human zygote with the future adult. Third is the zygote's capacity for self-development, and forth, the zygote's individuality or ontological identity is shared with the adult."²⁷ Hui asserts: "Based on the human zygote's genetic uniqueness, its ontological identity and continuity and its innate capacity for self-development, I see not a *potential* human person but a human person with a potential to develop."²⁸ As Beckwith puts it: "The conceptus is a new, although tiny, individual with its own genetic code (with forty-six chromosomes), a code that is neither her mother's nor her father's. From this point until death no new genetic information is needed to make the unborn entity an individual human."²⁹ We can logically conclude that on the biological level, a person's life begins at conception, when sperm and ovum combine to form the zygote.

Conception is also medically defined as the time a human being begins to exist.³⁰ The majority of obstetricians and gynecologists in the United States believe that human life begins at fertilization. In a questionnaire to a stratified random sample of 1,800 practicing obstetrician-gynecologists in the United States assessing their beliefs

²⁷ Edwin C. Hui, *At the Beginning of Life: Dilemmas in Theological Bioethics* (Downers Grove, IL: InterVarsity, 2002), 59–60.

²⁸ Hui, *Beginning of Life*, 74. Italics in original.

²⁹ Francis J. Beckwith, *Politically Correct Death* (Grand Rapids: Baker, 1993), 42, quoted in Ronald H. Nash, *When A Baby Dies: Answers to Comfort Grieving Parents* (Grand Rapids: Zondervan, 1999), 111–12.

³⁰ See the medical textbooks and literature listed below: T. W. Sadler, *Langman's Medical Embryology*, 7th ed. (Baltimore: Williams & Wilkins, 1995), 3; William J. Larsen, *Essentials of Human Embryology* (New York: Churchill Livingstone, 1998), 1–17; Ronan R. O'Rahilly and Fabiola Muller, *Human Embryology & Teratology* (New York: Wiley-Liss, 1996), 5–55; Ida G. Dox, Biagio John Melloni, and Gilbert Eisner, *The Harper Collins Illustrated Medical Dictionary* (New York: Harper Perennial, 1993), 146; Douglas Considine, *Van Nostrand's Scientific Encyclopedia*. 5th ed. (New York: Van Nostrand Reinhold Company, 1976), 943; Lee M. Silver, *Remaking Eden: Cloning and Beyond in a Brave New World* (New York: Avon Books, 1997), 39; Bradley M. Patten, *Human Embryology*, 3rd ed. (New York: McGraw Hill, 1968), 43; J. P. Greenhill and E. A. Friedman, *Biological Principles and Modern Practice of Obstetrics* (Philadelphia: W. B. Sanders, 1974), 17; E. L. Potter and J. M. Craig, *Pathology of the Fetus and the Infant*, 3rd ed. (Chicago: Year Book Medical Publishers, 1975), vii.

about when pregnancy begins, one-half (57%) believe pregnancy begins at conception, fewer (28%) believe it begins at implantation, and 16% are not sure.³¹ The French geneticist Jerome L. LeJeune asserts: “To accept the fact that after fertilization has taken place a new human has come into being is no longer a matter of taste or opinion. The human nature of human being from conception to old age is not a metaphysical contention, it is plain experimental evidence.”³²

Twining, Fusion, and Embryonic Development

Some bioethicists argue that an embryo is not yet a person because it could split into two embryos, fuse with another embryo, or even develop into an accessory tissue such as a placenta, hydatidiform mole, or dermoid cyst.³³ In 1979, Clifford Grobstein first coins the term “pre-embryo.” His followers go on to argue that until a pre-embryo becomes an embryo, it is neither an individual nor a person.³⁴ I will respond to their arguments below.

³¹ Grace S. Chung, Ryan E. Lawrence, Kenneth A. Rasinski, John D. Yoon, et al., “Obstetrician-gynecologists’ Beliefs About When Pregnancy Begins,” *American Journal of Obstetrics & Gynecology* 206, no. 2 (2012): 132.e1–132.e7.

³² *Subcommittee on Separation of Powers, Report to Senate Judiciary Committee S-158*, 97th Congress, 1st Session, 1981, quoted in Norman L. Geisler, *Christian Ethics: Contemporary Issues & Options* (Grand Rapids: Baker, 2010), 149.

³³ Richard McCormick, “Who or What is the Pre-embryo?” *Kennedy Institute of Ethics Journal* 1 (1991), 1–15; Carlos Bedate and Robert Cefalo, “The Zygote: To Be or Not Be a Person,” *Journal of Medicine and Philosophy* 14, no. 6 (1989): 641–45.

³⁴ Clifford Grobstein, “External Human Fertilization,” *Scientific American* 240 (June 1979): 33–43; Modesto Ferrer Colomer and Luis Miguel Pastor, “Use of the Term ‘Pre-embryo’ in the Biomedical Literature from its Origin to the Present,” *Cuadernos de Bioetica* 28, no. 92 (January–April 2017): 115–16; Thomas A. Shannon and Allan B. Wolter, “Reflections on the Moral Status of the Pre-embryo,” *Theological Studies* 51, no. 4 (1990): 603–26; McCormick, “Who or What is the Pre-embryo?” 1–15.

“Pre-embryo”?

First, “pre-embryo” is an unscientific term that is rejected from embryology textbooks.³⁵ Leading embryologists such as Bruce Carlson,³⁶ Thomas Sadler,³⁷ and William Larsen³⁸ choose not to use the term “pre-embryo.” Bosco Ning summarizes why Ronan O’Rahilly, another eminent embryologist, does not use this term to describe the developing human:³⁹

1. It is *ill-defined* because it is said to end with the appearance of the primitive streak or to include neurulation.

2. It is *inaccurate* because purely embryonic cells can already be distinguished after a few days, as can also the embryonic disc.

3. It is *unjustified* because the accepted meaning of the word embryo includes all of the first eight weeks.

4. It is *equivocal* because it may convey the erroneous idea that a new human organism is formed at only some considerable time after fertilization.

5. It was introduced “*largely for public policy reasons.*” Just as the postnatal age begins at birth, the prenatal age begins at fertilization.

Upon an examination of biomedical literature, Modesto Colomer and Luis Pastor found that the term “pre-embryo” first appeared in 1979, grew in popularity throughout the 1990s, then declined, although it never disappeared.⁴⁰ The authors

³⁵ C. Ward Kischer, “The Big Lie in Human Embryology: The Case of the Preembryo.” *The Linacre Quarterly* 64, no. 4 (1997): 58.

³⁶ Carlson, *Human Embryology*.

³⁷ Sadler, *Langman’s Medical Embryology*, 7th ed.

³⁸ Larsen, *Human Embryology*.

³⁹ Ronan O’Rahilly and Fabiola Muller, *Human Embryology and Teratology*, (New York: Wiley-Liss, 2001), 88, quoted in Bosco Ning, “From Delayed Hominization to the Embryo as Individual and Person,” *Solitude: A Meditative Journal of Taiwan Christian Thought* 14 (December 2007): 132–33.

⁴⁰ Colomer and Pastor, “Pre-embryo in the Biomedical Literature,” 115–16.

conclude: “Regarding the human nature of the embryo, this term is no longer used; everything suggests that the term has been artificially created to justify the use of embryos for IVF and biomedical experiments.”⁴¹ In conclusion, the term had been invented and popularized by political, financial and ideological agendas, but in no way by scientific findings.

Accessory Tissues

Carlos Bedate and Robert Cefalo argue that an embryo could develop into a hydatidiform mole or a dermoid cyst and therefore “does not meet all the necessary criteria in sufficient condition to be a person.”⁴² Their view, however, is scientifically inaccurate. As I presented earlier in this chapter, hydatidiform moles and dermoid cysts can develop from sperm and ova, but not from a zygote. Another argument comes from Ford, who observes that some embryonic cells will develop into the embryo’s own organs, while other cells will differentiate into accessory tissues (such as the placenta), which are not a part of the embryo’s body. Ford argues that since no one can foretell which cells will remain as a part of the embryo’s body, the embryo’s personhood remains unclear until this differentiation is complete.⁴³ My response is that cell differentiation and cell loss do not affect the individuality of an organism. Every day, humans produce and shed countless skin cells, intestinal mucosal cells, fingernails, and hairs. Even though each skin cell contains the person’s DNA, the person does not lose personhood nor become a lesser person from shedding those cells. Following the same logic, an embryo does not lose its ontological identity and individuality just because several of its cells

⁴¹ “Pre-embryo. This Term is No Longer Used in Current Discussions,” *Bioethics News*, Kennedy Institute of Ethics, accessed June 13, 2020, <https://bioethics.georgetown.edu/2017/09/pre-embryo-this-term-is-no-longer-used-in-current-discussions-regarding-the-nature-of-the-embryo>.

⁴² Bedate and Cefalo, “Zygote,” 641–45.

⁴³ Norman Ford, *When Did I Begin? Conception of the Human Individual in History, Philosophy and Science* (Cambridge: Cambridge University Press, 1988), preface, xvi.

differentiate into accessory tissues that will eventually be separated from its body. As Jan Deckers summarizes, “A child does not lose his or her identity when (s)he is separated from his or her placenta.”⁴⁴

Identical Twinning

Identical twinning, in which one embryo splits into two embryos, occurs in about 0.37 % (1:270) of all births.⁴⁵ It happens ten times more frequently in IVF labs than in the womb and can be regarded as a natural process of disrupted development and self-healing.⁴⁶ Some argue that the potential of identical twinning refutes the individuality and personhood of an embryo. However, I will explain why identical twinning is considered a form of asexual reproduction and why that does not remove the personhood of the embryo.

Identical twinning is comparable to mitotic cell division, in which a cell with a full set of DNA splits into two cells, each with a full set of DNA. Similar to the asexual reproduction of some organisms, “splitting into twins could be a nonsexual form of ‘parenting’ akin to cloning.”⁴⁷ After an embryo splits into two embryos, it can be said that not just one but two generations of embryos have come into being—one twin being a parent of the other.⁴⁸

⁴⁴ Jan Deckers, “Why Eberl is Wrong. Reflections on the Beginning of Personhood,” *Bioethics* 21, no. 5 (Jun. 2007): 280.

⁴⁵ Moore and Persaud, *The Developing Human*, 125–29; Larsen, *Human Embryology*, 262, 490–92. The exact stimulus that causes twinning is not known.

⁴⁶ Bob Smietana, “When Does Personhood Begin?” *Christianity Today* 48, no. 7 (July 2004): 28. This is a paraphrase of a comment made by William Hurlbut, a biology professor and member of the President’s Council on Bioethics.

⁴⁷ Norman L. Geisler, “When Did I Begin? A Review Article.” *Journal of the Evangelical Theological Society* 33, no. 4 (December 1990): 511.

⁴⁸ Germain Grisez, *Living a Christian Life, The Way of the Lord Jesus 2* (Quincy, IL: Franciscan Press, 1993), 495.

It must be noted that before any organism goes through asexual division, it is a complete individual, and after division, it becomes two complete individuals. The division does not take away the first organism's individuality. Take the asexual reproduction of an earthworm as an example. If an earthworm is cut into two, it will become two earthworms. The emergence of two earthworms in no way compromises the initial organism's integrity as an individual before it is cut in half.⁴⁹ In a similar analogy: if Person A was cloned so that there exists Person A and his clone, Person B, there is no reason to claim that Person A never was an individual just because he eventually became two individuals.⁵⁰ As these examples demonstrate, twinning and other types of asexual reproduction cannot take away the initial embryo's individuality or personhood.⁵¹

Chimerization

Next, I will discuss the instance in which two embryos in the germinal stage fuse together, or chimerize, to form one embryo.⁵² Ford questions the individuality and personhood of early embryos because several can be artificially fused into one chimera.⁵³ Before addressing his argument, I must state that embryos do not have the natural

⁴⁹ Hui, *Beginning of Life*, 70.

⁵⁰ Louis Aldrich, "Lun Jiehezi Shibushi Weige Ren" [Is the Human Zygote a Person?] *Monthly Journal of Philosophy and Culture* 28, no. 8 (2001): 693.

⁵¹ Maureen L. Condic, *Untangling Twinning: What Science Tells Us about the Nature of Human Embryos* (Notre Dame, IN: University of Notre Dame Press, 2020), 48. Condic asserts, "There is clear scientific evidence that the one-cell embryo or zygote initiates a developmental trajectory; that is, the zygote is a manifestly human organism. Therefore, twinning at the two-cell stage or later does not call into question the ontological status of the original embryo as a complete and individual human being."

⁵² Alan J. Branch, "Answers to Common Pro-Abortion Arguments", *Alan Branch Blog*, last modified September 14, 2017, <https://www.alanbranchethics.com/s/9-Answers-to-common-abortion-arguments.pdf/>. This phenomenon is called human chimerism and sometimes known as embryonic recombination or mosaicism.

⁵³ Ford, *When Did I Begin?* 168–77.

tendency to chimerize.⁵⁴ In fact, embryonic fusion has only been observed in the laboratory under artificial stimuli.⁵⁵ Hui comments on the rarity of the phenomenon:

This fact suggests that early embryos possess a certain regulatory capacity and ability to repair themselves . . . the possibility to form chimeras under laboratory condition probably suggests that the powers of ‘grafting,’ ‘transplant,’ ‘healing,’ ‘regeneration’ and so on are present in the early embryos but never naturally mobilized to form chimeras. Hence, I concur with the conclusion that most babies develop with their accessory tissues from a single zygote, as an individual organism, despite the possibility of twinning or chimerization.”⁵⁶

Similar to twinning, embryonic fusion can be considered a form of asexual reproduction. Whereas in sexual reproduction, a human is formed by the fusion of two gametes, asexual reproduction is entirely different, and different conclusions must be drawn about the personhood of the initial two embryos. In the following example, I will compare the fusing of embryos to tree grafting, another form of artificial asexual reproduction. Suppose a fruit farmer took a branch from tree A and grafted it onto the trunk of tree B, forming tree C. Would we question the individuality of tree A and tree B? It is obvious that tree A is an individual tree, as is tree B and tree C. Before grafting, both A and B lived independent lives; if not for the graft, those lives would have remained independent of each other. As for C, it is also an individual tree, even though it carries the genes of A and B. The fact that grafting is possible does not deny, but rather affirms, that the two plants were alive and individuated prior to their combination.⁵⁷ A similar medical analogy could further illustrate the mechanism. When a human twin dies early in the embryonic stage, the surviving twin could acquire some of the dead twin’s cells and end

⁵⁴ Germain Grisez, *Abortion: The Myths, the Realities, and the Arguments* (New York: Corpus, 1970), 37–38.

⁵⁵ Teresa Iglesias, “What Kind of Being Is the Human Embryo?” In *Embryos and Ethics: The Warnock Report in Debate*, ed. Nigel M. de S. Cameron (Edinburgh: Rutherford, 1987), 70.

⁵⁶ Hui, *Beginning of Life*, 70.

⁵⁷ Grisez, *Abortion*, 27.

up with two distinct sets of genes.⁵⁸ Thus, in the rare case where two human embryos chimerize, the embryos ought to be considered as two individual persons that fuse into one. During the process, Embryo A dies, and as Embryo B absorbs some of A's cells and genes, it is transformed into the chimeric Embryo C.⁵⁹ Even though Embryos A, B, and C appear and perish at different points in time, each one possesses individuality and personhood as long as it is alive.

Fertilization, Conception, and Pregnancy

Prior to the 1960s, the word “conception” was used in legal and medical literature synonymously with “fertilization,” i.e., sperm-ovum fusion. One dictionary equates the two, defining conception as “fertilization; inception of pregnancy.”⁶⁰ Both refer to the point at which the “union of the male and female gametic nuclei” occurs when a new human being, genetically distinct from its mother and father, comes into being.⁶¹ Biologically, “fertilization” refers to the binding of the sperm and ovum while “conception” refers to the formation of the fertilized ovum, or the zygote. Both refer to the beginning of a pregnancy and are regarded by most dictionaries as interchangeable nouns. But due to recent advancements in ART, fertilization no longer indicates pregnancy, since fertilization can also take place in vitro, in a petri dish. Similarly, not all embryos today arise from fertilization, because some arise from SCNT. Contemporary

⁵⁸ Kristen Chen, Ramen H. Chmait, Douglas Vanderbilt, Samuel Wu, et al., “Chimerism in Monochorionic Dizygotic Twins: Case Study and Review,” *American Journal of Medical Genetics* 161A, no. 7 (2013): 1817–24; Letícia, Tavares, Daiane Cobianchi Da Costa, Anna Paula de Borba Batschauer, Luiz Fernando Job Jobim, et al., “Blood Chimerism in Twins,” *Immunohematology* 34, no. 4 (December 2018): 151–57.

⁵⁹ The question may be raised: If embryo A is a person that dies after the fusion, what happens to embryo A's soul? Topics concerning the deaths and souls of embryos are discussed in chapter 7.

⁶⁰ Stuart Berg Flexner, ed., *Random House Dictionary of the English Language*, 2nd ed., unabridged (New York: Random House, 1987).

⁶¹ Charles D. Dern, “Speaking Clearly About Early Life: Confusion Over Medical Terms,” *Ethics and Medics* 34, no. 3 (March 2009): 3–4.

scientific writers have yet to adopt new terms to describe “fertilization” in the context of ART. Since such a process does not take place in a woman’s body, most writers use “conception” to represent the starting point of the new life. Therefore, I will use “conception” in this dissertation to describe the beginning of life outside of a woman’s body. I will use the same term to describe natural intrauterine conception as recorded by the Bible.⁶²

On the biological level, a new human person is generated at conception. As Hui puts it: “The person comes to be when the human physical organism comes to be.”⁶³ The *biological self* is inseparable from the body.⁶⁴ “Whatever is done to my body is, after all, done to me; therefore the nature of human embodiment renders medicine an inherently personal and moral enterprise.”⁶⁵

The reproduction of life as a species, from one human generation to the next, also begins at conception.⁶⁶ To view the human person as a natural kind, rather than an emergent property, is consistent with our moral intuition.⁶⁷ Hui concludes that the position that “awards human life with moral standing at the time of conception” is fundamentally based on the natural-law tradition, which is defended biologically on the basis that the conceptus possesses the full human genome, theologically on the basis of a primary creational relationship with God and philosophically by the species principle

⁶² The term “natural conception” is meant to contrast with conception enabled by ART.

⁶³ Hui, *Beginning of Life*, 73.

⁶⁴ Lynne Baker, Materialism with a Human Face, in Kevin Corcoran, ed., *Soul, Body and Survival: Essays on the Metaphysics of Human Persons* (Ithaca, NY: Cornell University Press, 2001), 161. For example, when a patient wonders if she has cancer, she wonders if her *self* has cancer. She sees her body from a first-person, rather than a third-person, point of view.

⁶⁵ Hui, *Beginning of Life*, 82.

⁶⁶ Hui, *Beginning of Life*, 27–28.

⁶⁷ Beckwith, “Abortion and Public Policy,” 510.

itself.”⁶⁸

Ultimately, the topic of personhood surpasses the scope of biological science. Frame comments, “no scientifically obtained proposition in itself would appear sufficient to establish ontological status and ethical rights . . . a purely scientific argument, an argument containing only scientific premises and no Scripture premises, must be regarded as in principle incapable of resolving this sort of question.”⁶⁹

⁶⁸ Hui, *Beginning of Life*, 27.

⁶⁹ John M. Frame, *Medical Ethics: Principles, Persons, and Problems* (Phillipsburg, NJ: P&R, 1988), 103.

CHAPTER 3

PERSONHOOD AND THE SOUL

While science shows that a human's biological life begins at conception, the Bible reveals that a human has not only a physical body but also a metaphysical soul.¹ When God breathed into Adam's nostrils, for example, Adam became a living man with a soul. The view that the whole person consists of body and soul prevails throughout church history.² Therefore, we must consider theology as well as biology when we seek to understand the beginning of personhood.³ Our goal is not to read a modern scientific understanding back into biblical texts, but rather, "to focus on the sacred writers' clear witness to the reality of divine involvement in the womb from the beginning of human life."⁴ In this chapter, I will describe how the concepts of personhood and the soul have

¹ Kung-Ho Chou, "Shengjing de Ren Lun yu Yixue Lunli" [Christian Anthropology and Medical Ethics in the Bible], in *Jidutu Yixue Lunli Xilie (1)—Duoyuan Shehui de Yixue Lunli* [The Christian Medical Ethics Series Vol. 1—*Medical Ethics in a Diverse Society*], ed. Liming Chang (Taichung: Chinese Christian Medical Mission, 2005), 30. A being with a soul is a person and holds the highest moral status among all created beings.

² Edwin C. Hui, *At the Beginning of Life: Dilemmas in Theological Bioethics* (Downers Grove, IL: InterVarsity, 2002), 112–14.

³ Hsiao-Chih Sun, "Renlei Peitai zhi Xingshang yu Daode Diwei" [The Metaphysics and Moral Status of Human Embryos], *National Taiwan University Philosophical Review* 34 (October 2007): 62, http://ntur.lib.ntu.edu.tw/bitstream/246246/281884/1/0034_200710_2.pdf; Peter Singer, *Practical Ethics* (Cambridge: Cambridge University Press, 1979), 86. Traditionally, *human* is considered synonymous to *person*, but contemporary secular ethicists have attempted to differentiate the two. For example, Peter Singer claims that although an embryo is human from the moment of conception, it is not a person. Since personhood is defined by all the characteristics of a human being, Singer's philosophy nullifies the concept of the human and reduces the human to a biological entity no different from other animals. Singer also uses traits and behaviors, such as self-consciousness, to define personhood. In doing so, he overlooks the ontological essence of the person beneath outwardly expressed traits. Unsurprisingly, Singer also questions the personhood of infants, who do not display self-consciousness.

⁴ John Jefferson Davis, "The Moral Status of the Embryonic Human: Religious Perspectives." *Ethics & Medicine* 22, no. 1 (Spring 2006): 10.

developed throughout history, in the realms of philosophy and theology.

The Historical Development of Personhood

Ancient Philosophical-Religious Background

Since the beginning of history, philosophers have pondered how the soul relates to the body and, more fundamentally, whether humans truly have souls. Many ancient cultures, including Chinese, Indians, Egyptian, and Mesopotamian peoples, believed in immortal souls. In fact, the word “soul” was translated from the Greek word “*psuche*,” which also means “mind” and serves as the root of “psychology.” However, each culture had distinct beliefs about the soul. To ancient Greeks, the soul was the “breath of life” and “high spirit,” unrelated to intellectual reasoning, consciousness, will, or feeling. After a person dies, the soul is reduced to a phantom shadow of the dead person.⁵

Many pre-Socratic philosophers believed that souls were immortal. During the period of Homer, it was common belief that the deceased continue to live in the memory of survivors. Orphicists taught that the soul was immortal and eternal because it originated from Zeus.⁶ They believed that just as Greek gods are immortal, the soul is also immortal, and that just as universal principles exist eternally, the soul’s existence has neither beginning nor end.⁷ According to Orphicists, the reasoning nature of the soul demonstrates its divinity.

Plato expands upon Socrates’ concept of soul immortality. He believes that the

⁵ John Burnet, *The Socratic Doctrine of the Soul* (London: Oxford University Press, 1916), 13–14.

⁶ Paschal Fu-Ning Ting, “Yalisiduode de Linghun Buxiu Gainian” [Aristotle on the Immortality of the Soul], *National Taiwan University Philosophical Review* 42 (October 2011): 7.

⁷ Antoine Vergote, *In Search of a Philosophical Anthropology*, trans. M. S. Muldoon (Leuven, Belgium: Leuven University Press, 1996), 72–73.

soul and the body are separate and that neither one is contingent upon the other. To Plato, the soul is the true person, the basis of life, and the cause of body movement. It is rational, contrary to the sensation-oriented body.⁸ Plato became the first person to introduce a philosophical foundation for this religious tradition. He proposes four arguments for the soul's immortality in *Phaedo* and elaborated upon the concept in *Republic* and *Phaedrus*.⁹ Plato's arguments explore the soul's similarity to Form.¹⁰ The Form theory was Plato's effort to establish a metaphysical foundation for the ever-changing world. Similarly, the soul theory was his effort to establish metaphysical principles for the physical body. Plato reasons that the soul of a human is the true human being, just as the world of Forms is the true world, and the essence of a human being is the soul, just as the essence of any object is its Form. According to Plato, the soul does not permanently conjoin to a body but departs from the body and continues to exist after the body dies.¹¹ This means one soul can be identified with several individuals successively throughout its cycles of transmigration. Although the soul is immortal, it does not possess a continuous self-identity, in Plato's opinion.¹²

Aristotle, more concerned with the tangible world and the individual human, describes a human as a psychosomatic, non-eternal being.¹³ In his view, a human ceases

⁸ Sabina Lovibond, "Plato's Theory of Mind," in *Psychology*, ed. Stephen Everson (Cambridge: Cambridge University Press, 1991), 36.

⁹ Plato, *Phaedo*, 78b–84b.

¹⁰ Gottfried Martin, *Einleitung in die allgemeine Metaphysik* (Stuttgart, Germany: Reclam, 1965), 36.

¹¹ Plato, *Phaedo* 78b–84b.

¹² Eduard Zeller, *Outline of the History of Greek Philosophy*, trans. W. Nestle (London: Routledge & Kegan Paul, 1969), 123; Plato, *Phaedo* 59c–118a.

¹³ Aristotle, *De Anima*, 2.1; John Zizioulas, *Being as Communion: Studies in Personhood and the Church* (Crestwood, NY: SVS, 1985), 31–33. Aristotle believes that the soul is not separable from the body.

to exist when he dies. He concludes that human beings do not have real ontology, since an ontological being exists only when his body and soul are both alive.¹⁴

Overall, ancient Greek philosophy is rooted in ontological monism. Few ancient Greek philosophers drew any relation between the soul and personhood.¹⁵ When confronted with the multiplicity of material objects, the philosophers traced the existence of those objects to the objects' relationship with the One being. Every case of differentiation or accident was regarded as the objects' tendency toward non-being.¹⁶ For this reason, ancient Greek philosophy was unable to endow human individuality with permanence and concrete ontology.

View of the Soul in Eastern Cultures

Traditional Chinese folk religions teach that each human's soul consists of two entities: *po* (魄), which gives the person physical vitality, and *hun* (魂), which governs emotions, the intellect, and the will. It is understood that when one dies, one's *po* and *hun* dissociate from the dead body. Whereas the *po* leaves the human world and returns to nature, the *hun* transforms into a spirit.¹⁷ Confucianists believe that the *hun* of those who live virtuous lives will never be lost or forgotten but will surely unite with their ancestors' spirits.¹⁸ Upon this unification, each *hun* is no longer an individual entity but becomes one with the other spirits. In fact, a person's *hun* is never associated with the

¹⁴ Aristotle, *De Anima*, 3.8; Zeller, *History of Greek Philosophy*, 123. Aristotle says, "there is nothing outside and separate in existence from sensible spatial magnitudes."

¹⁵ Zizioulas, *Being as Communion*, 32–33.

¹⁶ Zizioulas, *Being as Communion*, 29.

¹⁷ Wen-Yuh Hsieh, "Zhongguo Chuantong Sixiang Zhong de Linghun Guan" [Traditional Chinese Views Toward the Soul], in *Perspectives on Soul*, ed. Isaac J. Chen (El Monte, CA: Evangelical Formosan Church, 2003), 4–6.

¹⁸ Hsieh, "Traditional Chinese Views," 13.

person's self.¹⁹ Other Eastern religions, including Buddhism and Hinduism, teach that a human's soul can transmigrate into the body of a deity, a human, an animal, or an evil spirit, depending on the human's moral deeds in the previous life cycle.

The theory of soul transmigration, as seen in ancient Western and Eastern cultures, poses a difficulty for the concept of personhood. If a soul can enter a new body in each reincarnation cycle, then there would be no such thing as a continuous personal identity.²⁰ For example, if the soul of Mr. A reincarnated twice and successively entered the bodies of Ms. B and a mouse, are all three the same "person"? When Ms. B says "myself", is she referring to herself, Mr. A, the mouse, or all three? The blurred line in this hypothetical illustration shows that personality and self-identity cannot be reconciled with soul transmigration.²¹ Overall, secular philosophy and ancient religions from the West and the East fail to provide a sound foundation for personhood and self-identity based on their understanding of the soul.

Influence of Judeo-Christian Theology

The Contribution of the Early Church Fathers

The ontological view of personhood against the non-personal view of the ancient Greeks was a breakthrough in Western philosophy. John Zizioulas attributes the philosophical shift to the study of the enigmatic Trinity. He writes, "The concept of person with its absolute and ontological content was born historically from the endeavour of the Church to give ontological expression to its faith in the Triune God."²² The Bible

¹⁹ Hsieh, "Traditional Chinese Views," 6.

²⁰ John Wisdom, *Philosophy and Psychoanalysis* (Oxford: Blackwell, 1953), 248–49.

²¹ David Bostock, "Immortality and the Nature of the Soul in the Phaedo," in *Plato 2. Ethics, Politics, Religion, and the Soul*, ed. Gail Fine (Oxford: Oxford University Press, 2000), 418–24.

²² Zizioulas, *Being as Communion*, 36.

reveals that the Father is God, the Son is God, and the Holy Spirit is God; all three persons are God, yet the Bible also says there is only one God. How can God be simultaneously one and three? The seemingly perplexing biblical account and challenges from heretics demanded early theologians to develop a comprehensible explanation. Thus, the Doctrine of the Trinity gradually took shape over the first few centuries. Its background was ancient Greek philosophy, which drew no relation between the Greek term *hypostasis* (now understood as “person”) and the Latin term *prosopon* (person). Instead, *hypostasis* (person) and *ousia* (substance) were used interchangeably.²³

Tertullian is the first to designate an individual meaning to *persona*, a term that previously referred to an actor’s mask.²⁴ He uses *persona* to describe the three individuals in the Triune God: *una substantia, tres personae* (one substance, three persons). He emphasizes the distinction and relation between the three persons in the Godhead. Nevertheless, his explanation of the three persons was more relational and less ontological.

Development in the Understanding of “Person”

In early Christian councils, from Nicaea to Chalcedon (451 A. D.), the notion of person became an integral part in the Doctrine of the Trinity. In general, Latin-speaking churches in the Western Roman Empire followed the teachings of Augustine, whereas Greek-speaking churches in the Eastern Roman Empire followed the teachings of the Cappadocians.²⁵

²³ Robert Letham, *The Holy Trinity: In Scripture, History, Theology and Worship* (Phillipsburg, NJ: P&R, 2004), 119.

²⁴ Robert W. Jenson, *The Triune Identity: God According to the Gospel* (Eugene, OR: Wipf and Stock, 2002), 72; Mark Coppenger, “What Shall We Make of ‘Snowdenism’?” *Providence Magazine* 7 (Spring 2017): 39, <http://providencemag.com/wp-content/uploads/What-Shall-We-Make-of-Snowdenism-Mark-Coppenger.pdf>.

²⁵ Letham, *The Holy Trinity*, 377.

The Western Latin Churches

In *De Trinitate*, Augustine expresses his reluctance to use the word *persona* to describe the Triune God. He writes, “the reason there are said to be three persons or three substances is not to signify diversity of being, but to have at least one word to answer with when asked *three what* or *three who*.”²⁶ Augustine had hoped to describe the three individuals in the Trinity with terms that were unassociated with created beings. He accepted the word “person” but was not satisfied with it. As a result, he spent more time discussing the unity of the single divine substance than the plurality of the three persons. He also spent less time exploring the ontological relations among the divine Persons. In Augustinian thought, the relations among the divine Persons were secondary attributes of the primary divine substance. To him, God is one Being within whose divine consciousness there is a three-fold self-relatedness. Aware of the limitations, Augustine proposed many analogies in *De Trinitate* trying to illustrate the difficult mystery of the Trinity. His favorite was a psychological analogy for each of the three Persons: memory, understanding, and will.²⁷ In this analogy, the person is an abstract quality instead of a concrete entity.²⁸ The result is the Augustinian tradition of personhood, which focuses on the person’s individual consciousness and its internal functions, but lacks explanation in the social and communal aspects of personhood.

The individualist and intellectual connotations of the person as a center of consciousness became a tradition in Western philosophy, influenced by Augustine’s psychological analogy. One example is the definition of “person” by Boethius a century later as “an individual substance of a rational nature.”²⁹ Medieval thinkers saw the

²⁶ Augustine, *De Trinitate*, 7.4.7.

²⁷ Augustine, *De Trinitate*, 15.7.12.

²⁸ Letham, *The Holy Trinity*, 199.

²⁹ Boethius, “*Liber Contra Eutychen et Nestorium*,” in *Theological Tractates*, 3.74. Originally “*persona est naturae rationabilis individua substantia*.” This is the definition proposed by Boethius to

“person” as a rational being. Thomas Aquinas follows Boethius’ generic definition of person as “an individual substance of a rational nature,”³⁰ which became recognized as doctrine at the Council of Vienne.³¹ Aquinas views God as *ipsum esse*, a self-subsistent being. The distinction between the Persons in one God is only by relation of origin, and unlike in the human world, these relations are not accidental but are of the divine essence itself.³² In *Summa Theologica*, Aquinas draws an analogy from the persons to humans and angels, in addition to God.³³ When discussing whether it is true that Christ as Man is a hypostasis or person, he writes, “It belongs to every man to be a person, inasmuch as everything subsisting in human nature is a person.”³⁴ Anselm later argues from the doctrine of simplicity that since God has no parts, it follows that each Person is God as a whole, and they are one and the same God.³⁵ This tradition may have influenced the Cartesian definition of person as a thinking individual, and continues to exert an enormous influence on the contemporary understanding of personhood.

The Eastern Greek Churches

Prior to the Council of Constantinople, the Eastern Cappadocian fathers—Basil the Great, Gregory of Nazianzus, and Gregory of Nyssa—made significant contributions to clarify the true, eternal, and personal distinctions of the three Persons and

respond to the Christological errors of Nestorianism and monophysism.

³⁰ Thomas Aquinas, *Summa Theologica*, 1.29.1.

³¹ Josef Neuner and Jacques Dupuis, ed., *The Christian Faith in the Doctrinal Documents of the Catholic Church*, 6th ed. revised, (New York: Alba House, 1996), 405; Aquinas, *Summa Theologica*, 1.29.1–2, quoted in Louis Gutheinz, *Theological Anthropology*, (Taipei: Catholic Kaungchi Press, 1996), 172.

³² Aquinas, *Summa Theologica*, 1.29.4.

³³ Peter Toon, *Our Triune God: A Biblical Portrayal of the Trinity* (Vancouver: Regent College Publishing, 1996), 208.

³⁴ Aquinas, *Summa Theologica*, 3.16.12.

³⁵ Letham, *The Holy Trinity*, 224.

set them in the context of their relations to each other. The Nicene Creed employed the term *hypostasis* (person) but sometimes interchanged it with *ousia* (being or nature).³⁶ Basil used *hypostases* to demonstrate that the Father and the Son are distinct and not to be confused.³⁷ The Cappadocians applied *hypostasis* to the Holy Spirit, who is to be numbered with the Father and the Son. They did not say there are three Gods but affirmed “distinctions of the divine Persons, and at the same time abide by the monarchy.”³⁸ Basil initiated the move of disassociating *ousia* from *hypostases*. He wrote to Count Terentius, “*ousia* has the same relation to *hypostases* as the common to the particular.”³⁹ Thus, *hypostasis* was converted from an abstract and impersonal being to a self-identifying subject with a name, an identity, and objective relations with other beings. It became appropriate to express the three identifiable, self-manifesting divine Persons as *hypostases*.⁴⁰

Modern Philosophical Concept of Personhood

In modern philosophy, the “person” is a self-reflective and self-determining entity.⁴¹ Descartes proposes the “self” as “*cogito ergo sum*” – “I think, therefore I am.” Under this definition, thinking presupposes the existence of “self” or the self-conscious

³⁶ Letham, *The Holy Trinity*, 116.

³⁷ Letham, *The Holy Trinity*, 149.

³⁸ Chrysostom Koutloumousianos, *The One and the Three: Nature, Person and Triadic Monarchy in the Greek and Irish Patristic Tradition* (Cambridge: James Clarke & Co., 2015), 27.

³⁹ Edmund J. Fortman. *The Triune God: A Historical Study of the Doctrine of the Trinity* (Eugene, OR: Wipf & Stock, 1999), 80.

⁴⁰ Edwin Hui, “Jen and Perichoresis: the Confucian and Christian Bases of the Relational Persons,” in *The Moral Status of Persons: Perspectives on Bioethics*, ed. G. K. Becker (Amsterdam-Atlanta: Editions Rodopi B.V., 2000), 96–97.

⁴¹ The legal concept of the judicial person and the Hebrew concept of the corporate person (e.g., Ephraim or Israel) are beyond the scope of this chapter.

“I”.⁴² Today, a person is commonly defined as a centered self with his own rationality, consciousness, individuality and particularity. Such a view emphasizes the person’s coherence, consistency, and identity.⁴³

Metaphysically, “person” is a term of dignity (*nomen dignitatis*) because it describes the inherent value and dignity of a being.⁴⁴ Immanuel Kant, who affirms these values, asserts that all persons have inherent dignity and therefore deserve respect. According to Kant, persons should always be treated as an end, and never as a means only.⁴⁵ In his view, the dignity of the person is associated with free will and moral responsibilities, whereas “moral status” determines how the person ought to be treated. Similarly, the contemporary culture emphasizes personal rights, such as legal rights, which ought not to be violated without due cause.⁴⁶ Kant’s view that it is the rational nature in a person, rather than the ontological individual, that evokes self-esteem, is in stark contrast with the Chalcedonians.⁴⁷

From a scriptural perspective, persons deserve dignity and respect because they

⁴² J. Wentzel van Huyssteen and Erik P. Wiebe, eds., *In Search of Self: Interdisciplinary Perspectives on Personhood* (Grand Rapids: Eerdmans, 2011), 348; David Brown, “Trinity,” in *A Companion to Philosophy of Religion*, ed. Philip Quinn and Charles Taliaferro (Malden, MA: Blackwell, 1997), 526. Descartes’ definition has been compared to the writings of other Renaissance philosophers and Augustine.

⁴³ Hui, “Jen and Perichoresis,” 95–96; Ray Anderson, *On Being Human* (Grand Rapids: Eerdmans, 1982), 161–78.

⁴⁴ Grzegorz Hofub, “Being a Person and Acting as a Person,” *Forum Philosophicum* 13 (2008): 267.

⁴⁵ Immanuel Kant, *Groundwork of the Metaphysics of Morals*, trans., H. Paton (New York: Harper and Row, 1948), 96.

⁴⁶ Mark Coppenger, *Cases and Maps: A Christian Introduction to Philosophy* (Eugene, OR: Wipf and Stock, 2019), 28.

⁴⁷ Oliver O’Donovan, *Begotten or Made?* (Oxford: Oxford University Press, 1984), 58. The Chalcedonian definition of Christ is “‘one person *in* two natures’ [where] the person, the individual being, is primary.” Kant argues that what is valuable and deserves respect is the ‘rational nature’ rather than the “individual being in whom a generic principle of rational nature is discerned.”

are created in *Imago Dei*. The dignity and value of the person is not inherent within oneself but endowed by God because they are made in his image. In fact, the concept of human rights had arisen from the Judeo-Christian culture because it was rooted in the assumption that humans are *created* equal.⁴⁸ Scriptural revelation provides the necessary metaphysical foundation for treating humans with dignity and respect.⁴⁹

The Composition of a Human Person: One, Two, or Three Parts?

Before discussing the human soul, we must first clarify the theological anthropology: Does a human consist of one, two, or three components? A popular view in conservative Protestant circles is the “trichotomist” view, which says that, according to the Bible, man consists of body, soul, and spirit. One of the earliest proponents of trichotomy was Irenaeus.⁵⁰ Trichotomism became popular among the Alexandrian fathers of the early church, declined during the mediaeval period, and revived in the nineteenth century by English and German theologians such as Franz Delitzsch and J. B. Heard.⁵¹ More recently, it has been defended by Watchman Nee, Bill Gothard, and the *Scotfield Reference Bible*.⁵² The Chinese church has been deeply influenced by Watchman Nee, who introduced his own version of trichotomism adopted from the Christadelphian

⁴⁸ “All men are created equal” is part of the United States’ Declaration of Independence penned by Thomas Jefferson in 1776.

⁴⁹ Christian Smith, *What is a Person?* (Chicago: University of Chicago Press, 2010), 3. Apart from God’s revelation in Scripture, it is nearly impossible to find a metaphysical basis to support the notions of human rights and dignity. Christian Smith observes a type of philosophical “schizophrenia” in his social scientist peers who are “personally committed—some passionately so—to human rights, social justice . . .,” yet simultaneously teach social science theories that point to the opposite, namely, that humans are governed by the external environment and their behaviors predictable by statistical models. The social scientists have a moral intuition for human dignity, but by intentionally excluding Scripture, they create a schism between their moral pursuits and their scholarly discipline.

⁵⁰ Anthony A. Hoekema, *Created in God’s Image* (Grand Rapids: Eerdmans, 1986), 204–5.

⁵¹ Millard J. Erickson, *Christian Theology* (Grand Rapids: Baker, 1998), 2:520–21.

⁵² Hoekema, *God’s Image*, 205.

theology.⁵³ He taught that of those three elements, the spirit holds the highest honor because it interacts with God; the soul (thoughts, emotions, and the will) is the next in line, and the body, which comes into contact with the world, is the least honorable.⁵⁴ Nee believed that because God is Spirit, he only accepts the spirit and rejects worship from the soul or the body.⁵⁵ Nee suggested that people's thoughts, emotions, and will are useless in spiritual matters; even if the soul loved God, God would not accept that love.⁵⁶

Trichotomists often appeal to two NT passages:⁵⁷

“For the word of God is living and active. Sharper than any double-edged sword, it penetrates even to dividing soul and spirit, joints and marrow; it judges the thoughts and attitudes of the heart” (Heb 4:12).

“And the God of peace himself sanctify you wholly (*holoteleis*); and may your spirit and soul and body be preserved entire (*holokleron*), without blame at the coming of our Lord Jesus Christ.” (1 Thess 5:23, ASV)

The problem with using these verses to endorse trichotomism is that, first, 1 Thessalonians 5:23 is not a doctrinal statement but a prayer. Paul did not intend to analyze the composition of a human being; rather, he was praying that God would protect the whole person.⁵⁸ Although the spirit, soul, and body simultaneously served as the

⁵³ Watchman Nee, *The Release of the Spirit* (Indianapolis: Sure Foundation, 1956), 6.

⁵⁴ Watchman Nee, “The Potential of the Soul”, in *The Complete Works of Watchman Nee* (Hong Kong: Heavenly Bread, 1991–1995), 17:155.

⁵⁵ Ka-Lun Leung, *The Glory, Shame, Rise, and Decline of Watchman Nee*, (Hong Kong: Wonder Grace, 2004), 206.

⁵⁶ Watchman Nee, *The Spiritual Man*, (Hong Kong: Christian, 2000), 137.

⁵⁷ Hoekema, *God's Image*, 207–8.

⁵⁸ Leon Morris, *First Thessalonians*, trans. Chuan-Yu Yang, Tyndale New Testament Commentaries (Taipei: Campus Evangelical Fellowship, 2002), 116–17; Ronald Y. K. Feng, *First Thessalonians*, Tien-Dao Bible Commentaries (Hong Kong: Tien-Dao, 1994), 460–67. Among all of the epistles, this was the only place Paul mentioned the “spirit, soul, and body.” This does not mean that Paul believed each human was composed of three entities.

subject in the verse, the singular verb and the singular adjective “whole” (*holokleron*) revealed that wholeness was the emphasis of the verse. Hoekema comments,

“We should observe first that . . . The first [Greek word], *holoteleis*, is derived from *holos*, meaning whole, and *telos*, meaning end or goal; the word means ‘whole in such a way as to reach the goal.’ The second word, *holokleron*, derived from *holos* and *kleros*, portion or part, means ‘complete in all its parts.’ It is interesting to note that in the second half of the passage both the adjective *holokleron* and the verb *teretheie* (‘may be preserved or kept’) are in the singular, indicating that the emphasis of the text is on the whole person.”⁵⁹

He explains, “Scriptures are not primarily interested in the constituent ‘parts’ of man or in his psychological structure, but in the relationships in which he stands.”⁶⁰ According to Hoekema, Paul is saying that no matter how we name our immaterial parts, he wants God to sanctify us wholly to the day of Christ.⁶¹ Indeed, if one insists that the verse proves that each human consists of three parts, a spirit, a soul, and a body, how can he explain the four entities Jesus listed in Mark 12:30—the heart, the soul, the mind, and the strength?⁶²

The language in Hebrews 4:12 is also figurative.⁶³ Its main point is that the word of God is living and active, able to reveal all that is hidden in a person—even the thoughts that are hidden deep inside one’s soul—like a sharp sword, so nothing can be hidden in the presence of the LORD.⁶⁴ The “soul and spirit” refer to the immaterial components of a human, while the “joints and marrow” represent the deepest parts of the

⁵⁹ Hoekema, *God’s Image*, 208.

⁶⁰ Hoekema, *God’s Image*, 204.

⁶¹ Wayne Grudem, *Systematic Theology: An Introduction to Biblical Doctrine* (Grand Rapids: Zondervan, 1994), 479.

⁶² Grudem, *Systematic Theology*, 478–79.

⁶³ Hoekema, *God’s Image*, 208.

⁶⁴ Donald Guthrie, *Hebrews*, trans. Campus Evangelical Fellowship, Tyndale New Testament Commentaries (Taipei: Campus Evangelical Fellowship, 2001), 121–22.

material body.⁶⁵ Grudem explains: “The author is not saying that the Word of God can divide soul *from* spirit, but he is using a number of terms (soul, spirit, joints, marrow, thoughts and intentions of the heart) that speak of the deep inward parts of our being that are not hidden from the penetrating power of the Word of God.”⁶⁶ If one insists that this verse proves that one’s soul and spirit can be pierced and separated by the word of God, but also say that the statement about the “joints and marrow” cannot be interpreted literally, one would be interpreting the Bible inconsistently.

In reality, spirit (*pneuma*)⁶⁷ and soul (*psuche*)⁶⁸ are so often used interchangeably in the Bible that they cannot be absolutely distinguished from one another.⁶⁹ Hoekema asserts, “We must also reject trichotomy because *it posits a sharp distinction between the spirit and the soul that finds no support in Scripture.*”⁷⁰ Parts of the original language of the Bible indicate that a person constitutes of a spirit (*pneuma*) and a body (Jas 2:26, 2 Cor 7:1, 1 Cor 7:34); other parts say a person constitutes of a soul (*psuche*) and a body (Matt 6:25, Matt 10:28). A person’s death is sometimes described as the departure of his spirit (Luke 23:46) and sometimes as the departure of his soul (Gen 35:18, 1 Kgs 17:22). Prayers to God can be made by either the spirit or the soul (Luke 1:46, Ps 103:1). Sometimes, Christ says his spirit is distressed (John 13:21); other times, he says his soul is distressed (John 12:27). Spiritual growth is often referred to as “growth

⁶⁵ Raymond Brown, *The Message of Hebrews*, trans. Chin-Lan Yang (Taipei: Campus Evangelical Fellowship, 2007), 123.

⁶⁶ Grudem, *Systematic Theology*, 479. Italics in original.

⁶⁷ *Pneuma*, G4151: a current of air, i.e., breath (blast) or a breeze; by analogy or figurative a spirit, i.e., (human) the rational soul, (by implication) vital principle, mental disposition, etc.

⁶⁸ *Psuche*, G5590: breath, i.e., (by implication) spirit, abstract or concrete (the animal sentient principle only).

⁶⁹ Grudem, *Systematic Theology*, 473–77.

⁷⁰ Hoekema, *God’s Image*, 206. Italics in original.

of the soul” (Acts 4:32, Eph 6:6, Col 3:23, Jas 1:21). Jesus calls believers to “Love the Lord your God with all your heart and with all your soul and with all your mind and with all your strength.” (Mark 12:30) but does not mention loving God “with all your spirit.”⁷¹

Because “spirit” and “soul” are often used interchangeably in the original text, the evidence from the two verses do not support the theory of distinguishing the spirit from the soul. What the Bible reveals should be a holistic dualism: the spirit and the soul are viewed as one non-material part (collectively referred to as “the soul” in the rest of this dissertation) that perfectly unites with the material body to form a human person.⁷² Only death can separate the body and the soul.⁷³

The view that human beings consist of only one element is called monism. A recent version of monism is the “non-reductive physicalism” advocated by Nancey Murphy and Joel Green at Fuller Theological Seminary. Proponents of physicalism attempt to reconcile science and Scripture by claiming that each person only has a material body but no soul.⁷⁴ According to physicalism, psychiatry and medical imaging have revealed that so-called functions of the soul, such as cognition, consciousness,

⁷¹ See Erickson, *Christian Theology*, 2:538–57; Bruce A. Ware, “Human Nature and the Soul” (Systematic Theology I, Lecture 26), <https://www.biblicaltraining.org/library/human-nature-soul/systematic-theology-i/bruce-ware/>.

⁷² John W. Cooper, *Body, Soul & Life Everlasting: Biblical Anthropology and the Monism-Dualism Debate* (Grand Rapids: Eerdmans, 2000), 231; Richard Swinburne, *Are We Bodies or Souls?* (Oxford University Press, 2019), 9. The biblical view of human nature is both holistic and dualistic. Richard Swinburne holds that although a human being consists of a soul and a body, “it is our soul which makes each of us who we are.” The view that only one’s soul is one’s true self is more Cartesian or Platonic than biblical.

⁷³ Jürgen Moltmann, *God in Creation and the Spirit of God* (Minneapolis: Fortress, 1993), 258–62. Moltmann compared the inseparable combination (*Gestalt*) of the human soul and body to “reciprocal perichoresis”, the interchangeability and coexistence of the three persons of the Trinity. But the author believes this analogy went beyond the explicit revelation of the Bible, because although God exists in three persons, a human is only one person. Besides, the creator and creation have a qualitative difference. So even though a human exists in the image of God, excessive comparisons of the two may distort the Christian doctrine.

⁷⁴ Nancey Murphy, “Do Humans Have Souls? Perspectives from Philosophy, Science, and Religion,” *Interpretation: A Journal of Bible and Theology* 67, no. 1 (2013): 30–41.

emotions, memory, IQ, and personality, are in fact attributed to the structure and functions of the brain.⁷⁵ Murphy summarizes: “all of the human capacities once attributed to the immaterial mind or soul are now yielding to the insights of neurobiology.”⁷⁶

Monism has not generally been adapted by evangelical theologians because many scriptural texts clearly affirm that the soul live after the body dies (Luke 23:43; Matt 10:28; 2 Cor 5:8; Phil 1:21).⁷⁷ Physicalists reject the notion of disembodied existence, or intermediate state, of dead persons between death and resurrection,⁷⁸ but are not able to provide a satisfactory “counter-proposal that is nearly as thorough, comprehensive, and coherent as the case of the historic Christian position.”⁷⁹

William Cheshire, a neurologist, criticizes the notion that “human thought is fully reducible to mechanical processes.”⁸⁰ Dismissing the idea as reductionist, he argues: “Although neuroscience has shed considerable light on the functions of the brain, it lacks the ability to explain the phenomena of consciousness, personal agency, conscience moral responsibility, the continuity of identity over time, or human purpose.”⁸¹ The notion that moral choices and actions are operated under the physical laws of the brain undermines the moral responsibilities and freedom of individuals. Physicalism is actually

⁷⁵ Joel B. Green, *Body, Soul, and Human Life: The Nature of Humanity in the Bible* (Grand Rapids: Baker, 2008), 476.

⁷⁶ Nancey Murphy, “Science and Society,” in *Witness, Systematic Theology 3*, ed. James William McClendon, Jr. (Nashville: Abingdon, 2000) 99–131.

⁷⁷ Grudem, *Systematic Theology*, 473; Ware, “Human Nature and the Soul.”

⁷⁸ Joel B. Green, “Eschatology and the Nature of Humans: A Reconsideration of Pertinent Biblical Evidence,” *Science & Christian Belief* 14, no. 1 (April 2002): 33–50.

⁷⁹ John W. Cooper, “The Current Body-Soul Debate: A Case for Dualistic Holism,” *Southern Baptist Journal of Theology* 13, no. 2 (Summer 2009): 38.

⁸⁰ William P. Cheshire, “The Sum of All Thoughts: Prospects of Uploading the Mind to a Computer,” *Ethics & Medicine* 31, no. 3 (Fall 2015): 135–41.

⁸¹ Cheshire, “The Sum of All Thoughts,” 139.

a metaphysical claim that “entails determinism of the will.”⁸²

Yet physicalists raise a legitimate question: In light of new findings about the brain’s structure and function, how should contemporary Christians define the soul or spirit? In the following sections, I will point to some clues found in Scripture.

What is a Soul?

The biblical view of the soul can be summarized by the following characteristics:

- (1) The soul is the non-material component of a living human. When the soul is present in a human, the human is alive; when the soul leaves, the human dies. For example:
 - a. “And as her soul was departing (for she was dying), she called his name Benoni; but his father called him Benjamin.” (Gen 35:18, ESV)
 - b. “And the Lord heard the voice of Elijah; and the soul of the child came into him again, and he revived.” (1 Kgs 17:22, KJV)
 - c. “Do not be afraid of those who kill the body but cannot kill the soul. Rather, be afraid of the One who can destroy both soul and body in hell.” (Matt 10:28)
 - d. “But God said to him, ‘Fool! This night your soul is required of you, and the things you have prepared, whose will they be?’” (Luke 12:20)
- (2) One’s spirit expresses one’s character, personality, thoughts, will, and emotions. For example:
 - a. “But because my servant Caleb has a different spirit (*ruach*) and follows me wholeheartedly . . .” (Num 14:24a)
 - b. “I remembered my songs in the night. My heart mused and my spirit (*ruach*) inquired.” (Ps 77:6)
 - c. “After he had said this, Jesus was troubled in spirit (*pneuma*) and testified, ‘I tell you the truth, one of you is going to betray me.’” (John 13:21)
 - d. “For who among men knows the thoughts of a man except the man’s spirit within him? In the same way no one knows the thoughts of God except the Spirit of God.” (1 Cor 2:11)
 - e. “For they refreshed my spirit (*pneuma*) and yours also. Such men deserve recognition.” (1 Cor 16:18)

⁸² Cooper, “The Current Body-Soul Debate,” 43.

- (3) One's spirit communicates with God. For example:
- a. "Create in me a pure heart, O God, and renew a steadfast spirit within me." (Ps 51:10)
 - b. "My soul yearns for you in the night; in the morning my spirit longs for you." (Isa 26:9a)⁸³
- (4) One's soul will carry the records of every deed of one's body into eternity. For example: "Then I heard a voice from heaven say, 'Write: Blessed are the dead who die in the Lord from now on.' 'Yes,' says the Spirit, 'they will rest from their labor, for their deeds will follow them.'" (Rev 14:13)

From a medical perspective, the first point is expressed through the vital signs in a human body; a person with a soul is alive and expresses all sorts of observable vital signs; when a person dies, the soul leaves the body and the vital signs disappear. The second point can be partially explained through genetics, the function of the brain, fluctuation in hormones, social circumstances, psychology, and psychiatry; however, some functions of the human soul, such as conscience and religiosity, cannot be explained entirely by the material brain. The third and fourth points are beyond the scope of medicine.

Several scholars have attempted to distinguish between "personality" studied in contemporary psychology and "soul" described in the Bible. Stephen Greggo believes that while psychologists observe human experience and personality traits, they neglect the metaphysical soul and eternal life. Thus, they misinterpret the concept of "soul" by oversimplifying it to the level of "personality."⁸⁴ Nancy Duvall believes the soul is ontological, objective, universal, and nature-given, while the self is experiential, subjective, particular, and nature-developed.⁸⁵ James Orr observes that the "soul" described in the Bible means the following things: living being, life, self, person, desire,

⁸³ Michael A. Eaton, *Ecclesiastes*, trans. Chin-Ling Tsai and Chen-De Hsing, Tyndale Old Testament Commentaries (Taipei: Campus Evangelical Fellowship, 1999), 95–96.

⁸⁴ Greggo, "Soul Origin," 259–60.

⁸⁵ Nancy S. Duvall, "From Soul to Self and Back Again," *Journal of Psychology and Theology* 26, no. 1 (1998): 6–15.

appetite, emotions, and passion.⁸⁶ Greggo divides the meaning of the “soul” in the Bible into three aspects: (1) the inner self (Luke 1:46, Matt 26:38); (2) the life force that makes one alive (Gen 35:18, Job 2:6, Jer 15:2); (3) the whole person in the sense of the body and soul as one being (Gen 12:5, Exod 1:5, Acts 2:41); he believes the soul, which lasts into eternal life, is much broader than personality.⁸⁷

The Words in Scripture that Refer to the Soul

Since each human being is composed of a body and a soul, I will investigate the difference between humans and animals by examining the diction of the Bible regarding the soul. This section inspects six words in the Hebrew OT and the Greek NT that refer to the soul.

Nephesh⁸⁸

This feminine Hebrew noun appears 755 times in the OT; 600 of those are translated as *psuche* (soul, heart, spirit) in the Septuagint.⁸⁹ *Nephesh* has a multitude of meanings, including throat, neck, soul, life, person, body, and will.⁹⁰ It appears in the account of the creation of humans: “the LORD God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being (*nephesh chayah*)”⁹¹ (Gen 2:7). The phrase *nephesh chayah* is not specific to humans;

⁸⁶ James Orr, ed., “Psychology,” *The International Standard Bible Encyclopaedia* (Grand Rapids: Eerdmans, 1939), 2494–99.

⁸⁷ Greggo, “Soul Origin,” 258–67.

⁸⁸ *Nephesh* (H5315): properly a *breathing* creature, that is, *animal* or (abstractly) *vitality*; used very widely in a literal, accommodated or figurative sense (bodily or mental).

⁸⁹ Cheng, Ting-Hsien, “Nepes de Ciyi he Fanyi” [Definitions and Translations of *Nepes*]. *Journal of the Original Bible Text of the Scriptures* 1 (1993): 12–17.

⁹⁰ John C. Rankin, “The Corporeal Reality of *Nephesh* and the Status of the Unborn,” *Journal of the Evangelical Theological Society* 31, no. 2 (June 1988): 153–60.

⁹¹ *Chayah* (H2421): to *live*, whether literally or figuratively; causatively to *revive*.

the Bible’s authors use the same phrase to describe living creatures (Gen 1:24, 2:19, 9:10, 9:15, etc.), live objects (Gen 1:30), and God (e.g. Isa 1:14, Ps11:5, Jer 12:7).⁹² Although *nephesh* may often stand for the whole person,⁹³ it is too broadly defined to shed light on unique attributes of the human soul.

Ruach⁹⁴

This feminine Hebrew noun can refer to wind, breath, or spirit. In Ecclesiastes, it refers to the spirit of humans and animals: “Who knows if the human spirit (*ruach*) rises upward and if the spirit (*ruach*) of the animal goes down into the earth?” (Eccl 3:21) Elsewhere in the Bible, *ruach* refers to human breath (Job 12:10, Ezek 37:10), animal breath (Gen 7:15, Eccl 3:19, 21), human spirit (Job 32:8, Ps 31:5, Isa 42:5), God’s Spirit (Gen 6:3, Exod 35:31, Num 11:29), and even evil spirits (1 Kgs 22:22–23, 2 Chr 18:21–22). *Ruach* overlaps in meaning with *nephesh* in referring to the whole person.⁹⁵ Similar to *nephesh*, *ruach* is too broadly defined and does not help us deduce unique attributes of the human soul.

Chay⁹⁶

This Hebrew word shares a root with *chayyah* (alive, Gen 2:7). As an adjective, it means “living, alive, flowing, or active.” As a masculine noun, it refers to relatives, life (abstract emphatic), or sustenance. As a feminine noun, it refers to living

⁹² Cheng, “Definitions and Translations of *Nephesh*,” 17.

⁹³ Hoekema, *God’s Image*, 210.

⁹⁴ *Ruach* (H7307): *wind*; by resemblance *breath*, that is, a sensible (or even violent) exhalation; figuratively *life, anger, unsubstantiality*; by extension a *region* of the sky; by resemblance *spirit*, but only of a rational being (including its expression and functions).

⁹⁵ Walter David Stacey, *The Pauline View of Man* (London: Macmillan, 1956), 90.

⁹⁶ *Chay* (H2416): *alive*; hence *raw* (flesh); *fresh* (plant, water, year), *strong*; also (as noun, especially in the feminine singular and masculine plural) *life* (or living thing), whether literally or figuratively.

things, animals, appetite, or renewal. In the creation account, *chayyah* was used to describe a broad range of things, including animal lives (Gen 1:21a), beasts (Gen 1:24–25), the living breath of God (Gen 2:7), a living spirit (Gen 2:7), the tree of life (Gen 2:9), and human lives (Gen 3:20). Its meaning is also too broad.

Psuche⁹⁷

This feminine Greek noun can mean “spirit, life, heart, or breath;” in the Septuagint, it corresponds to the Hebrew word *nephesh*. Although *psuche* in the NT usually refers to human life (Matt 16:26) or human souls (Matt 10:28), it can also refer to animal lives (Rev 16:3). It is not specific to human souls.

Pneuma⁹⁸

This neuter Greek noun, which can mean “spirit” or “breath,” corresponds to the Hebrew word *ruach*. In the NT, it usually refers to the Holy Spirit (Matt 16:26) but can also mean human spirits (Rom 8:10, 16) and evil spirits (Mark 1:26).

Zoe⁹⁹

This feminine Greek noun means “life” or “lifetime”. It can describe the new life or eternal life that God gives to those who are reborn (Luke 18: 30); it can also describe God’s life (John 5:26). Again, it is not specific to human souls or human lives.

The Bible’s authors use other words, such as *neshamah* (breath, heart) and *lebab* (heart, will, soul, understanding, breath), to refer to the soul. However, none of those words are specific to the human soul. In conclusion, the words in the Bible that

⁹⁷ *Psuche* (G5590): breath, i.e., (by implication) spirit, abstract or concrete

⁹⁸ *Pneuma* (G4154): a current of air, i.e., breath (blast) or a breeze; by analogy or figuratively, a spirit, i.e., (human) the rational soul, (by implication) vital principle, mental disposition, etc., or (superhuman) an angel, demon, or (divine) God, Christ’s spirit, the Holy Spirit:—ghost, life, spirit(-ual, -ually), mind.

⁹⁹ *Zoe* (G2222): life (literal or figurative).

were translated as “soul” often encompass the spirits of humans, animals, and supernatural beings. Because none of the words are specific to the human soul, none of the words can distinctly define the human soul. Since a semantic analysis cannot clarify the Bible’s definition of the human soul, a biblical understanding of the human soul may be gained by reflecting on the creation of human beings in the image of God.

The Image of God

The origin and nature of humans are sharply distinguished from other creatures as made after their kind. Only humans are created in the image and likeness of God.¹⁰⁰ Among all creatures, humans are the only ones that received God’s breath. Hierarchically, humans bow down to God the Creator, yet humans also bear God’s glory and rises above all other creatures (Ps 8:3–6).¹⁰¹ Furthermore, humans are the only creation to receive God’s salvation (Heb 2:16).¹⁰²

But what is God’s image? The Bible provides no direct definition.¹⁰³ One clue comes from Genesis, when the author writes that Seth bears the image of his father, Adam.¹⁰⁴ We can infer that when the Bible says Adam bears God’s image, it means Adam is a son of God (Luke 3:38). However, it seems unlikely that God’s image refers to physical appearance, because God is an invisible Spirit—moreover, a Spirit who forbids

¹⁰⁰ “Then God said, ‘Let us make mankind in our image, in our likeness, so that they may rule over the fish in the sea and the birds in the sky, over the livestock and all the wild animals, and over all the creatures that move along the ground.’ So God created mankind in his own image, in the image of God he created them; male and female he created them.” (Gen 1:26–27)

¹⁰¹ “When I consider your heavens, the work of your fingers, the moon and the stars, which you have set in place, what is mankind that you are mindful of them, human beings that you care for them? You have made them a little lower than the angels and crowned them with glory and honor. You made them rulers over the works of your hands; you put everything under their feet.” (Ps 8:3–6)

¹⁰² “For surely it is not angels he helps, but Abraham’s descendants.” (Heb 2:16)

¹⁰³ Erickson, *Christian Theology*, 2:531–32.

¹⁰⁴ “When Adam had lived 130 years, he had a son in his own likeness, in his own image; and he named him Seth.” (Gen 5:3)

people from worshiping carved statues of himself (1 Tim 1:17, 6:16; John 4:24).¹⁰⁵ Theologians have offered various explanations on this important matter. G. K. Beale proposes that *Imago Dei* encompasses ontology and function.¹⁰⁶ Ontology is a set of qualities, including morals and spirituality, that God endows to every human being. Function refers to the human's role of filling the earth and subduing it; hence, when a person is righteously ruling over creation, the person is displaying God's glory and functional image. Erickson summarizes three additional interpretations of *Imago Dei* as follows: According to the *substantive view*, the image of God is manifested as a human's spiritual or moral quality, including his free will and ability to reason; according to the *relational view*, the image of God is shown in a human's ability to relate to God and others; according to the *functional view*, the image of God is displayed by a human's actions, such as her dominion over God's creation.¹⁰⁷

One passage in Colossians contributes significantly to the meaning of *Imago Dei*: “[You] have put on the new self, which is being renewed in knowledge in the image of its Creator.” (Col 3:10) “Renewed in knowledge” can also be translated into “entering knowledge” (*eis epignosis*); in other words, someone whose knowledge is *renewed* must go on to bear the fruit of knowing God and thus reflect his image.¹⁰⁸ This notion echoes

¹⁰⁵ Ying-Hang Huang, “Doctrine Regarding the Image of God in Humans: Calvin’s Writings on the Image of God in Humans” (Chinese Evangelical Seminary classroom material). “Now to the King eternal, immortal, invisible, the only God, be honor and glory for ever and ever. Amen.” (1 Tim 1:17) “. . . who alone is immortal and who lives in unapproachable light, whom no one has seen or can see.” (1 Tim 6:16a) “You saw no form of any kind the day the Lord spoke to you at Horeb out of the fire. Therefore watch yourselves very carefully, so that you do not become corrupt and make for yourselves an idol, an image of any shape, whether formed like a man or a woman.” (Deut 4:15–16)

¹⁰⁶ Gregory K. Beale, *The Temple and the Church’s Mission: A Biblical Theology of the Dwelling Place of God* (Downers Grove, IL: InterVarsity, 2004), 81–121.

¹⁰⁷ Erickson, *Christian Theology*, 2:520–29.

¹⁰⁸ Nicholas Thomas Wright, *Colossians and Philemon*, trans. An-Tzi He, Tyndale New Testament Commentary (Taipei: Campus, 2000), 213.

Ephesians 4:24, which teaches believers to follow the truth and live a righteous (*dikaiousune*) and holy (*hosiototes*) life that reflects the likeness of God.¹⁰⁹

This verse refers to the image of the redeemed human—essentially, the children of God, who resemble God. This is the narrow definition of God’s image.¹¹⁰

But the Bible also notes that although all sinners fall short of the glory of God, God’s image does not leave the sinners. Here, *image* is used in a broader sense and applied to all people:

- (1) “Whoever sheds human blood, by humans shall their blood be shed; for in the image of God has God made mankind.” (Gen 9:6)
- (2) “With the tongue we praise our Lord and Father, and with it we curse human beings, who have been made in God’s likeness.” (Jas 3:9)¹¹¹

These two verses can be applied to believers and unbelievers alike. By this definition, all humans are said to be made after the likeness of God. *Image* in these two verses may refer to human traits that resemble God’s traits and differ from the rest of creation. John Murray explains, “The divine image defines the distinct identity of man. The fall does not obliterate this radical differentiation, nor does it destroy man’s distinguished identity.”¹¹²

What precisely distinguishes humans from other creatures? Theologians, philosophers, and scientists have various views. Some propose lists of traits such as self-

¹⁰⁹ A. Skevington Wood, “Ephesians,” in *Ephesians – Philemon*, Expositor’s Bible Commentary, ed. Frank E. Gaebelin (Grand Rapids: Zondervan, 1984), 63; Francis Foulkes, *Ephesians*, trans. Yung-Ming Lee, Tyndale New Testament Commentary (Taipei: Campus, 2002), 149–50. “[And] to put on the new self, created to be like God in true righteousness and holiness.” Here, the term translated to “holiness” is not the common *hagiosune* but *hosiototes*, which only appears in Luke 1:75 and implies piety and loyalty toward God.

¹¹⁰ Huang, “Doctrine Regarding the Image of God in Humans.”

¹¹¹ “When God created mankind, he made them in the likeness of God . . . When Adam had lived 130 years, he had a son in his own likeness, in his own image.” (Gen 5:1, 3) Indirectly, these verses shows that Adam’s son bore Adam’s likeness and God’s likeness.

¹¹² John Murray, *Select Lectures in Systematic Theology*, Collected Writings of John Murray 2 (Carlisle, PA: The Banner of Truth, 1977), 37; Grudem, *Systematic Theology*, 442–43.

consciousness, rationality, freedom, morality, and religiousness; others refer to divine representation, moral accountability, immortality, physical, mental, and relational aspects.¹¹³ However, as John Kilner asserts,

the very wording of the image-of-God concept signals that it is about what people *are*, in a way somehow connected with God, rather than what they *are not* . . . the biblical texts provide evidence that humanity’s creation in God’s image is not about actual human attributes (including ways that people are presently like God or unlike animals). Rather, it has to do with being created to conform to who Christ is as the image of God.¹¹⁴

Both the Hebrew word for “image” and “likeness” refer to an object similar but not identical to the subject it reflects.¹¹⁵ Kilner explains that the image of God is “about an orientation—having a model according to which one is expected to develop.”¹¹⁶ In the case of humans, that model and image is Jesus Christ. God had created humans with the expectation that each will one day grow into the likeness of Christ. Although humans no longer reflect the glorious *Imago Dei* after the Fall, Christ, the ultimate image of God, remains intact.¹¹⁷

In the words of Erickson: “The image is something in the very nature of man, in the way in which he was made. It refers to something man *is* rather than something he *has* or *does*. By virtue of his being man, he is in the image of God; it is not dependent upon the presence of anything else.”¹¹⁸ Unlike any other creature, humans are made in God’s image and created to conform to Christ.

¹¹³ Murray, *Systematic Theology*, 38; Grudem, *Systematic Theology*, 445–48.

¹¹⁴ John F. Kilner, *Dignity and Destiny: Humanity in the Image of God* (Grand Rapids: Eerdmans, 2015), 111, 115. Parentheses in original.

¹¹⁵ Grudem, *Systematic Theology*, 442.

¹¹⁶ Kilner, *Dignity and Destiny*, 131.

¹¹⁷ Hebrew 1:3; Col 1:15.

¹¹⁸ Erickson, *Christian Theology*, 2:532–33. Italics in original.

CHAPTER 4

THE ORIGIN OF THE SOUL

Each person is born with a body and a soul. The body begins as a single cell and develops according to a genetic blueprint inherited from the person's parents. The soul, in contrast, is non-material and beyond the scope of scientific discovery.¹ Much theological discussion surrounds the origin of the soul. Does God create each soul *ex nihilo*—from nothing? Or does he set up natural laws so that one's soul is propagated from the sexual union of one's parents? Delitzsch muses, "The origin of man is, indeed, on all sides a mystery."²

In theological tradition, two dominant theories have been developed to explain the origin of the soul: creationism, which teaches that souls are created *ex nihilo*,³ and traducianism, which holds that souls are propagated by natural reproductive laws.⁴ In general, the Catholic church and most Reformed churches endorse creationism, whereas the Lutheran church, the Baptist church, and a few Reformed scholars endorse traducianism.⁵

¹ In this dissertation, "soul" refers exclusively to the human soul, unless indicated otherwise.

² Franz Delitzsch, *A System of Biblical Psychology*, 2nd ed., trans. Robert Ernest Wallis (Edinburgh: T&T Clark, 1867), 139.

³ Charles Hodge, *Systematic Theology* (Grand Rapids: Eerdmans, 1970), 2:66–67. A third explanation for the origin of the soul was pre-existence, a theory influenced by Plato. Proponents of pre-existence, led by Origen of Alexandria, taught that each human's soul existed long before conception and finally entered the body upon the creation of the body. Because pre-existence was not supported by Scripture, it was later rejected by the Church.

⁴ The Latin suffix *tradux* means "branch" or "shoot."

⁵ Bruce A. Ware, "Human Nature and the Soul" (Systematic Theology I, Lecture 26), <https://www.biblicaltraining.org/library/human-nature-soul/systematic-theology-i/bruce-ware/>.

To this day, the church has not reached a consensus, because the Bible does not offer an explicit explanation for the origin of the soul.⁶ Karl Barth comments on the creationism-traducianism debate, “We may have various reasons for refusing to enter into this strange discussion about the date of the inception of human life. In any case, however, none of the various attempted solutions, each of which outdoes the other in abstruseness, leads us even the slightest step forward from where we stand, i.e., face to face with the fact that, if we exclude the pantheistic solution, we are bound to reckon with a beginning of human life, and therefore with a time when we were not, which was not yet ours.”⁷ A century later, Laurence R. O'Donnell, III describes current opinions on the controversy: “The creationism-traducianism debate has all but disappeared in recent statements of Reformed theology. Many modern Reformed theologians have followed Karl Barth’s example in dismissing the question as an outmoded concern. The topic has not received a major treatment in decades, and the most recent Reformed systematic theologies treat the debate somewhat dismissively.”⁸ Their dismissal is most likely caused by frustration over the theological deadlock and the impression that the topic is unrelated to believers’ daily lives. However, the topic is closely related to this dissertation. Once resolved, it will provide a firm foundation to support the thesis that personhood begins at conception.

In this chapter, I will review the scriptural evidence offered to support each

⁶ G. C. Berkouwer, *Man: The Image of God*, trans. Dirk W. Jellema (Grand Rapids: Eerdmans, 1962), 285–56; Robert L. Reymond, *A New Systematic Theology of the Christian Faith* (Nashville: Thomas Nelson, 1998), 424. Wayne Grudem, *Systematic Theology: An Introduction to Biblical Doctrine* (Grand Rapids: Zondervan, 1994), 485. Augustine is hesitant to choose between the two views. Herman Bavinck, Abraham Kuyper, and Wayne Grudem are among the many scholars who refuse to state a conclusion despite strong opinions on the topic.

⁷ Karl Barth, *Church Dogmatics*, ed. G. W. Bromiley and T. F. Torrance, trans. G. W. Bromiley (Edinburgh: T&T Clark, 2004), 3/2:574.

⁸ Laurence R. O'Donnell III, “Shedding Traducianism: Oliver Crisp’s Analysis of William Shedd’s Traducianism in Light of Herman Bavinck’s Creationism” (paper submitted to Professor John W. Cooper for Body, Soul & the Monism-Dualism Debate [995BPA] at Calvin Theological Seminary).

view. Philosophical and empirical evidence will be treated as secondary. I will argue that traducianism is more capable than creationism to explain divine providence in generating the human soul.

The Origin of the Soul and the Doctrine of Original Sin

Historically, the creationism-traducianism debate has rarely been treated as an isolated topic but usually discussed alongside the doctrine of sin, especially the transmission of original sin. Therefore, I will first provide an overview of original sin.

Original Sin

Based on Scripture, we inherit original sin from Adam in two ways:⁹

1. *Imputed guilt*: As a federal head, Adam sinned in his representation of all mankind; therefore, his guilt is judicially imputed to all of his descendants (Rom 5:12, 18–19). In other words, when Adam sinned, God not only counted Adam guilty but also counted us guilty.¹⁰
2. *Inherited corruption (sinful nature)*: As a result of Adam’s sin, each of his descendants inherit his corruption, or sinful nature, which includes a disposition to sin. This inherited corruption exists from the very beginning of one’s life (Ps 51:5).

The Relation Between Adam’s Sin and Ours

When Paul writes in Romans 5:12, “Therefore, just as sin entered the world through one man, and death through sin, and in this way death came to all people, because all sinned,” he proclaims that every person was affected when Adam first sinned. The clause “because all sinned” refers not to sins we committed after our births, but to Adam’s sin. Scripture does not explain *how* but only states *that* we all sinned in Adam.¹¹

⁹ Grudem, *Systematic Theology*, 494–96; Millard J. Erickson, *Christian Theology* (Grand Rapids: Baker, 1998), 2:651.

¹⁰ Louis Berkhof, *Systematic Theology*, combined ed. (Grand Rapids: Eerdmans, 1996), 242–43.

¹¹ Anthony A. Hoekema, *Created in God’s Image* (Grand Rapids: Eerdmans, 1986), 157.

In an attempt to understand this mystery, historical theologians have developed two main views on the relation of Adam's sin to that of his offspring.

Realism. This view, sometimes called Augustinian Realism, is held by Augustine, Tertullian, William G. T. Shedd, A. H. Strong, and Klaas Schilder. Proponents of realism argue that “we were all in Adam when he sinned; hence Adam's sin is actually the sin of us all.”¹² According to the realist logic, we committed sin in the loins of Adam, just as Levi paid tithes to Melchizedek through Abraham when he was “still in the loins of his ancestor” (Heb 7:9–10).¹³ Adam, the natural head of all mankind, possesses the undifferentiated total human nature, whereas his offspring are parts of this generic human nature.¹⁴ In other words, Adam and all of his offspring are “parts of one metaphysical whole,”¹⁵ and God justly condemns us for Adam's sin because it was our sin, too.

Federalism. Several Reformed theologians such as Herman Bavinck, J. Gresham Machen, A. D. R. Polman, John Murray, and Louis Berkhof state that God imputed Adam's primal sin to his descendants.¹⁶ Just as Christ's righteousness is imputed to all believers, so is the guilt of Adam's sin to all his descendants. Adam was the federal head of all mankind when he sinned. Therefore, we are legally associated with the guilt of that sin. In other words, God looks upon us *as if* we all have sinned even though we did not personally participate in Adam's sin. Likewise, Christ is the federal head of the

¹² Hoekema, *God's Image*, 158.

¹³ Hoekema, *God's Image*, 159.

¹⁴ Hoekema, *God's Image*, 158. Augustine and some theologians might have understood realism in the context of Plato's writings, such as *Parmenides*, in that the entirety of human nature is deemed as Form, whereas each individual person is a concrete particular that arises from the Form. However, this view is not accepted by other theologians who accept realism.

¹⁵ Oliver D. Crisp, “Pulling Traducianism out of the Shedd,” *Ars Disputandi* 6, no. 1 (2006): 265–87.

¹⁶ Hoekema, *God's Image*, 161.

church because of his death and resurrection. Therefore, believers are legally associated with his righteousness. God looks upon us *as if* we all have righteousness even though we did not personally participate in Christ's death and resurrection.

Most creationists believe in federalism. They deduce that because original sin is represented solely by Adam, our federal head, Adam's sins must not have been transmitted to his descendants through his soul. Many Reformed theologians uphold creationism and reject traducianism because they believe only creationism is consistent with the Reformed doctrine, that original sin was *represented* by Adam but not *inherited* from Adam.¹⁷

Creationism

Creationism teaches that each successive new soul is a unique, direct, and immediate creation of God.¹⁸ In other words, billions of successive human souls are separately created by God *ex nihilo* and joined to their respective physical bodies during or after fertilization.¹⁹ Theologians who endorse creationism include Clement of Alexandria, Irenaeus, Pelagius, Ambrose, Jerome, Gregory of Nazianzus, Cyril of Alexandria, Aquinas,²⁰ Arminius, John Calvin,²¹ and Reformed scholars such as Charles

¹⁷ Hoekema, *God's Image*, 160–63; Gordon H. Clark, "Traducianism," *The Trinity Review*, July/August 1982, <http://www.trinityfoundation.org/journal.php?id=56/>. Those Reformed theologians assume federalism is incompatible with realism, but this assumption is not necessarily true. I will discuss this topic later in the chapter.

¹⁸ Reymond, *A New Systematic Theology*, 424; Berkouwer, *Man*, 295.

¹⁹ Clark, "Traducianism," 3.

²⁰ Berkhof, *Systematic Theology*, 196. Thomas Aquinas states, "It is heretical to say that the intellectual soul is transmitted by way of generation." This remains the prevailing view in the Roman Catholic Church.

²¹ "Genesis 3," John Calvin's Bible Commentary, Christianity.com, <https://www.christianity.com/bible/commentary.php?com=clvn&b=1&c=3/>. John Calvin writes in his commentary on Gen 3:16, "Nor is it necessary to resort to that ancient figment of certain writers, that souls are derived by descent from our first parents."

Hodge, Archibald A. Hodge, Abraham Kuyper, Herman Bavinck, John Murray, J. Gresham Machen, J. Oliver Buswell, Louis Berkhof, and Wayne Grudem.²²

Biblical Evidence Supporting Creationism

Several biblical passages, varying in evidential strength, have been cited to support creationism.²³

First, “[God] breathed into his nostrils the breath of life (*nishmat khayim*), and the man became a living being (*nephesh khayah*)” (Gen 2:7).²⁴ This verse shows that Adam’s soul was created directly by God.

Second, “the dust returns to the ground it came from, and the spirit (*ruach*)²⁵ returns to God who gave (*nathan*) it” (Eccl 12:7).²⁶ This verse portrays God as the source of souls.

Third, “then the LORD God formed (*yatsar*) a man from the dust of the ground” (Gen 2:7).²⁷ The same Hebrew word for “formed” can be found in Zechariah 12:1b, “the LORD, who stretches out the heavens, who lays the foundation of the earth,

²² Stephen P. Greggo, “Soul Origin: Revisiting Creationist and Traducianist Theological Perspectives in Light of Current Trends in Developmental Psychology,” *Journal of Psychology & Theology* 33, no. 4 (Winter 2005), 260; Grudem, *Systematic Theology*, 484; Hoekema, *God’s Image*, 161; Herman Bavinck, *God and Creation*, Reformed Dogmatics 2, ed. John Bolt, trans. John Vriend (Grand Rapids: Baker Academic, 2003), 580.

²³ Bavinck, *God and Creation*, 581; Grudem, *Systematic Theology*, 484–86; Greggo, “Soul Origin” 260; Francis Turretin, *Institutes of Elenctic Theology*, 5.13.1–17. The biblical passages that are commonly quoted to support creationism are extracted from the above literature. The arguments vary widely in persuasiveness but are nevertheless listed for the sake of completeness.

²⁴ *Neshamah* (H5397): a *puff*, that is, *wind*, angry or vital *breath*, divine *inspiration*, *intellect* or (concretely) an *animal*.

²⁵ *Ruach* (H7307): *wind*; by resemblance *breath*, that is, a sensible (or even violent) exhalation; figuratively *life*, *anger*, *unsubstantiality*; by extension a *region* of the sky; by resemblance *spirit*, but only of a rational being (including its expression and functions).

²⁶ *Nathan* (H5414): to *give*, used with great latitude of application (*put*, *make*, etc.)

²⁷ *Yatsar* (H3335): to *mould* into a form, earthen, fashion, form, frame, make.

and who forms (*yatsar*) the spirit of man within him . . .” By describing the spirit of man in a way that parallels the heavens and the earth, two of God’s direct creations, the passage in Genesis implies that God directly creates the spirit of man as well.

Fourth, “Thus says God, the LORD, who created the heavens and stretched them out, who spread out the earth and what comes from it, who gives (*nathan*) breath (*neshamah*) to the people on it and spirit (*ruach*) to those who walk in it . . .” (Isa 42:5, ESV). As does the previous verse, this verse suggests that God directly gives people their souls.

Fifth, “Besides this, we have had earthly (*sarx*) fathers who disciplined us and we respected them. Shall we not much more be subject to the Father of spirits and live?” (Heb 12:9, ESV).²⁸ It seems that God is named “the Father of spirits” to distinguish him from the fathers of physical bodies. Whereas one’s body comes from his earthly father, his soul comes from God.²⁹ A similar phrase can be found in Moses and Aaron’s prayer: “O God, the God of the spirits of all flesh, shall one man sin, and will you be angry with all the congregation?” (Num 16:22, ESV)

Sixth, “I will not accuse forever, nor will I always be angry, for then the spirit (*ruach*) of man would grow faint before me—the breath of man that I have created (*asah*)” (Isa 57:16). This verse also states that the spirit is created by God.³⁰

²⁸ *Sarx* (G4561): flesh, meat, the body (as opposed to the soul or spirit, or as the symbol of what is external, or as the means of kindred), or (by implication) human nature, or (special) a human being.

²⁹ Delitzsch, *Biblical Psychology*, 137–38; Berkouwer, *Man*, 298. Regarding Heb 12:9, Delitzsch says: “There can hardly be a more classical proof test for creationism.”

³⁰ Turretin, *Institutes of Elenctic Theology*, 5.13.6 Turretin believes 1 Peter 4:19 supports creationism because it encourages believers to entrust their souls to the faithful Creator (*ktistes*).

Critiques of Creationists’ Use of Biblical Data

Although creationists propose many different arguments, the arguments share some common principles. I will summarize those principles and explain why I am not convinced by them.

First, the claim that every new person is created in the same way Adam was—that the body is created first and the soul is subsequently breathed into the body—neglects many distinctions between Adam and his descendants.³¹ Adam does not have a father or mother or any human predecessor, but each of Adam’s descendants does. Adam’s body came directly from dust, but his descendants’ bodies did not. These differences suggest that the sequential creation of Adam’s body and soul is unique. We cannot conclude that the souls of all his descendants were created in the same way as his soul was.

Secondly, although Hebrews 12:9 points out that one’s body originates from a human father while his spirit originates from God, the theme of the verse is discipline, not the origin of the soul. Delitzsch points out that other statements in the book of Hebrews, such as that the Israelite nation came out of Abraham’s loins (Heb 7:10), actually suggest that the writer of Hebrews held a traducianist view.³² Delitzsch asserts, “the writer does not mean to say that the new beginning of a human life is effected bodily indeed by procreation, while spiritually it is constituted by a divine creation; but rather that the body as well as spirit of the child comes into being at the moment of procreation.”³³ Scripture does not separate sources of the spirit and the body, unless one

³¹ Creationists use 1 Corinthians 15:47–48 to support the similarity of creation between Adam and his posterity: “The first man was of the dust of the earth, the second man from heaven. As was the earthly man, so are those who are of the earth; and as is the man from heaven, so also are those who are of heaven.”

³² Delitzsch, *Biblical Psychology*, 137–38.

³³ Delitzsch, *Biblical Psychology*, 138.

searches it with the presupposition that it does. Scripture affirms that the only source is God—all things are made through him (1 Cor 8:6; Rom 11:36). Therefore, Scripture says that the body of an infant is also created by God (Pss 127:3; 139:13) while the infant’s earthly parents are only the intermediary through which God creates the body.

Furthermore, the word “father” in the Hebrew context could have referred to one’s ancestor rather than his actual father (John 8:39). Therefore, the phrase “the Father of our spirits” does not prove the direct creation of each individual soul.

Thirdly, Ecclesiastes 12:7 says one’s body returns to dust (*aphar*) on earth, which it came from, while his spirit returns to God who gave it.³⁴ Although this verse declares that God is the maker of the soul, the main purpose of the verse is to contrast the mortality of the body with the immortality of the soul;³⁵ it does not prove the direct creation of each soul. On the contrary, if every soul is immediately created and breathed into a body so that they have the same origin as that of Adam’s soul, then the same rule will demand that each body be immediately created by God directly from the dust. That does not make sense.

Fourthly, creationists believe that the sinlessness of the incarnated Son can only be explained by creationism: Jesus’s body came from Mary’s body, but his soul was pure and sinless because God created it separately and directly. I will argue against this view later in this chapter.³⁶

³⁴ *Aphar* (H6083): *dust* (as powdered or gray); hence *clay, earth, mud*.

³⁵ Michael A. Eaton, *Ecclesiastes: An Introduction and Commentary* (Downers Grove, IL: InterVarsity Press, 2009), 174.

³⁶ Greggo, “Soul Origin” 260; Hodge, *Systematic Theology*, 2:72. The Bible does not explicitly state the origin of the soul or body of the incarnated Son. In theological tradition, most creationists believe that Jesus’s body came from Mary while his soul was directly created by God. On the other hand, most traducianists believe that Jesus’s body and soul both came from Mary. Since the Incarnation is a supernatural and unique event in human history, the origin of Jesus’s soul does not influence the conclusion of this dissertation.

Finally, creationists claim that Genesis 2:2 does not mean God ceased to create new things but that God continues his work today (John 5:17), including creating new souls.³⁷ However, I will argue later that it is more plausible to comprehend the Sabbath in Genesis 2:2 as a complete cessation of *ex nihilo* creation.

In addition to the aforementioned scriptural evidence, creationism is said to be consistent with the classical understanding of the soul's simplicity in Greek philosophy. Unlike Traducianism, which claims news souls are derived from the parents' souls and thus implies that souls are divisible, creationism maintains "the simple, indivisible, immortal, and spiritual nature of the soul."³⁸

Theological Challenges Against Creationism

Some significant theological problems with creationism have yet to be resolved. First, as a result of Adam's sin, each of his descendants is born with a sinful nature (Rom 5:12–19). However, it is theologically difficult to reconcile the fact of sinful nature with the creationist argument that God directly creates each soul. John Calvin, a creationist, does not specify how Adam's corruption is passed on to the rest of humankind: "Instead of saying . . . that each of us draws vice and corruption from his parents, it would be more correct to say that we are all alike corrupted in Adam alone, because immediately after his revolt God took away from human nature what He had bestowed upon it."³⁹

Some creationists maintain that God directly creates souls with sinful natures. Grudem says, for example, "God gives each child a human soul that has tendencies to sin

³⁷ Turretin, *Institutes of Elenctic Theology*, 5.13.17.

³⁸ Bavinck, *God and Creation*, 581; see also O'Donnell, "Shedding Traducianism," 22.

³⁹ John Calvin, "Gospel According to John," in Calvin's *Commentaries*, trans. William Pringle (repr., Grand Rapids: Baker, 2005), 17:113, quoted in Samuel Joseph Roy Newton, "The Spirit of Sonship in the Johannine Corpus" (PhD diss., Southern Baptist Theological Seminary, 2017), footnote 79.

that are similar to the tendencies found in the parents.”⁴⁰ To support this point, Grudem references God’s vow to “[punish] the children for the sin of the fathers to the third and fourth generation of those who hate [him]” (Exod 20:5). In this assertion, however, Grudem runs the risk of compromising God’s character by describing God as the immediate creator of sinful souls. Ken Hamrick points out an inconsistency in the creationist’s interpretation: “God is made to be a continual fountain of corruption . . . if God has created their corruption, then how can he justly condemn them for it?”⁴¹

Francis Turretin, a Genevan Reformed creationist theologian, admits that creationism fails to explain “why God infuses a soul tainted with sin and joins it to an impure body.”⁴² He proposes that perhaps God does not intend “to abolish the first sanction concerning the propagation of the human race by generation.”⁴³ However, Turretin’s explanation seems incompatible with the Bible’s account of creation: “God saw everything that he had made, and behold, it was very good.” (Gen 1:30) God’s direct creation ought to reflect his holiness and goodness; therefore, if souls were God’s direct creation, the souls ought not to be tainted with a sinful nature. As the apostle John makes clear in the epistles, “We know that whoever is born of God does not sin” (1 John 5:18a, NKJV) and “whoever has been born of God does not sin, for His seed remains in him; and he cannot sin, because he has been born of God.” (1 John 3:9, NKJV).⁴⁴

⁴⁰ Grudem, *Systematic Theology*, 485.

⁴¹ Ken Hamrick, “Origin of the Soul: A Defense of Paternal Traducianism,” *SBC Open Forum*, last modified October 11, 2014, <http://kenhamrick.com/2014/10/11/origin-of-the-soul-a-defense-of-paternal-traducianism>.

⁴² Turretin, *Institutes of Elenctic Theology*, 5.13.17.

⁴³ Turretin, *Institutes of Elenctic Theology*, 5.13.17.

⁴⁴ Ware, *God’s Greater Glory*, 102. Ware points out God’s asymmetrical relation to good and evil and refers to God’s control of evil as his “indirect-permissive” divine agency. Ware writes: “when God controls *good*, he is controlling what *extends from his own nature*; yet when he controls *evil*, he controls what is *antithetical to his own nature*.”

Berkhof suggests that God creates morally neutral souls and, withholding his divine virtue, imputes Adam's sin unto those souls. He states, "The descendants of Adam are sinners, not as a result of their being brought into contact with a sinful body, but in virtue of the fact that God imputes to them the original disobedience of Adam. And it is for that reason that God withholds from them original righteousness, and the pollution of sin naturally follows."⁴⁵ Nonetheless, Berkhof does not explain why those souls become polluted by sin spontaneously. Some may guess the pollution of sin originates from the mother, but no biblical evidence shows that sin is transmitted from a mother's soul to her child's soul. Others may guess the pollution of sin originates from the sinful world; but if that is the case, how can we explain the *sinful nature* of unborn babies (Ps 51:5; Gen 8:21)?

The second problem arises among creationists who defend that God creates sinless souls which later become contaminated by sinful bodies: "the divinely created spirit which enters into the sensitive nature derived from Adam, inherits at the same time with it the sin inherent in it."⁴⁶ This theory allows a corporeal, but not a spiritual, connection between Adam's sin and ours. Delitzsch believes this theory is "contrary to Scripture and experience, that the human spirit stands independently, without any actual relation to original sin . . . [and makes God] Himself the originator of evil."⁴⁷ Bavinck states, "the hereditary transmission of sin cannot be explained by saying that the soul, though created first pure by God, is polluted by the body, for in that case sin would be materialized."⁴⁸ Other creationists hold that "God creates a good soul and then imputes

⁴⁵ Berkhof, *Systematic Theology*, 199–200.

⁴⁶ Delitzsch, *Biblical Psychology*, 135.

⁴⁷ Delitzsch, *Biblical Psychology*, 135.

⁴⁸ Bavinck, *God and Creation*, 584.

the sin of Adam to that soul. So we are ensouled with the sinful soul of Adam.”⁴⁹ In other words, the soul’s sinfulness is externally imputed but not intrinsically inherited. I will point out later that this theory only explains the *imputed* guilt but fails to explain the *inherited* sinful nature. Strong criticizes the creationist view presented above:

This theory, if it allows that the soul is originally possessed of depraved tendencies, makes God the direct author of moral evil; if it holds the soul to have been created pure, it makes God indirectly the author of moral evil, by teaching that He put this pure soul into a body which will inevitably corrupt it.⁵⁰

Interestingly, the same creationists affirm that original sin includes “hereditary corruption” or an inherited sinful nature. Gordon Clark, a traducianist, asks in response: “But how can corruption be hereditary if every new soul is an immediate creation?”⁵¹ Indeed, Charles Hodge, a creationist, weighs the transmission of inborn depravity against the irreconcilable thought that God immediately creates sinful souls. Hodge’s solution is to appeal to secondary and mediate causes of creation, thus abandoning the idea of immediate creation.⁵² In a similar way, Herman Bavinck reasons that, because God brings an infant into existence through the bodies of sinful parents, the infant’s new soul also becomes tainted by sin.⁵³ Abraham Kuyper believes in “organic creation,” during which each newly created soul is transformed as soon as it comes into contact with the sinful body.⁵⁴ Hodge, Bavinck, and Kuyper all acknowledge the role of an intermediary in order to preserve the purity of God’s direct creation. It can be said, therefore, that they are not pure creationists. According their theories, only the body inherits a sinful nature,

⁴⁹ Ware, “Human Nature and the Soul.”

⁵⁰ Augustus Hopkins Strong, *The Doctrine of Man*, Systematic Theology 2 (Philadelphia: American Baptist Publication Society, 1907), 493.

⁵¹ Clark, “Traducianism,” 2.

⁵² Clark, “Traducianism,” 4.

⁵³ Berkouwer, *Man*, 288.

⁵⁴ Berkouwer, *Man*, 290.

whereas the soul is intrinsically sinless and later becomes tainted with sin from an external source. However, this dichotomy is not supported by biblical evidence but borders upon Gnosticism. It is inconsistent with Christian tradition, which teaches instead that the whole person—body and soul—is *intrinsically* corrupted from its beginning.⁵⁵

Other Reformed theologians choose creationism over traducianism, believing that traducianism is incompatible with the doctrine of federal headship and imputation of guilt.⁵⁶ Badgett writes, “The question of hereditary sin’s ‘transmission’ has occupied theologians since Augustine suggested a biological basis (i.e., traducianism). Under a covenantal anthropology no such theory of transmission is necessary.”⁵⁷ But this is a false dichotomy, as shown by Hoekema and Clark.⁵⁸ I will argue later in this chapter that traducianism plausibly explains federal and natural headship alike.⁵⁹

The third problem is that Christ’s incarnation speaks against creationism. I will discuss in chapter 7 that the Chalcedon Christology affirms that the incarnated Son has a *human soul* and a human body. Delitzsch explains why creationism is incompatible with the fact that Christ had a human soul:

Wherever Scripture speaks of Christ in conformity with the human aspect of His personality, it places it under the point of view of begetting, conception, and birth; nowhere of immediate divine creation . . . [Christ] has all that belongs to the human natural condition . . . He has it by the reception of the Holy Ghost, and overshadowing of the power of the most High (Luke i.35), from Mary—not only the body, but also spirit and soul. Only on this supposition is He in truth (not merely according to the natural basis of human nature) our *adelphos*; and only upon the

⁵⁵ Grudem, *Systematic Theology*, 497; Ps 51:5; Jer 17:9; Titus 1:15.

⁵⁶ Clark, “Traducianism,” 2. Hodge is an example.

⁵⁷ Jonathan Paul Badgett, “Christian Self-Knowledge: A Christological Framework for Undermining Dissociation Through Reconciliation” (PhD diss., The Southern Baptist Theological Seminary, 2018), 198.

⁵⁸ Hoekema, *God’s Image*, 160.

⁵⁹ Even though William Shedd holds a traducianist view, I disagree with his rejection of Adam’s federal headship.

supposition that on all sides of human natural condition He is rooted in the compact consistency of humanity, was its universal redemption possible through Him . . .⁶⁰

The fourth problem is that if a child's soul is not related to or derived from the souls of his parents, it becomes difficult to explain how the child inherited his parents' personality traits. Creationists may argue that personality traits are acquired after birth, but psychological studies have shown that adopted children tend to have remarkably similar personalities as their birth parents, even if the children and the parents had never met.⁶¹ If one proposes that personality traits are only transmitted by genes, anthropology would be reduced to physicalism. Wayne Grudem acknowledges the empirical evidence of inherited personality traits. In defense of creationism, he hypothesizes that "God gives an individually created soul to the child and that soul is consistent with the hereditary traits and personality characteristics that God allowed the child to have through its descent from its parents."⁶² Grudem's hypothesis is logically plausible but lacks biblical evidence. In contrast, traducianism can adequately explain inherited personality traits.

The questions above remain as significant challenges for creationists. In the following section, I will discuss the alternative theory on divine providence for souls: traducianism, which Bavinck considers to be almost as strong of an argument as creationism.⁶³

⁶⁰ Delitzsch, *Biblical Psychology*, 136. The original quote spells *adelphos* in Greek letters.

⁶¹ Scarr, Sandra, Patricia L. Webber, Richard A. Weinberg, and Michele A. Wittig, "Personality Resemblance among Adolescents and Their Parents in Biologically Related and Adoptive Families," *Journal of Personality and Social Psychology* 40, no. 5 (May 1981): 885–98.

⁶² Grudem, *Systematic Theology*, 484.

⁶³ Bavinck, *God and Creation*, 581.

Traducianism

Traducianism teaches that humans are propagated as whole beings, the soul along with the body.⁶⁴ In other words, the souls of the children are as much derived from their parents as their bodies are.⁶⁵ Notable traducianists include Tertullian,⁶⁶ Apollinaris, Gregory of Nyssa, Martin Luther,⁶⁷ Philip Melanchthon, Oliver Buswell, and some Reformed and Baptist theologians such as Jonathan Edwards, William G. T. Shedd, A. H. Strong, Gordon Clark, and Millard J. Erickson.⁶⁸

Biblical Evidence Supporting Traducianism

Below, I will review biblical passages, which vary in their evidential strength, that have been used to support traducianism.⁶⁹

First, “One might even say that Levi, who collects the tenth, paid the tenth through Abraham, because when Melchizedek met Abraham, Levi was still in the body (*osphus*) of his ancestor” (Heb 7:9–10).⁷⁰ Levi paid the tithe through Abraham—their ancestor-descendant relationship is emphasized. Ware says, “That seems to indicate that

⁶⁴ Reymond, *New Systematic Theology*, 424; Francis Turretin, *Institutes of Elenctic Theology*, 5.13.1. There have been several variations of traducianism throughout church history, but this is the common theme. In general, traducianists hold that “the soul is propagated by the soul, not by a decision and partition of the paternal soul, but in a spiritual manner, as light is kindled by light.”

⁶⁵ Erickson, *Christian Theology*, 2:654; Greggo, “Soul Origin,” 259–61.

⁶⁶ Tertullian, *Treatise on the Soul*, 4; Berkhof, “Historical Views Respecting the Origin of the Soul,” *Systematic Theology*, 196. Tertullian is said to be the first author who wrote about traducianism. He based his arguments on Scripture and his observation of nature. Due to his influence, traducianism gained acceptance in the North African and Western churches.

⁶⁷ For this reason, traducianism became the prevailing opinion among Lutheran theologians.

⁶⁸ Bavinck, *God and Creation*, 580; John M. Rist, *Augustine: Ancient Thought Baptized* (Cambridge: Cambridge University Press, 1994), 317–20; Ware, “Human Nature and the Soul.” Some scholars contest the proposal that Augustine held a traducianist view.

⁶⁹ The list of biblical passages supporting Traducianism are primarily a paraphrase of William Shedd’s writings quoted in Clark’s “Traducianism,” 3–5.

⁷⁰ *Osphus* (G3751): the loin (external), i.e., the hip; internal (by extension) procreative power.

there is a tie between Levi and Abraham that indicates that he really does come from Abraham. It seems to indicate this line of transferring humanity on through.”⁷¹ This suggests that the origin of Levi’s soul can be traced back to Abraham, his great-grandfather.

Second, “All those who went to Egypt with Jacob—those who were his direct descendants, not counting his sons’ wives—numbered sixty-six persons” (Gen 46:26). A literal translation from the Hebrew text would read, “All those . . . who came out (*yatsa*)⁷² of his thighs (*yarek*)⁷³ . . . numbered sixty-six souls (*nephesh*),”⁷⁴ which implies that the souls of Jacob’s descendants came from Jacob.

Third, “My frame was not hidden from you when I was made (*asah*) in the secret place” (Ps 139:15a).⁷⁵ “Your hands shaped me and made (*asah*) me.” (Job 10:8a) Both verses refer to God’s creation of the human’s material body, yet we know that God does not create these bodies *ex nihilo* but through natural procreation. As implied by these verses, God sometimes creates via natural rules that he divinely establishes. Indeed, other verses in the Bible also explain that although humans reproduce by biological mechanisms, all humans are still considered to be creations of God, for he is the origin of all things (Rom 11:36). Even though the verses in this paragraph are commonly cited to support creationism, it is uncertain that all of those verses truly refer to direct creation; instead, it may be more plausible to say that these verses refer to *mediated* creation.⁷⁶

⁷¹ Ware, “Human Nature and the Soul.”

⁷² *Yatsa* (H3318): to go (causatively *bring*) out.

⁷³ *Yarek* (H3409): the *thigh* (from its fleshy *softness*); by euphemism the *generative parts*; figuratively a *shank, flank, side*.

⁷⁴ *Nephesh* (H5315): properly a *breathing* creature, that is, *animal* or (abstractly) *vitality*; used very widely in a literal, accommodated or figurative sense (bodily or mental).

⁷⁵ *Asah* (H6213): to do or make.

⁷⁶ Reymond, *New Systematic Theology*, 424–25; Berkouwer, *Man*, 293–94. A number of

Fourth, “Flesh (*sarx*) gives birth (*gennaō*) to flesh,⁷⁷ but the Spirit gives birth to spirit (*pneuma*).” (John 3:6)⁷⁸ *Sarx* is usually translated to “flesh”, but in this verse, *sarx* refers to a person’s body and soul. In this verse, Jesus explains to Nicodemus that *sarx*, the person, is born (*gennaō*) of flesh (*sarx*), whereas a regenerated life is born of the Spirit.⁷⁹ Indirectly, the verse suggests that a child inherits both his body and soul from his parents. As Clark puts it, “Nicodemus received his unregenerated soul from his parents.”⁸⁰ There is no evidence in this verse that a sinner’s yet-to-be-regenerated soul is immediately created and externally infused by God.

Fifth, in the verse “The Word became flesh (*sarx*)” (John 1:14a), *sarx* again refers to the entire person—the body and soul—of Jesus Christ. The incarnated Christ was not, as Apollinarists describe, a soulless human body infused with the Spirit of God.⁸¹ Rather, as the Creed of Chalcedon affirms, Christ was “truly God and truly man, of a reasonable [rational] soul and body.”⁸²

supporting verses, such as Zechariah 12:1, Isaiah 42:5; 57:16, and 1 Peter 4:19, were quoted during the discussion of creationism earlier in this chapter.

⁷⁷ *Gennaō* (G1080): to *procreate* (properly of the father, but by extension of the mother); figurative to *regenerate*.

⁷⁸ *Pneuma* (G4151): a current of air, i.e., breath (blast) or a breeze; by analogy or figurative a spirit, i.e., (human) the rational soul, (by implication) vital principle, mental disposition, etc.

⁷⁹ In the following verses, *sarx* also refers to the body and the soul. “For you granted him authority over all people (*sarx*) that he might give eternal life to all those you have given him” (John 17:2). “If those days had not been cut short, no one (*sarx*) would survive” (Matt 24:22a).

⁸⁰ Clark, “Traducianism,” 3.

⁸¹ Grudem, *Systematic Theology*, 555–56. Apollinarian Christology was rejected as heresy in 362 AD because it contradicted Hebrews 2:17.

⁸² Gregory of Nazianzus, “To Cledonius the Priest against Apollinarius (Epistle 101)”, in *Christology of the Later Fathers*, ed. Edward R. Hardy, The Library of Christian Classics 3 (Louisville: Westminster John Knox, 1954), 221. In his argument against Apollinarius, Gregory of Nazianzus wrote that the Son “needed flesh for the sake of the flesh which had incurred condemnation, and soul for the sake of our soul.”

Sixth, “God blessed them and said to them, ‘Be fruitful (*parah*)⁸³ and increase in number; fill the earth and subdue it.’” (Gen 1:28a) Because the “fruit” of Adam and Eve are full human beings, it is implied that the bodies and souls of those descendants come into being through procreation in divine providence.⁸⁴

Seventh, “When Adam had lived 130 years, he had a son in his own likeness, in his own image; and he named him Seth” (Gen 5:3). Instead of saying Seth is in the likeness and image of God, the verse says Seth is in the likeness and image of Adam. Ware considers Genesis 5:3 as a strong textual support for Traducianism. He says, “How did Seth get in the image of God? By being made in the image of Adam who is in the image of God.”⁸⁵ Since Seth was the first begotten man whose birth was accompanied by this description, the text suggests a pattern of human procreation which can be more plausibly explained with traducianism,⁸⁶ namely: the image and likeness of Adam are passed on through the reproduction of the body and the soul, and expressed in his son Seth.⁸⁷

⁸³ *Parah* (H6509): to *bear fruit* (literally or figuratively): bear, bring forth (fruit), (be, cause to be, make) fruitful, grow, increase.

⁸⁴ Ware, “Human Nature and the Soul.” The same word, *parah*, also appears in God’s blessing to other creatures (Gen 1:22), where procreation produces entire living creatures and not just physical bodies. Ware comments, “the human pair is told to be fruitful and multiply and fill the earth. The implication is just like cows and horses and fishes. What do they reproduce? Cows and horses and fish. And humans reproduce humans; they really do procreate.”

⁸⁵ Ware, “Human Nature and the Soul.”

⁸⁶ The same point can be made about the creation of women in the image and likeness of God. 1 Cor. 11:7–8.

⁸⁷ Clark, “Traducianism,” 3–4. Clark argues that Acts 17:26–27 also supports traducianism. First, the verse shows that all humans originate from one bloodline (*haima*). Second, the people’s act of seeking God proves that they have souls. Therefore, this verse implies that the souls of “every nation of men” also originate from the same bloodline.

The Meaning of the Sabbath

Perhaps the most powerful argument for traducianism is the establishment of the Sabbath, as described in Genesis 2:1–3. “Thus the heavens and the earth were completed (*kalah*) in all their vast array. By the seventh day God had ended (*kalah*)⁸⁸ the work he had been doing; so on the seventh day he rested (*shabath*)⁸⁹ from all (*kalah*)⁹⁰ his work. And God blessed the seventh day and made it holy, because on it he rested (*shabath*) from all the work of creating (*bara*)⁹¹ that he had done.” In Scripture, *bara* refers to God’s creation *ex nihilo*. The biblical statement of God’s resting from all (*kalah*) his work of creating (*bara*) is the theological basis for the Sabbath. Interpreting God’s “rest” to mean the cessation of direct creation (*bara*) *ex nihilo* not only affirms Genesis 2:3 but also explains many other verses that discuss the Sabbath, such as Exodus 20:8–11, 31:17, Deuteronomy 5:12–14, and Hebrews 4:3b–4.⁹² Such an interpretation does not contradict John 5:17, since God continues to govern the universe in divine providence

⁸⁸ *Kalah* (H3615): to end, whether intransitively (to cease, be finished, perish) or transitively (to complete, prepare, consume).

⁸⁹ *Shabath* (H3634): to complete, (make) perfect.

⁹⁰ *Kalah* (H7673): cease, celebrate, leave, put away (down), (make to) rest, rid, still, take away.

⁹¹ *Bara* (H1254): (absolutely) to create.

⁹² “Remember the Sabbath day by keeping it holy. Six days you shall labor and do all your work, but the seventh day is a Sabbath to the LORD your God. On it you shall not do any work, neither you, nor your son or daughter, nor your manservant or maidservant, nor your animals, nor the alien within your gates. For in six days the LORD made the heavens and the earth, the sea, and all that is in them, but he *rested* on the seventh day. Therefore the LORD blessed the Sabbath day and made it holy” (Exod 20:8–11, italics added); “It will be a sign between me and the Israelites forever, for in six days the LORD made the heavens and the earth, and on the seventh day he *abstained from work and rested*” (Exod 31:17, italics added); “Observe the Sabbath day by keeping it holy, as the LORD your God has commanded you. Six days you shall labor and do all your work, but the seventh day is a Sabbath to the LORD your God. On it you shall not do any work, neither you, nor your son or daughter, nor your manservant or maidservant, nor your ox, your donkey or any of your animals, nor the alien within your gates, so that your manservant and maidservant may rest, as you do” (Deut 5:12–14); “And yet his work has been finished since the creation of the world. For somewhere he has spoken about the seventh day in these words: ‘And on the seventh day God *rested from all his work*’” (Heb 4:3b–4, italics added).

through established natural laws.⁹³ Delitzsch states that the Sabbath of creation “is a limit sharply drawn by God Himself between His direct creative foundation, and His continuous mediate creative control.”⁹⁴

In contrast, suppose God continued to create new souls after the sixth day, when “the heavens and the earth were completed,” what, then, would be the significance of the Sabbath? Creationists are confronted by biblical passages that clearly state God finished his work (Gen 2:2) and rested (Heb 4:4). Delitzsch comments, “it is impossible to reconcile the principle that God is still every day immediately creating millions of souls.”⁹⁵ To this day, God continues to administer divine providence but no longer creates *ex nihilo*. Berkhof, a creationist theologian, admits that continued immediate creation after the sixth day “is not in harmony with God’s present relationship to the world and His manner of working in it, since it teaches a direct creative activity of God, and thus ignores the fact that God now works through secondary causes and ceased from His creative work.”⁹⁶ He affirms that “after the original creation, God works only mediately.”⁹⁷

Summary of Traducianist Arguments

In summary, the following are the arguments for traducianism.

First, God creates Adam’s soul by breathing into his body. In his providential design, he establishes natural laws by which the human body and soul may be multiplied through procreative mechanisms. After Adam, not only are the children’s bodies derived

⁹³ Ware, *God’s Greater Glory*, 18, 21.

⁹⁴ Delitzsch, *Biblical Psychology*, 133.

⁹⁵ Delitzsch, *Biblical Psychology*, 133.

⁹⁶ Berkhof, *Systematic Theology*, 199–200.

⁹⁷ Berkhof, *Systematic Theology*, 198.

from their parents' bodies, but their souls are derived also from their parents' souls.

Second, the multiplication of human souls is still considered to be a method of God's creation because the mechanism is designed by God.⁹⁸ Through procreation, humans continue to reflect God's unlimited ability to create. The creation of new souls is a *mediated creation*, which differs from direct creation because it involves intermediaries: parents, reproductive laws, and hereditary rules.

Third, traducianism is more plausible in light of general biological evidence. Specifically, the reproduction of souls is more consistent with the reproduction mechanisms of the lives of other creatures in God's divine providence. Although human souls are fundamentally different from the lives of other creatures, because humans are the only species that received God's breath and are made in God's image, traducianism would show there is no difference between the reproduction *process* of human souls and that of the lives of other beings.

Fourth, traducianism "accounts better for the kind of commonality in family lines that is more than physical. It is spiritual, emotional, dispositional, personality and all kinds of things, it seems to be passed on."⁹⁹ Most of all, it explains why a sinful nature recurs in every generation of humans: it is because the sinful nature is inherited and not individually created.

Theological Challenges Against Traducianism

However, traducianism also faces several theological challenges.¹⁰⁰ In this

⁹⁸ Scripture attributes all events to the hands of God (Exod 32:35; Judg 21:15; 1 Sam 16:14). Thus, it is reasonable to count the reproduction of souls as one of God's deeds. Besides, this logic can be used to explain many verses that appear to support creationism (e.g., Zech 12:1, Isa 42:5, Heb 12:9, and 1 Pet 4:19).

⁹⁹ Ware, "Human Nature and the Soul."

¹⁰⁰ The following criticisms on traducianism are based primarily on Berkhof, *Systematic Theology*, 198–99, and Turretin, *Institutes of Elenctic Theology*, 5.13.1–17.

section, I will outline and respond to those challenges.

Federalism. First, some creationists reject traducianism because they disagree that Adam’s role as humanity’s federal head can be harmonized with traducianism. A. A. Hodge claims that “no creationist can be a realist.”¹⁰¹ Berkhof says traducianism is

generally wedded to the theory of realism, since this is the only way in which it can account for original guilt. By doing this it affirms the numerical unity of the substance of all human souls, an untenable position; and also fails to give a satisfactory answer to the question, why men are held responsible only for the first sin of Adam, and not for his later sins, nor for the sins of the rest of their forebears.¹⁰²

In reality, creationism is not absolutely tied to federalism, nor is traducianism irrevocably associated with realism. Creationists and traducianists address the *origin* of the soul, whereas federalism and realism deal with the *transmission* of Adam’s sin. The two pairs of opposing viewpoints are interrelated but not the same. A categorical exclusion of one or the other does not accurately reflect the wide spectrum of various positions among theologians. In fact, traducianists could be federalists¹⁰³ or realists;¹⁰⁴ and creationists could also be either federalists or realists.¹⁰⁵ Therefore, traducianism ought to be defined apart from the doctrine of original sin. Some Reformed theologians even believe that traducianism and federalism are not only both true but ought to be merged into one. Bavinck asserts, “Federalism . . . does not exclude the truth which lies

¹⁰¹ Hodge, *Systematic Theology*, 2:66–72, quoted in Clark, “Traducianism,” 2; Berkhof, *Systematic Theology*, 197–201. Similarly, Berkhof criticizes that Traducianism “fails to give a satisfactory answer to the question, why men are held responsible only for the first sin of Adam, and not for his later sins, not for the sins of the rest of their forebearers.”

¹⁰² Berkhof, *Systematic Theology*, 198.

¹⁰³ Clark, “Traducianism,” 2.

¹⁰⁴ William G. T. Shedd, *Dogmatic Theology*, 3rd ed., ed. Alan W. Gomes (Phillipsburg, NJ: P&R, 2003), 446; Erickson, *Christian Theology*, 2:654.

¹⁰⁵ Grudem, *Systematic Theology*, 494 footnote. Although Grudem holds a federalist viewpoint, he intentionally uses the term *inherited* sin to specify the meaning of *original* sin. He seems to suggest that humans inherit sin directly from Adam, skipping all other ancestors. However, Grudem does not explain how this could be possible without a spiritual connection with Adam.

hidden in realism; on the contrary, it fully accepts this truth.”¹⁰⁶ Hoekema writes, “In general, Reformed theologians have separated these two lines of interpretation (realism and immediate imputation). It is my conviction, however, that they ought to be combined.”¹⁰⁷

In response to Hodge’s challenge, Clark argues that traducianism “never claims to explain original sin.”¹⁰⁸ He insists that as do creationists, traducianists accept the view of federal headship of Adam, as the Westminster Confession of Faith states, “. . . the guilt of this sin was imputed, and the same death in sin and corruption nature conveyed to all their descendants descending from them by ordinary generation.”¹⁰⁹ Following this logic, Clark argues that humans are not guilty of Adam’s “second, third, and fourth sin. We are guilty only of his first sin.”¹¹⁰ As previously mentioned, original sin includes imputed guilt and a sinful nature. Traducianism can plausibly explain both of those components, by pointing to Adam as the one from whom we *inherited* our corrupted nature.¹¹¹ Hoekema summarizes:

We do not understand how this corruption can be transmitted from parents to children . . . But both Scripture and experience tell us that the pollution of sin is indeed passed on from parents to their offspring. *Direct* imputation, therefore refers only to the transmission of guilt, not to the transmission of corruption. In other words, there is a direct imputation of guilt, and a mediate transmission of corruption.¹¹²

¹⁰⁶ Bavinck, *Reformed Dogmatics*, 3rd ed. (Kampen: Kok, 1918) 3:93, quoted in Hoekema, *God’s Image*, 160, translated by Hoekema.

¹⁰⁷ Hoekema, *God’s Image*, 160.

¹⁰⁸ Clark, “Traducianism,” 4.

¹⁰⁹ *The Westminster Confession of Faith*, 6.3.

¹¹⁰ Clark, “Traducianism,” 4.

¹¹¹ Erickson, *Christian Theology*, 2:654.

¹¹² Hoekema, *God’s Image*, 157.

In contrast, creationism can explain imputed guilt but has difficulty in explaining inherited corruption, because creationism rejects the spiritual connection between Adam and his descendants. Creationism believes that the sinful nature cannot be transmitted from Adam's soul to his descendants in the same way as his genes are passed downstream. The problem is, if the soul, which is directly created by God, is pure and sinless, then the sinful nature of humans can only be attributed to two possible sources: the body or Satan. If one claims that the sinful nature is inherited entirely through the body whereas the soul is sinless, such a claim seems to suggest Gnosticism.¹¹³ On the other hand, if one insists that the sinful nature has its source entirely from demonic and worldly temptations, then it falls short in explaining the internal drive of sinful nature from one's heart. External temptations are insufficient to explain one's inherent sinful desires (Matt 15:19). James Orr summarizes:

For if God creates a soul, that soul must be pure and sinless and stainless at birth. How then can it be said that man is "conceived" as well as "born in sin"? If the impure, sin-stained body contaminates the pure, unstained soul by contact, why cannot the stainless soul disinfect the contaminated body? And again, if every individual soul is a special creation by direct interposition of the Almighty, what becomes of the unity and solidarity of the race? Is its connection with Adam then purely one of physical or corporeal generation? Creationism cannot account for the birth of the soul.¹¹⁴

This is why Berkhof, a creationist, reluctantly admits that traducianism "seems to offer the best basis for the explanation of the inheritance of moral and spiritual depravity, which is a matter of the soul rather than of the body."¹¹⁵

¹¹³ Berkhof, *Systematic Theology*, 219. Berkhof's statement illustrates the association of Gnosticism and this view, namely, sinful body and innocent soul: "Gnosticism, which regarded evil as inherent in matter, and as such the product of the Demiurge. The contact of the human soul with matter at once rendered it sinful."

¹¹⁴ James Orr, ed., "Psychology," *The International Standard Bible Encyclopaedia* (Grand Rapids: Eerdmans, 1939), 2496, quoted in Greggo, "Soul Origin," 261.

¹¹⁵ Berkhof, *Systematic Theology*, 198.

Not only does traducianism better explain inherited corruption, it also better justifies God’s judgement upon such corruption. Augustine once asked Jerome in his argument against creationism,

If souls are from day to day made for each individual separately at birth, where, in the case of infant children, is sin committed by these souls so that they require the remission of sin in the sacrament of Christ because of the sin of Adam from who the sinful flesh has been derived? . . . Where, therefore, is the justice of the condemnation of so many thousands of souls, which in the deaths of infant children leave this world . . .?¹¹⁶

Similarly, Hoekema states, “the greatest difficulty with [creationism] is that it seems to suggest that God imputes to us the guilt of a sin that we did not commit.”¹¹⁷

Simplicity of the soul. Second, some believe traducianism is contrary to the philosophical doctrine of the simplicity of the soul.¹¹⁸ They question how a parent’s soul could give rise to a child’s soul without splitting or diminishing in the process.¹¹⁹ Berkhof asks, for example,

The soul is a pure spiritual substance that does not admit of division. The propagation of the soul would seem to imply that the soul of the child separates itself in some way from the soul of the parents. Moreover, the difficult question arises, whether it originates from the soul of the father or from that of the mother. Or does it come from both; and if so, is it not a compositum?¹²⁰

Turretin argues that “If the whole (soul) is propagated, then the parents will be without it and so will be deprived of life. If a part, it will be divisible and consequently

¹¹⁶ Augustine, *Letter CLXVI: A Treatise on the Origin of the Human Soul, Addressed to Jerome*, 4.10.

¹¹⁷ Hoekema, *God’s Image*, 162.

¹¹⁸ Berkhof, *Systematic Theology* 197–201.

¹¹⁹ Oliver D. Crisp, *Revisioning Christology: Theology in the Reformed Christology* (Farnham, UK: Ashgate, 2011), 85. William Shedd believes that “there is a constant diminution of the primitive non-individualized human nature when once its division and individualization begins by conception.” Like most traducianists, however, I am not convinced by Shedd’s concept of diminution, and I believe the concept of diminution is not necessary for traducianism.

¹²⁰ Berkhof, *Systematic Theology*, 197–201. Berkhof does not offer any scriptural support for this assertion.

material and mortal.”¹²¹ In the same line, Charles Hodge challenges realists to assume the divisibility of essence (i.e., the soul) and the materiality of Spirit. Their challenges pose a philosophical question, rather than a biblical one. Therefore, I will respond first philosophically and then empirically.

First, Greek philosophy should not be the stand-alone criterion to judge or evaluate theological doctrines. However, since Berkhof and several creationists appeal to the simplicity and indivisibility of the soul, a concept not directly derived from Scripture but rather rooted in Plato’s concept of Form, I agree with Clark that they applied Plato’s philosophy inappropriately. In *Phaedo*, Plato described the soul as simple, or non-composite. In a sense, the soul is similar to Form, which is eternal, simple, and unchanging.¹²² According to Plato, each sensible thing participates in its respective, immaterial Form; however, when one Form participates in many particulars in the sensible world, the Form does not become fragmented.¹²³ This view is the context of the ancient model of traducianism, which explains that “God originally created one generic human nature, which in the course of time was divided into many separate individuals. Adam, however, possessed the whole of this human nature.”¹²⁴ In Augustine’s words, “For we were all in that one man . . . For not yet was the particular form created and distributed to us in which we as individual were to live, but already the seminal nature

¹²¹ Turretin, *Institutes of Elenctic Theology*, 5.13.7, parenthesis added. For Turretin’s philosophical objections to soul propagation via division, see Turretin, *Institutes of Elenctic Theology*, 5.13.7–9.

¹²² Plato, *Phaedo* 78b–84b. Plato believes that because the soul is eternal and unchanging, it must have pre-existed before the body.

¹²³ Plato, *Phaedo* 78b–84b. According to Plato, the simplicity and purity of the soul warrants its immortality. Since destruction is the separation of a composite’s parts, and since the soul is non-composite, Plato reasons that the soul must be indestructible.

¹²⁴ Hoekema, *God’s Image*, 158.

was there from which we were to be propagated.”¹²⁵ However, Plato reasoned in *Parmenides* that the soul is like the immaterial Form and does not have to divide when each individual is propagated. In other words, the soul of Adam could remain undivided when each new individual soul of his offspring is generated subsequently.¹²⁶

Clark, an expert in pre-Socratic and ancient Greek philosophy,¹²⁷ asks in his response to the materialistic charge by Charles Hodge: “Did Hodge never read Plato’s *Parmenides*? And to suppose that Christian Traducianists or Christian Realists teach the materiality of Spirit, either the Holy Spirit or the human spirit, is ridiculous.”¹²⁸ Clark also refutes Berkhof’s accusation against traducianism’s “division of essence,” saying that “This is a misunderstanding of Realism, one that *Parmenides* ridiculed.”¹²⁹

Second and empirically, traducianism affirms that souls are propagated from one generation to the next, just as the physical part of a human being is propagated from one generation to the next. This is consistent with the universal observations in nature that animals inherit their lives from their previous generations. Bavinck also observes theologically that everything “a human being possesses is passed down from one generation to the next in the same way as in the animal world.”¹³⁰ The fundamental difference between a human’s soul and an animal’s life is not its *reproductive process* but its *origin*: from God’s breath versus another method of creation. Traducianism teaches that both human souls and the lives of animals are propagated with the same natural

¹²⁵ Augustine, *The City of God*, 13.14.

¹²⁶ Clark, “Traducianism,” 2.

¹²⁷ “Greek Religion and Philosophy by Gordon H. Clark,” The Gordon H. Clark Foundation, last modified July 16, 2015, <https://gordonhclark.reformed.info/greek-religion-and-philosophy-by-gordon-h-clark>. Clark published many writings on ancient Greek religion and philosophy.

¹²⁸ Clark, “Traducianism,” 5.

¹²⁹ Clark, “Traducianism,” 6.

¹³⁰ Bavinck, *God and Creation*, 585.

mechanism.¹³¹ Although it is a mystery how immaterial lives of all species could be propagated to the next generation without diminishing the parents' lives, it is nevertheless a ubiquitous and undeniable phenomenon in nature.¹³²

Asserting that the soul is not created *ex nihilo*, Stephen Greggo proposes that “the origin of the soul is a creative convergence of nature, nurture, and interactive forces that operate within both the human and divine, visible and invisible realms.” He further explains the process may involve “human-divine, physical-relational, eternal-temporal, and material-immaterial forces.”¹³³ Oliver Crisp imagines that each human gamete carries one half of a psychical “imprint” or “pattern,” which, when fused with the “pattern” of another gamete, generates a new soul.¹³⁴ Although their theories are probable, Christian readers must exercise caution and avoid assuming physical materials are the sources of souls, because in such an assumption, the essence of the soul could be easily mistaken as material.¹³⁵

As discussed in chapter 3, the Hebrew words for the soul: *nephesh*, *ruach*, *chay*, and their corresponding Greek words: *psuche*, *pneuma*, and *zoe*, have all been used

¹³¹ I use the word “life” to represent the animating principle of an animal, in order to distinguish it from the “soul” of a human, because only human souls are created in God’s image.

¹³² James K. Beilby, ed. *For Faith and Clarity: Philosophical Contributions to Christian Theology* (Grand Rapids: Baker Academic, 2006), 257. William Hasker proposes a physics analogy to help readers imagine the possibility of a new soul’s generation. The analogy is that when an electrical current passes through an electromagnetic coil, a new magnetic field, which did not previously exist within the coil, will emerge; furthermore, a sufficiently strong magnetic field (like a child’s soul) could become self-sustaining, continuing to exist even when the magnet (like the parents’ souls) which generated it is destroyed. Hasker’s analogy is purely speculative, but it may help readers comprehend the involvement of divine providence through natural mechanisms.

¹³³ Greggo, “Soul Origin,” 265.

¹³⁴ Oliver Crisp follows the reasoning of J. P. Moreland and Scott Rae in *Body and Soul*. See Crisp, “Pulling Traducianism Out of the Shedd,” 265–87.

¹³⁵ Cooper, “Body-Soul Debate,” 32–51; Greggo, “Soul Origin,” 264.

to describe human lives and animal lives alike.¹³⁶ In Ecclesiastes 3:19–20, for example: “Man’s fate is like that of the animals; the same fate awaits them both: As one dies, so dies the other. All have the same breath (*ruach*); man has no advantage over the animal. Everything is meaningless. All go to the same place; all come from dust, and to dust all return.” Kilner draws similarities between human lives and animal lives: “Genesis also notes the commonality between people and animals (especially in contrast with God). People and many animals share the same day of creation, and they all are to eat the same food and multiply to fill the earth . . . God forms them all from the ground, and animates them to become living beings/souls . . . Indeed, all share the ‘breath of life’.”¹³⁷

Traducianism better explains why Scripture uses the same words to describe human and animal lives. Scripture teaches that “man is a species, and the idea of a species implies the propagation of the entire individual out of it.”¹³⁸ Traducianism maintains that both life (*ruach*) and body of all species, including humans, are propagated through procreational mechanism. As Hamrick puts it, “Creationists overlook the *law of propagation*, which is everywhere evident . . . The natural sense of the Genesis account is that God had made man, and every other creature, as propagative beings, able to multiply after their own kind.”¹³⁹ John Calvin also regards the breath of life in humans as something held in common with animals. Barth accepts this interpretation and holds that the only difference

¹³⁶ In the Old Testament, *nephesh* is used to refer to humans (Gen 2:7) and animals (Gen 1:24, 2:19, 9:10, 9:15); *ruach* is used to refer to humans (Job 12:10; Ezek 37:10) and animals (Gen 7:15, Eccl 3:19, 21); and *khay* is used to refer to humans (Gen 3:20) and animals (Gen 1:21). In the New Testament, *psuche* is used to refer to humans (Matt 10:28; 16:26) and animals (Rev 16:3). The word *pneuma* is used primarily to refer to the Holy Spirit (Matt 3:16), and sometimes humans (Rom 8:10,16). Although *pneuma* has not been used to refer to animals, in the Septuagint (LXX), the Hebrew word *ruach* is generally translated as the Greek word *pneuma*, and that literally applies to all the passages with animals mentioned above. Similar rule is observed for the word *zoe* (Luke 18:30; John 5:26).

¹³⁷ John F. Kilner. *Dignity and Destiny: Humanity in the Image of God* (Grand Rapids: Eerdmans, 2015), 110.

¹³⁸ Clark, “Traducianism,” 3.

¹³⁹ Hamrick, “Origin of the Soul.” Italics in original.

between man and animal in regards to the breath of life is the *manner* in which God gave it.¹⁴⁰

In contrast, the angels are not a “race” or “kind” because they do not marry and reproduce (Matt 22:30).¹⁴¹ When some angels sinned, the condemnation does not extend to other angels (Jude 1:6). There is no such thing as federal representative or natural head for angels. They are separately created. The fact that angel’s guilt is not “imputed” to others suggests that the connection of life-body and soul-through inheritance is an important factor in biblical anthropology. Creationists’ claims that human souls are separately created mimics the angelic model, and hence the inheritance of guilt points to the body. Traducianism better illuminates the connection of each human life with Adam’s soul, which is helpful when we contrast humans’ guilt with that of angels.

The sinful nature in Mary. Third, some creationists argue that if both the body and soul of Jesus had come from Mary, as traducianists believe, Jesus would have inherited a sinful nature from Mary.¹⁴² In response, traducianists claim that the same problem exists in creationism that original sin may pass on from Mary to Jesus through the body, rather than through the soul. To defend creationism, John Murray said that between the conception and the birth of Jesus, God could have exercised supernatural powers to protect Jesus’s body from becoming contaminated by original sin from Mary, and because of this Jesus was called “the holy one to be born.” (Luke 1:35)¹⁴³ Murray’s

¹⁴⁰ The views of Calvin and Barth are described in Graham A. D. Scott, “Abortion and the Incarnation,” *Journal of the Evangelical Theological Society* 17, no. 1 (Winter 1974): 42, footnote 29.

¹⁴¹ Shedd noticed the mistake of John Owen speaking of the angels as a “race.” Shedd, *Dogmatic Theology*, 262.

¹⁴² Hodge, *Systematic Theology*, 2:72.

¹⁴³ John Murray, *Select Lectures in Systematic Theology*, Collected Writings of John Murray 2 (Carlisle, PA: Banner of Truth Trust, 1977), 135. Roman Catholics go one step further to claim that Mary was conceived immaculately—that she was protected by God from original sin when she was conceived. Since this view is not supported by Scripture, it is not discussed in this dissertation.

reasoning is plausible, but the same logic can be applied to support traducianism as well: God could have used supernatural powers to protect Jesus from inheriting the original sin that would have been passed down along with Mary's soul.

This problem is not unique to traducianism. If original sin was *inherited* through procreation, but did not affect Jesus because God used supernatural powers to protect Jesus from it, then neither creationism or traducianism would contradict Jesus's impeccability. If, instead, original sin was not inherited but was simply *imputed* to Adam's progenies, then neither of the theories needs to deal with the problem of whether Jesus could have inherited original sin. Ware makes the interesting observation that it is the sins of the *fathers* that are visited upon the third and fourth generation (Exod 20:5). Since the Holy Spirit took the place of a human father and brought about Jesus' conception (Luke 1:35), "it prevented the sinful line of Adam from being passed on from the father."¹⁴⁴

Other Points to Consider

The origin of Eve's soul. Scripture is silent regarding the origin of Eve's soul. Most creationists believe that Eve had received the immediate breath from God as Adam did. Francis Turretin, for example, notes that while Adam called Eve the *bone of his bones* and *flesh of his flesh*, he never called her the *soul of his soul* (Gen 2:23).¹⁴⁵ In contrast, traducianists argue that doctrines ought not to be rooted in biblical silence. Most traducianists, adhering to the concept of propagation, believe that Eve's soul originated from Adam's soul. Graham Scott asserts, "when Eve was created from Adam's rib, she automatically had life in her, for life pervaded the whole of Adam's body."¹⁴⁶ Franz

¹⁴⁴ Ware, "Human Nature and the Soul."

¹⁴⁵ Francis Turretin, *Institutes of Elenctic Theology*, 5.13.3.

¹⁴⁶ Scott, "Abortion and the Incarnation," 42.

Delitzsch and Gordon Clark cite First Corinthians 11:8 to support this view: “For man did not come from woman, but woman from man.”¹⁴⁷ Epiphanius comments on this verse, saying “The woman was formed for him (Adam), out of him, resembling him, out of the very same body, and by the very same inspiration.”¹⁴⁸ I believe traducianism better explains why Scripture specifies our inherited corruption from Adam rather than Eve, even though Eve had eaten the forbidden fruit first.¹⁴⁹ However, I maintain that since Eve’s creation sequence was unique among humans, the origin of her soul is independent from the conclusion of this dissertation.

Confounding terminology. Some Reformed theologians use the term “creationism” to describe *mediated*, instead of *immediate*, creation of children’s souls through their parents. Charles Hodge writes, “We do not know how the agency of God is connected with the operation of second causes, how far that agency is mediate, and how far it is immediate.”¹⁵⁰ Bavinck intriguingly admits that Daubanton’s view contains much truth that new souls are generated through the union of the parents’ souls:¹⁵¹

Daubanton pictures the new body originating as a result of material contact between the procreative products, and the new spiritual soul similarly originating as a result of spiritual (metaphysical) contact between the psychic potencies inherent in the procreative products. Both the ovum and the sperm are ‘ensouled’ prior to this contact, and both are bearers of psychic life. Now, when the two touch and penetrate each other both physically and psychically (metaphysically) in the mother’s body, they have the capacity not only to produce a material fetus but also to produce in that fetus a new and newly become pneumatic human soul. This scenario is of course [partially] correct.¹⁵²

¹⁴⁷ Clark, “Traducianism,” 3; Delitzsch, *Biblical Psychology*, 132–33.

¹⁴⁸ Delitzsch, *Biblical Psychology*, 132–33.

¹⁴⁹ Creationists can still explain the doctrine by pointing out that Adam is the head of Eve and therefore represents humankind.

¹⁵⁰ Hodge, *Systematic Theology*, 2:69, quoted in Clark, “Traducianism,” 4.

¹⁵¹ F. E. Daubanton, *Het Voortbestaan van het Menschelijk Geslacht* (Utrecht, Netherlands: Kemink, 1902) 194, 205–7, 211, 240.

¹⁵² Bavinck, *God and Creation*, 581–82. Brackets in original.

Berkhof, in his agreement with Bavinck, describes creationism exactly as a traducianist would, saying that “the soul, though called into being by a creative act of God, yet is pre-formed in the psychical life of the fetus, that is, in the life of the parents, and thus acquires its life not above and outside of, but under and in, that complex of sin by which humanity as a whole is burdened.”¹⁵³ He continues, “. . . we are convinced that the creative activity of God in originating human souls must be conceived as being most closely connected with the natural process in the generation of new individuals.”¹⁵⁴

On the other hand, Clark, a traducianist, clarifies that “traducianists are willing to say that the souls of men are ‘created’ medially, i.e., by the mediation of parents.”¹⁵⁵ It appears that Berkhof and Clark are expressing the same idea, that the generation of a new soul is *mediated* through parents. Their supposedly opposite models of soul generation are actually more similar than different. But is it more appropriate to classify this model as creationism or traducianism? Obviously, it does not meet the criteria for creationism, which claims that souls are “immediately created by God and by creating infused; thus to be produced from nothing and without any preexisting material.”¹⁵⁶ Therefore, traducianism appears to be the more accurate classification. If one still prefers to use “creationism” to describe this idea, an appropriate name may be *mediated creationism* or *rule-based creationism*, meaning that the soul and the body are both *indirectly* created through *mediating* parents.¹⁵⁷ In other words, the soul and the body are *automatically*

¹⁵³ Berkhof, *Systematic Theology*, 4.

¹⁵⁴ Berkhof, *Systematic Theology*, 201.

¹⁵⁵ Clark, “Traducianism,” 4.

¹⁵⁶ Turretin, *Institutes of Elenctic Theology*, 5.13.1.

¹⁵⁷ Ware, *God’s Greater Glory*, 67–72. God’s providence includes his “exhaustive, meticulous sovereignty” encompassing “all things that occur in the universe.” Some of God’s actions are direct, and some are indirect. Although Ware’s focus is on the relation between divine sovereignty and human moral freedom, the principle applies here that God directs the created order directly and indirectly.

generated at the moment of conception according to the procreation rule in God’s created order in nature. As a comparison, a fetus’ body can be said to be “created” by God but actually follows hereditary rules under God’s providence. Similarly, in *mediated* creationism, the soul is not God’s *direct* creation but a *secondary* creation through natural rules in God’s created order.

In my opinion, this “mediated creationism” is actually a version of traducianism, because it teaches that the soul of a child comes from his parents, rather than being created *ex nihilo* and then infused into his body. If this understanding is correct, then this mediated or rule-based model of traducianism is the most widely accepted model that explains the origin of the soul.

Conclusion

Having surveyed the two dominant teachings regarding the origin of the soul, I conclude that traducianism is a more plausible model than creationism because traducianism can answer most, if not all, theological challenges. Traducianism favorably explains the human sinful nature, the meaning of the Sabbath, and the biblical use of words describing human life. Traducianism also emphasizes the tight link between soul and body that is reflected in OT and NT anthropology.

Some scholars believe that traducianism and creationism are both acceptable because the Bible does not provide enough evidence for a definite answer.¹⁵⁸ Some even argue that this controversy will never be resolved.¹⁵⁹ But after research in light of

¹⁵⁸ John M. Frame, *Salvation Belongs to the Lord: An Introduction to Systematic Theology* (Phillipsburg, NJ: P&R, 2006), 93; Greggo, “Soul Origin,” 262. Frame comments: “Creationists claim to do more justice to individual responsibility, while traducianists claim to do more justice to our solidarity in Adam. Myself, I don’t think that Scripture clearly supports one view or the other.”

¹⁵⁹ Berkouwer, *Man*, 292–309; Barth, *Church Dogmatics*, 3/2:583. Berkouwer rejects the traducianism-creationism dilemma. His Barthian-Christocentric insistence is as follows: “There is no science, and no theology, which can unveil for us this mystery of man. This does not mean an underevaluation of science and theology, but rather an understanding of their meaning and their limits.

Scripture, I am convinced that traducianism is better supported by biblical, theological, rational, and empirical evidence than creationism. Under God’s divine providence, each new soul is generated through procreative mechanisms or mediated creation, at the sexual union of the human parents, in the same way other creatures’ lives are generated.¹⁶⁰ Although each new soul is a unique individual, it is connected to its ancestors’ souls because it was born out of its parents’ union.

Man, who no longer understands himself, can again understand this mystery only from the viewpoint of the divine revelation in Jesus Christ.”

¹⁶⁰ Do animals have souls? The answer depends on how the word “soul” is defined. Animals undeniably have lives; some animals even possess thoughts, motivations, and emotions. But the life of an animal is different from the soul of a human. The soul of a human can interact with God (Ps 103:1, Luke 1:46), is immortal (Rev 6:9), and carries moral responsibilities (Heb 9:27), while the life of an animal is devoid of these characteristics. Ecclesiastes pointed out that humans and animals alike have lives that will eventually end (Eccl 3:19–20) and that most are clueless about the fates of the two after death (Eccl 3:21). Scripture also tells us animals will be present in the new heaven and the new earth (Isa 11:6, 65:25). But because the Bible offers few other clues on the matter, the existence of an immortal soul in an animal cannot be proven. Grudem, *Systematic Theology*, 480–81.

CHAPTER 5
WHEN DOES PERSONHOOD BEGIN? A BIBLICAL
PERSPECTIVE

A. A. Hodge, a creationist, writes that each new soul is “immediately created by God at the instant of conception.”¹ Despite disagreeing over *how* a human’s new soul is formed, creationists and traducianists generally agree that the soul is formed *when* the human is conceived. They have this consensus, in part because Scripture offers sufficient evidence to support it. Although Scripture does not explicitly define the beginning of personhood, it contains relevant passages and clear principles that enable Christians to offer a biblical answer to the question: When does personhood begin? In this chapter, I will examine key scriptural passages that address this question. I will review verses that relate to six stages of early human development, in a reversed chronological order: infancy, fetal stage, viability threshold, quickening stage, unformed embryonic stage, and conception. Based on these biblical passages, I will argue that the Bible assumes full personhood of all human beings from the moment of conception.

An Infant is a Person

Throughout the Bible, infants are consistently identified as persons. Not once does a biblical author imply that an infant’s life is inferior to that of an adult. Jesus once prays, for example, “You have hidden these things from the wise and prudent and have revealed them to babes (*neepios*)” (Luke 10:21; Matt 11:25, NKJV). He also says, “Let the little children (*paidia*) come to me, and do not hinder them, for the kingdom of

¹ Gordon H. Clark, “Traducianism,” *The Trinity Review*, July/August 1982, 1–2, <http://www.trinityfoundation.org/journal.php?id=56/>; Wayne Grudem, *Christian Ethics: An Introduction to Biblical Moral Reasoning* (Wheaton, IL: Crossway, 2018), 568.

heaven belongs to such as these” (Matt 19:14; Mark 10:14; Luke 18:16). The death of the seven-day-old baby born from the adulterous sin of king David and Bathsheba is depicted as a grievous event (2 Sam 12:18), with David declaring that he will see that baby again in the future (2 Sam 12:23).² The act of murdering infants by having them pass through fire is condemned as a detestable sin (Lev 18:21; Deut 18:10). It is clear from these passages that Scripture affirms the personhood of infants.

An Unborn Fetus is a Person

I will now discuss the personhood of unborn fetuses by examining seven accounts in the Bible, regarding John the Baptist, Paul, Jeremiah, the servant in Isaiah’s servant songs, Jacob, Esau, and Cain.

John the Baptist: Filled with the Holy Spirit from His Mother’s Womb

But the angel said to him, “Do not be afraid, Zechariah, for your prayer has been heard, and your wife Elizabeth will bear you a son, and you shall call his name John. And you will have joy and gladness, and many will rejoice at his birth, for he will be great before the LORD. And he must not drink wine or strong drink, and he will be filled with the Holy Spirit, even from his mother’s womb.” (Luke 1:13–15, ESV)

This is part of the prophecy that Gabriel speaks to Zechariah the priest, who was old and childless. Verse 15 says John would be filled with the Holy Spirit even “from his mother’s womb” (*ek koilias metros autou*).³ Indeed, Luke later records that John leaps for

² Wayne Grudem, *Systematic Theology: An Introduction to Biblical Doctrine* (Grand Rapids: Zondervan, 1994), 501, footnote 20. “But now that he is dead, why should I go on fasting? Can I bring him back again? I will go to him, but he will not return to me” (2 Sam 12:23). Instead of “I shall *go to him*,” a better translation would be “I shall go *where he is*,” in which David would not merely be saying he would eventually die like his baby, but instead that he will meet his baby again someday.

³ J. Reiling and J. L. Swellengrebel, *A Translator’s Handbook on the Gospel of Luke* (New York: United Bible Societies, 1971), 33; Robert G. A. Bratcher, *Translator’s Guide to the Gospel of Luke* (New York: United Bible Societies, 1982), 7–8. In the NIV, RSV, BF, JB, the Louis Segond Bible, and the Zürcher Bible, this passage translates to “in his mother’s womb.” Because Luke 1:41 and 44 record John the Baptist “leaping with joy in his mother’s womb,” it is appropriate to say he was filled with the Holy Spirit before he was born.

joy in his mother's womb; he leaps because he is filled with the Holy Spirit.⁴ Grudem comments, "We might say that John the Baptist was 'born again' before he was born!"⁵ The verb "to be filled [with the Holy Spirit]" here is *pletho*. Luke later uses the same verb to describe the Holy Spirit's descent on Zechariah (Luke 1:67), Elizabeth (Luke 1:41), the saints at Pentecost (Acts 2:4), Peter (Acts 4:8), and Paul (Acts 9:17; 13:9), implying that the Holy Spirit fills the fetus John the same way he fills adults. Since a person's body is a temple of the Holy Spirit (1 Cor 6:19), it is reasonable to deduce that little John in utero, named by the Lord and filled with the Holy Spirit, is already a person.

Paul the Apostle

But when God, who set me apart from my mother's womb and called me by his grace, was pleased to reveal his Son in me so that I might preach him among the Gentiles, my immediate response was not to consult any human being (Gal 1:15–16).

The apostle Paul declares to the Galatians that God had set him apart from his mother's womb. Walter Hansen expounds the passage as follows: (1) God's predestination happens before Paul's conversion; (2) This decision of God before the birth of Paul eventually leads to Paul's conversion; (3) God is pleased to reveal his Son in Paul's heart so that 4) Paul might preach the gospel among the Gentiles.⁶

Verse 15 is not a complete sentence but a part of a longer statement (Gal 1:15–17) that begins with "but" (*hote*) to contrast Paul's state before and after he came to Christ. Most translators see the phrase "by his grace" (*dia tes karitos*) as an elaboration upon "called me," since it succeeds the verb "to call" (*calesas*). Structurally speaking,

⁴ William Hendriksen, *Exposition of the Gospel According to Luke* (Grand Rapids: Baker, 1978), 70–71, 94–97.

⁵ Grudem, *Systematic Theology*, 500.

⁶ G. Walter Hansen, *Galatians*, IVP New Testament Commentary (Downers Grove, IL: InterVarsity, 1994), 42–46.

however, “by his grace” could also be a modifier of “to set apart” (*aphorisas*).⁷ In this description of his calling, Paul does not recount his experience on the road to Damascus but instead tells of his life before birth.⁸

The Greek text for “from my mother’s womb” is *ek koilias metros mou*. The word *ek* indicates the beginning of a period of time. Most scholars translate this passage as “before I was born,”⁹ while some translate it as “from my birth.”¹⁰ I consider the translation “before I was born” more plausible here for the following reason: In general, the bible shows that God knows a person, builds a relationship with him, and sometimes ordains him before he is born. This is commonly shown in the OT, which Paul alludes to as “the traditions of my fathers” in verse 14. David, Samson, Jeremiah, Jacob and Esau are examples of fetuses in the OT who are known by God. Ishmael receives a name from God before he is born. The authors of the Wisdom Literature declare that God creates them in the womb (Job 31:15; Ps 119:73) by mysterious ways unknown to mankind (Eccl 11:5) and is already their God before they are born (Pss 22:9–10; 71:6).¹¹ Paul’s statement can be understood in light of this context. Paul is most likely saying that, in accordance with the OT’s principles, he was set apart when he was still in his mother’s womb. John Calvin comments that this process of being set apart is one step between

⁷ Daniel C. Arichea and Eugene A. Nida, *A Translators Handbook on Paul’s Letter to the Galatians* (New York: United Bible Societies, 1976), 22.

⁸ George Barlow, *Galatians, Ephesians, Philippians, Colossians, 1 & 2 Thessalonians*, ed. Joseph S. Exell, *The Preacher’s Homiletic Commentary* 28, (Grand Rapids: Baker, 1986), 20.

⁹ Arichea and Nida, *Galatians*, 22; Marvin R. Vincent, *Word Studies in the New Testament* (New York: Charles Scribner’s Sons, 1911), 89; Martin Luther, *A Commentary on Saint Paul’s Epistle to the Galatians*, trans. Erasmus Middleton (London: B. Blakes, 1833), 51. Such a translation can be found in the ESV, Good News Bible, RSV, and NAB.

¹⁰ Hermann N. Ridderbos, *The Epistle of Paul to the Churches of Galatia* (Grand Rapids: Eerdmans, 1953), 62–63; William Hendriksen, *Exposition of Galatians*, *New Testament Commentary* (Grand Rapids: Baker, 1968), 52.

¹¹ John Stott, *Decisive Issues Facing Christians Today* (Old Tappan, NJ: Fleming H. Revell, 1990), 316.

predestination, which God ordains before the world’s creation, and the calling that comes to Paul later on.¹²

Jeremiah

Before I formed you in the womb I knew you, before you were born I set you apart; I appointed you as a prophet to the nations” (Jer 1:5).

This declaration by the Lord begins twice with “before” (*terem*).¹³ The verbs “to form” (*yatsar*) and “to be born” (*yatsa*) are both written in the imperfect tense, implying an ongoing development.¹⁴ The words for “abdomen” (*beten*) and “womb” (*rechem*) are parallel, as commonly seen in OT poetry.¹⁵ In the Hebrew text, 5a means “I formed you ‘in the womb’ (*ba-beten*)”,¹⁶ and 5b “before you were born” (*me-rechem*, from-womb)¹⁷ can be directly translated as “before you came forth from the womb.”¹⁸ The passage points out that even before Jeremiah was born, God had already set him apart (Jer 1:5b) and appointed him as a prophet to the nations (Jer 1:5c).¹⁹

Robert P. Carroll interprets this verse as follows. Verse 5a: “Before I formed

¹² John Calvin, *Commentaries on the Epistles of Paul to the Galatians and Ephesians* (Grand Rapids: Baker, reprint 1993), 40–41.

¹³ Andrew W. Blackwood, Jr., *Commentary on Jeremiah* (Waco, TX: Word Books, 1977), 37.

¹⁴ Theodore Laetsch, *Bible Commentary: Jeremiah* (St. Louis, MO: Concordia, 1965), 21.

¹⁵ Isa 46:3; Pss 22:11; 58:4; Job 3:11; 10:18–19; 31:35. William L. Holladay, *Jeremiah I: A Commentary on the Book of the Prophet Jeremiah Chapters 1–25*, Hermeneia: A Critical and Historical Commentary on the Bible (Philadelphia: Fortress, 1986), 33; Jack R. Lundbom, *Jeremiah 1–20*, The Anchor Yale Bible Commentaries, (New Haven, CT: Yale University Press, 1999), 230–31.

¹⁶ C. F. Keil and F. Delitzsch, *Jeremiah – Lamentations*, Commentary on the Old Testament (Peabody, MA: Hendrickson, 1996 reprint), 25–26.

¹⁷ John R. Kohlenberger III, ed., *The NIV Interlinear Hebrew-English Old Testament*, 3rd ed. (Grand Rapids: Zondervan, 1985), 135.

¹⁸ Blackwood, *Commentary on Jeremiah*, 37.

¹⁹ Esther H. Roshwalb, “Jeremiah 1.4–10: ‘Lost and Found’ in Translation and a New Interpretation,” *Journal for the Study of The Old Testament* 34, no. 3 (2010), 351–76. Synthetic parallelism is found in this verse.

you in the womb I knew you” indicates that Jeremiah was known and chosen by God before the world’s creation, so the choice is related to the prophet’s ability to speak (v. 9). Verse 5b: “Before you were born I set you apart” means that when Jeremiah was still in his mother’s womb, he had already been selected for warfare; hence, this selection is related to his physical strength (vv. 7–8). Verse 5c: “I appointed you as a prophet to the nations” is an additional explanation for the mission assigned to Jeremiah.²⁰ According to this verse, therefore, Jeremiah’s prophetic appointment happens before his birth. In the context of the full paragraph (vv. 4–9), the appointment of Jeremiah to speak the words of the LORD can be seen as a commission rather than a calling, because it came to Jeremiah long before he became capable of making decisions.²¹

Frame argues that this passage alone does not prove the personhood of Jeremiah before he was born. He cautions readers against “[reading] too much into these passages” because “according to Jer 1:5 and other passages the ‘personal continuity’ of a man’s life extends in a sense not only back to conception, but even *before* conception.”²² Frame contends: “the use of these personal pronouns does not prove that those in the womb are, while in the womb, persons. That use proves only that in God’s plan those particular fetuses were (at least) *destined to become* persons.”²³

Conversely, Beckwith rightly explains that this verse does not claim that Jeremiah existed before his conception, but rather that God knew him and had a plan for

²⁰ Robert P. Carroll, *Jeremiah: A Commentary*, Old Testament Library (Philadelphia: Westminster, 1986), 101.

²¹ Samuel Yau-Chi Tang, *Jeremiah*, Tien Dao Bible Commentary (Hong Kong: Tien Dao, 1992), 1:80.

²² John M. Frame, *Medical Ethics: Principles, Persons, and Problems* (Phillipsburg, NJ: P&R, 1988), 106.

²³ Frame, *Medical Ethics*, 106; Robert N. Wennberg, *Life in the Balance: Exploring the Abortion Controversy* (Grand Rapids: Eerdmans, 1985), 60–63; Dolores Dunnett, “Evangelicals and Abortion,” *Journal of the Evangelical Theological Society* 33, no. 2 (June 1990): 218–20. Wennberg and Dunnett expressed criticisms similar to Frame’s.

him prior to his conception. Beckwith writes:

It is certainly possible for God to know each of us “before” we were conceived. Therefore such passages describing God’s foreknowledge of us before conception cannot be used to explain away either conception as the beginning of personal existence or that personal existence is attributed to uterine life, especially when the passage specifically says, for instance, that a certain human being either has personally existed from conception (e.g. Gen 4:1) or has personally existed prior to birth (e.g. Jer 1:5; Ps 139:13–16; Luke 1:41–44). Furthermore “conception” or “to conceive” implies a beginning or a genesis, such as when I say, “This is the finest idea you have ever conceived.” Therefore when God speaks of a person prior to conception he is not making an ontological claim (a being claim) but an epistemological claim (a knowledge claim). Given these clarifications, the burden of proof is on Wennberg and Dunnett to show us why we should dispense with the more natural interpretation of the above passages.²⁴

God’s *foreknowledge* of Jeremiah’s formation belongs to God’s omniscience, but the *consecration* and *appointment* of Jeremiah belong to God’s sovereign action. As John Stott puts it,

. . . the passages which relate to *election*, the emphasis is on salvation by grace not works, and therefore on God’s choice of us before we existed or could do any good works. In passages which relates to *vocation*, however (whether the calling of prophets like Jeremiah or of apostles like Paul—cf. Gal 1:16), the emphasis is not only on God’s gracious choice but on his “forming” or “fashioning” them for their particular service . . . that is, while they were still being “fashioned” in the womb.²⁵

God’s omniscient elective foreknowledge transcends time and space; therefore, he already knew each person before the world was created (Rom 8:29; Eph 1:4). Hence, “before I formed you in the womb I knew you” does not necessarily indicate the prophet existed before he came into physical existence.

The Servant in Isaiah’s Prophecy

“Listen to me, O coastlands, and give attention, you peoples from afar. The LORD called me from the womb, from the body of my mother he named my name.” (Isa 49:1, ESV)

“And now the LORD says—he who formed me in the womb to be his servant to bring Jacob back to him and gather Israel to himself, for I am honored in the eyes of

²⁴ Francis J. Beckwith, “Brave New Bible: A Reply to the Moderate Evangelical Position on Abortion,” *Journal of the Evangelical Theological Society* 33, no. 4 (Dec 1990): 492.

²⁵ Stott, *Decisive Issues*, 317. Italics in original.

the LORD and my God has been my strength—” (Isa 49:5, ESV)

Isaiah 49:1–6, the second of the prophet’s four servant songs, speaks of God appointing the servant to preach to the Gentiles.²⁶ The identity of the servant shifts several times throughout the four servant songs. Sometimes, “the servant” seems to refer to the nation of Israel (42:19); other times, Cyrus (45:1) or Isaiah (50:4–6).²⁷ In Isaiah 53, the servant becomes so distinctly characterized that it is unlikely that he represents the entire nation of Israel.²⁸ Upon close scrutiny of the image, social status, and mission of the servant, we find that these descriptions are only fulfilled in Jesus Christ, the Messiah.²⁹

Isaiah speaks of the servant being formed “in the womb” (Isa 49:5a) and called “from the womb” (Isa 49:1b).³⁰ *In the womb* and *from the womb* are both translated from the same Hebrew text: *mi-beten*.³¹ However, I believe the translation “in the womb” is more plausible in this context. The verb “to form” is *yatsar*, also used to describe the action of a potter shaping a piece of pottery. The OT authors know that a fetus is formed *in* the womb (Gen 25:22–23; Eccl 11:5) and not *out* of it. Similarly, Isaiah 49:5a states that God formed his servant *in* the womb and not *out* of it. It is reasonable to translate the

²⁶ The four servant songs are Isaiah 42:1–4; 49:1–6; 50:4–9; and 52:13–53:12.

²⁷ R. N. Whybray, *Isaiah 40–66*, The New Century Bible Commentary (Grand Rapids: Eerdmans, 1984), 305.

²⁸ C. F. Keil and F. Delitzsch, *Isaiah*, Commentary on the Old Testament (Peabody, MA: Hendrickson, 1999), 347–51.

²⁹ Homer Hailey, *A Commentary on Isaiah: With Emphasis on the Messianic Hope* (Louisville: Religious Supply, 1992), 405–06.

³⁰ Claus Westermann, *Genesis 1–11: A Commentary*, trans. J. J. Scullion (Minneapolis: Fortress, 1984), 211.

³¹ Examples of translating the phrase to “in the womb” include: Keil and Delitzsch, *Isaiah*, 348; J. Alec Motyer, *Isaiah: An Introduction and Commentary*, Tyndale Old Testament Commentaries (Downers Grove, IL: InterVarsity, 1999), 397, 400. Examples of “from the womb” include: Edward Kissane, *The Book of Isaiah* (Dublin: Browne and Nolan, Richview Press, 1943), 125; Solomon F. Freehof, *The Jewish Commentary for Bible Readers: Book of Isaiah* (New York: Union of American Hebrew Congregations, 1972), 253.

same expression, *mi-beten*, the same way in Isaiah 49:1b: “the LORD called me *in* the womb.” Under this translation, the servant would be proclaiming that he was called in the womb. Since personhood is assumed for those whom God calls, this passage shows that the servant was already a person before he was born.

Jacob, Esau, and Cain

“In the womb he grasped his brother’s heel; as a man he struggled with God” (Hos 12:3).

“The babies jostled each other within her, and she said, ‘Why is this happening to me?’ So she went to inquire of the LORD” (Gen 25:22).

These passages describe Jacob’s struggles with his twin brother Esau in the womb of their mother, Rebekah. In each of these verses, the respective biblical author uses a literary device to show that the personhood of an unborn fetus is equal to that of an older human. In the passage from Hosea, verse 3a, “he grasped his brother’s heel,” parallels verse 3b, “he struggled with God,” implying that the identity of Jacob the unborn fetus is the same as, and continuous with, the identity of Jacob the grown man. In the passage from Genesis, the original text reads, “*ha-banim ratsats*” (the babies jostled), a description that conjures up an image of children already born. In other parts of Scripture, *ratsats* (to jostle) is translated to “to oppress,” “to crack,” “to inflict cruelties,” or “to crush,” all of which describe the actions of adults. Yet in the account in Genesis, the babies “jostled each other” within their mother (*ba-beten*, in the womb), no differently from the actions of people outside the womb.³² Finally, in both passages above, the nouns for “his brother” (*ach*) and “babies” (*ha-banim*) represent persons, not just intrauterine tissue. In other words, before Jacob and Esau were born, they were already portrayed in every way as persons.

³² Deut 28:33; Judg 9:53; 2 Chr 16:10 (ESV); Job 20:19 (ESV).

Similarly, the author of Genesis uses personal language to describe the unborn Cain:

Adam made love to his wife Eve, and she became pregnant and gave birth to Cain. She said, ‘With the help of the LORD I have brought forth a man.’” (Gen 4:1).

The verse begins with *ha-adam*,³³ “Adam,” or “the man,” and Eve describes her son as *iysh*, “a man,” as if to emphasize that the first pregnancy in human history created a man, just as God created a man in the beginning.³⁴ Adam and Eve’s lovemaking (*yada*, to know), Eve’s pregnancy, and their child’s birth are significant events in human history, because the events show that after humanity’s fall, God’s blessing to married couples—“be fruitful and increase in number; fill the earth and subdue it”³⁵—continues to stand. John Calvin explains that through the birth of her first child, Eve saw an opportunity for the human race to experience renewal after she and Adam sinned.³⁶ Although Genesis goes on to describe wickedness and tragedy in the first human family, Eve’s words remind readers that God promises salvation and that the serpent’s head will one day be crushed by Christ, the woman’s offspring.³⁷

John Davis points out that when the author of Genesis describes not only Cain’s birth but also his conception, the author is implying that Cain the person came into existence when he was conceived. Davis explains: “The writer’s interest in Cain extends

³³ *Adam* (H120): a *human being*. Kohlenberger ed., *Hebrew-English Old Testament*, 8.

³⁴ Westermann, *Genesis 1–11*, 290; Allen P. Ross, *Creation and Blessing* (Grand Rapids: Baker, 1988), 156. Cain’s name (*qayin*, H7014) is derived from a Hebrew root that means “to bring forth” or “to acquire”. Some scholars add that “Cain” is similar to *qanah* (H7069, to create; to build).

³⁵ “God blessed them and said to them, ‘Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground.’” (Gen 1:28)

³⁶ John Calvin, *Commentaries on the First Book of Moses called Genesis*, Calvin’s Commentaries, trans. James Anderson (Grand Rapids: Baker, reprint 1993), 190–91.

³⁷ “And I will put enmity between you and the woman, and between your offspring and hers; he will crush your head, and you will strike his heel.” (Gen 3:15)

back beyond his birth, to his conception. That is when his personal history begins. The individual conceived and the individual born are one and the same, namely, Cain.”³⁸

Beckwith observes a similar pattern in several OT passages, of tracing a person’s history back to his intrauterine days:³⁹

The author of Job 3:3 writes: “Let the day perish on which I was to be born, and the night, which said, ‘A boy [*geber*] is conceived.’” This passage is asserting that the person who was born is the same person as the individual who was conceived. “Job traces his personal history back beyond his birth to the night of conception. The process of conception is described by the biblical writer in personal terms. There is no abstract language of the ‘product of conception,’ but the concrete language of humanity.” Although the Hebrew word *geber* is usually used to describe postnatal humans and translated “male,” “man,” or “husband” (see Pss 34:9; 52:9; 94:12; Prov 6:34), in Job 3:3 it is translated as “boy” and applied specifically to an unborn human being.⁴⁰

This shows that personhood of the unborn is assumed by various OT authors.

The Viable Premature Infant is a Person

If people are fighting and hit a pregnant woman and she gives birth prematurely [or *she has a miscarriage*] but there is no serious injury, the offender must be fined whatever the woman’s husband demands and the court allows. But if there is serious injury, you are to take life for life, eye for eye, tooth for tooth, hand for hand, foot for foot, burn for burn, wound for wound, bruise for bruise. (Exod 21:22–25)

This law discusses accidental premature birth, placing a focus on the fetus’s injury and survival, as well as punishment to the offender. Some believe “premature birth” in verse 22 refers to “miscarriage” or “stillbirth,” in which the fetus dies. Based on this interpretation, they argue that the life of a fetus is inferior to that of a born person, since this law only punishes one who killed a fetus with a fine and not a death sentence. However, the following evidence supports the idea that “premature birth” indicates the fetus had already reached a viable age and survived the birth.⁴¹

³⁸ John Jefferson Davis, *Abortion and the Christian* (Phillipsburg, NJ: P&R, 1984), 40.

³⁹ Beckwith, “Brave New Bible,” 490.

⁴⁰ Beckwith, “Brave New Bible,” 491.

⁴¹ John I. Durham, *Exodus*, Word Biblical Commentary (Waco, TX: Word Books, 1987),

Yasia

First, the original text for “she gives birth prematurely” can be translated directly as “her children come out.” The verb “to come out” is *yasia* or *ys*. This verb appears many times in the OT; whenever it refers to birth, it means “to give a live birth” or “to be born alive” (Gen 25:26, 38:28; Job 1:21, 3:1, 10:18, Jer 1:5, 20:18). The only time *ys* is used to describe stillbirth is in Numbers 12:12, “Do not let her be like a stillborn infant coming from its mother’s womb with its flesh half eaten away.” In this exception, the text clearly states that *ys* is used to describe a dead and decomposing body, which, in the real world, would not easily be mistaken for a premature live birth. Thus, the reader quickly realizes this is an exception, since live infants are vastly different from stillborn infants under the lenses of law and medicine. Other than this instance, the OT never uses *ys* to refer to stillbirth. Therefore, in the context of OT diction, it is more fitting to interpret *ys* as “premature birth” in the passage in Exodus.

Shikkel

Second, there is another word in the OT that can be more fittingly translated as “miscarriage” or “stillbirth”: *shikkel* (Gen 31:38; Exod 23:26; Job 21:10; Hos 9:14).⁴² If this law in Exodus 21 is about miscarriage or spontaneous abortion, the author could have used *shikkel* (to be bereaved) to emphasize the death of the fetus.

Yeled

Third, the “fetus” in this law is *yeled*, which means “child” and not merely an object in the womb.⁴³ *Yeled*, being a masculine noun, implies that the fetus is not a

3:323–24.

⁴² Walter C. Kaiser, Jr., *What Does the Lord Require? A Guide for Preaching and Teaching Biblical Ethics* (Grand Rapids: Baker, 2009), 113.

⁴³ Durham, *Exodus*, 323. In the Masoretic Text (MT), “child” is plural (*yeledeha*), possibly because there could be more than one child in the womb. In contrast, “child” is singular in the Samaritan Pentateuch and LXX.

component of its mother's feminine body but an individual being.⁴⁴ The word *yeled* appears eighty-nine times in the OT, but only in this passage from Exodus is it translated as "fetus;" in all of the other passages, *yeled* refers to a born child or a young man.⁴⁵ A study of Middle-Eastern and Jewish literature brings us to the same conclusion: in the passage from Exodus, *yeled* ought to be translated as "child."⁴⁶ In fact, the OT contains two more words that specifically refer to embryos and fetuses: *golem* (embryo, Ps 139:16) and *nephel* (a miscarried or stillborn fetus, Ps 58:8; Job 3:16; Eccl 6:3). The writer of Exodus 21:22 does not choose a word that specifically means "fetus" but a word that means "child." Considering that legal documents need to be worded precisely to prevent misinterpretation, this infant described by the Exodus law is most likely a live birth, and the law does not concern miscarriages but premature live births. This interpretation is supported by the majority of evangelical scholars today.⁴⁷

Ason

Finally, the latter part of verse 22 does not specify which individual or which individuals suffered an "injury" (*ason*). *Ason*, a third-person, singular, and masculine

⁴⁴ H. F. W. Gesenius, *Hebrew-Chaldee Lexicon to the Old Testament*, trans. Samuel Prideaux Tregelles (Grand Rapids: Baker, 1979 reprint), 349; Willem A. VanGemeren, ed., *New International Dictionary of Old Testament Theology and Exegesis* (Grand Rapids: Zondervan, 1997), 530–31; George W. Wigram, *The Englishman's Hebrew and Chaldee Concordance of the Old Testament* (Grand Rapids: Baker, 1980 reprint), 457.

⁴⁵ *Yeled* (H3206) occurs 89 times in 76 verses in the Hebrew concordance of the KJV.

⁴⁶ H. Wayne House, "Miscarriage or Premature Birth: Additional Thoughts on Exodus 21:22–25," *Westminster Theological Journal* 41, no. 1 (1978), 108–23.

⁴⁷ Millard J. Erickson, *Introducing Christian Doctrine*, ed. Arnold Hustad (Grand Rapids: Baker, 2001), 177; Walter C. Kaiser, Jr., *Toward Old Testament Ethics* (Grand Rapids: Zondervan, 1983), 102–4; Davis, *Abortion and the Christian*, 51–52; John M. Frame, *The Doctrine of the Christian Life, A Theology of Lordship 3* (Phillipsburg, NJ: P&R, 2008), 717–32; Michael A. Grisanti, "The Abortion Dilemma," *The Master's Seminary Journal* 11, no. 2 (Fall 2000), 169–90; Chien-Kuo Lai, *Exodus*, Tien Dao Bible Commentary (Hong Kong: Tien Dao, 2005), 129–30.

noun, refers to an accident which could result in any kind of harm, including death.⁴⁸ Some may assume that in this law, “injury” refers to harm inflicted upon the pregnant woman. However, the original text lacks the word *lah* (to her). This means the individual who suffers an injury could have been the pregnant woman, her child, or both.⁴⁹ Following this logic, the death of a child would be incongruent to the law’s description, “there is no serious injury [to the mother or child],” since the law states that “injury” could have been suffered by the mother or the child, and, alternatively, “the lack of injury” could have been experienced by the mother or the child as well. It is worth noting that the common rule of punishment, “eye for eye and tooth for tooth,” is recorded in other passages, and this common punishment applies to perpetrators who injure *any* men or women—including pregnant women. This suggests that the rule in Exodus 21 does not mainly target pregnant women but the unborn children these women carry; otherwise, it would be a redundant and unnecessary rule.

In conclusion, the original meaning of verse 22 should be: if no harm comes to the prematurely born infant or its mother, the woman’s husband may still demand a payment from the offender, whose actions threatened the safety of the woman and child. In verse 23, “if there is serious injury” to the child or the mother, the punishment would be “life for life, eye for eye . . .,” in other words, a full retribution.⁵⁰ The weightiness of this punishment confirms that the life of a fetus is by no means inferior to that of an adult.⁵¹ In fact, this punishment is more severe than punishments for other accidental

⁴⁸ Benno Jacob, *The Second Book of the Bible: Exodus*, trans. Walter Jacob (Hoboken, NJ: Ktav, 1992), 656.

⁴⁹ C. F. Keil and F. Delitzsch, *Pentateuch*, Commentary on the Old Testament (Peabody, MA: Hendrickson, reprint 1996), 409 footnotes.

⁵⁰ Walter C. Kaiser, Jr., *Exodus*, The Expositor’s Bible Commentary, ed. Frank Gaebelein (Grand Rapids: Zondervan, 1990), 434; Keil and Delitzsch, *Pentateuch*, 409. The original text of “life for life” is “soul (*nephesh*) for soul (*nephesh*)”.

⁵¹ Gleason L. Archer, Jr., *Encyclopedia of Bible Difficulties* (Grand Rapids: Zondervan, 1982),

crimes and comparable to the punishments for intentional crimes, such as Leviticus 24:19–20: “Anyone who injures their neighbor is to be injured in the same manner: fracture for fracture, eye for eye, and tooth for tooth. The one who has inflicted the injury must suffer the same injury.” Similarly, in Deuteronomy 19:16–21, if a malicious witness takes the stand to accuse someone of a crime, the false witness is to be punished as he intended to do to the victim; life for life, eye for eye, tooth for tooth. Both of these laws are directed toward intentional or planned crime; hence the severe punishment. In general, OT law is more lenient toward accidental crimes. Cities of refuge are established for those who accidentally kill another person and are pursued by an avenger, and the pursued one is not required to give life for life because the killing was unintentional (Num 35:9–34). However, according to Exodus 21:22–25, if a pregnant woman tries to stop a fight and one of the fighting men causes the woman’s child to be born prematurely, the injurer’s sin cannot go unpunished, even though the harm was done unintentionally.⁵² Whether the injury was suffered by the mother or the child, the offender is not allowed to flee to a city of refuge but must pay life for life, eye for eye.⁵³ This suggests that pregnant women had a special status in the Israelite community. Whenever a pregnant woman shows up around a fight, the fighting men need to stop immediately; otherwise, they would risk injuring the innocent and being sentenced to severe punishment. This law also implies that injury inflicted upon a pregnant woman is preventable (but was not prevented) and can be cautioned against (but caution was not exercised). Whereas one whose stray ax head kills an innocent person has the liberty to flee to a city of refuge, someone who commits the preventable sin of killing a pregnant mother or her child does

248.

⁵² Keil and Delitzsch, *Pentateuch*, 409. The primary event is the fight among men. The strike that falls upon the pregnant woman is a secondary accident.

⁵³ Because the injury could have been inflicted upon the mother or the child, “tooth for tooth” might have referred to an injury to the mother’s teeth or oral cavity.

not have this option. This offers another glimpse into the righteousness and fairness of God's law.

Suppose some scholars disagree with the analysis above and insist that one who causes miscarriage is punished with merely a fine, would the argument prove that the Bible did not regard fetuses as persons? It would not, for two reasons. First, personhood cannot be inferred based solely on an isolated punishment clause in Mosaic laws without reference to the whole biblical context. For example, the same chapter (Exod 21:21) states that one who strikes and accidentally kills a slave is not subject to the death penalty; however, this law does not prove that slaves are not persons, only that slaves had a low social status in the ancient Israelite community. Second, in terms of severity, accidentally causing a miscarriage is vastly different from intentionally murdering a fetus.⁵⁴ Even today, accidental killing might only result in a few years in prison, and less severe accidental crimes may only result in a fine; in contrast, a planned murder would result in a much heavier sentence. Hence, just because someone who accidentally kills another is spared from a death sentence does not mean the victim was not a person; the lighter punishment merely indicates the accidental nature of the crime. However interpreted, Exodus 21:22–23 does not undermine the personhood of a fetus; in fact, it underscores the importance of the lives of pregnant women and fetuses in the view of the OT law. Whether a child survived a premature birth or not, it was protected by this law.

One might also ask: Do we still need to follow this Mosaic law today? Or did the law only apply to Israelites in the OT era? The response can be found in Jesus's words: "Do not think that I have come to abolish the Law or the Prophets; I have not come to abolish them but to fulfill them" (Matt 5:17). In his teachings, Jesus repeatedly

⁵⁴ Robert N. Congdon, "Exodus 21:22–25 and the Abortion Debate," *Bibliotheca Sacra* 146 (1989): 132–47.

emphasizes the principles of the Decalogue (Mark 10:19). He also quotes OT passages to summarize the spirit of the Law, which is to love God and love one's neighbors (Mark 12:29–31; Deut 6:4-5; Lev 19:18).⁵⁵ Although the days of the OT have passed, the commandment remains God's truth and thus continues to carry moral weight and authority in the NT. Even though the law of the OT is no longer observed literally, its principle remains the moral standard of believers in the NT and today, because it reflects the principles upon which God established moral standards for his people.⁵⁶ The principle of Exodus 21:22–23 is that God established a specific law to protect pregnant mothers and the children in their wombs; this principle is congruent to the overall spirit of Scripture. Those who hold that this verse does not apply to contemporary society cannot use this argument to reduce the personhood of a fetus.

Although this discussion is based on the premise that the fetus survived the premature birth, it does not exclude the possibility of its failure to survive. Since this is a case law, it is deliberately open-ended so it can be applied to a variety of similar cases. Its application is not limited to cases in which the child is born alive, nor is it limited to cases in which the fetus already has a "human form." Therefore, this discussion can be applied broadly: no matter how mature the fetus is, it is protected by this law as long as it is in its mother's womb.⁵⁷

A Quickened Fetus is a Person

The fetal movement of John the Baptist is vividly described in the Bible.

When Elizabeth heard Mary's greeting, the baby leaped in her womb, and Elizabeth

⁵⁵ Since the NT began, the law regarding divorce (Matt 19:8) has not remained in effect. However, in response to a Pharisee's question on divorce (Matt 19:24), Jesus affirms God's establishment in Genesis 2:24.

⁵⁶ Walter C. Kaiser, Jr., "The Law as God's Gracious Guidance for the Promotion of Holiness," *Five Views on Law and Gospel*, ed. Stanley Gundry (Grand Rapids: Zondervan, 1996), 198.

⁵⁷ Frame, *Doctrine of the Christian Life*, 721.

was filled with the Holy Spirit. In a loud voice she exclaimed: ‘Blessed are you among women, and blessed is the child you will bear! But why am I so favored, that the mother of my LORD should come to me? As soon as the sound of your greeting reached my ears, the baby in my womb leaped for joy. (Luke 1:41–44)

When the angel Gabriel tells Mary that her relative Elizabeth is pregnant with a boy, he refers to the boy as *huion*, a masculine noun. This implies that John was not a part of his mother’s feminine body.⁵⁸ Later, Elizabeth refers to the child in her womb as *brephos* (baby), a noun also used to refer to a child already born.⁵⁹ This shows that the NT’s authors received the same revelation as the OT’s authors, that a fetus in its mother’s womb is as much a person as a born infant.

Because Elizabeth was filled with the Holy Spirit, her exclamation was much more than an ordinary description of fetal movement.⁶⁰ She said the baby in her womb leaped “for joy;” from this we know that the unborn John not only leaped, but leaped with delightful emotion. The Greek text reads, “*eskirtesen agalliasei to brephos en te koilia mou*” (leaped in gladness the baby in the womb of mine).⁶¹ This verse echoes the prophecy of the angel in Luke 1:15, which states that John the Baptist will be filled with the Holy Spirit, even in his mother’s womb. Non-person objects cannot leap “for joy.” What this quickening reflects, therefore, is the joyful response of an unborn person.

An Unformed Embryo is a Person

For you created my inmost being; you knit me together in my mother’s womb. I praise you because I am fearfully and wonderfully made; your works are wonderful,

⁵⁸ Johann Albrecht Bengel, “Commentary on Luke 1:36,” *Johann Albrecht Bengel’s Gnomon of the New Testament*, 1897, <https://www.studylight.org/commentary/luke/1-36.html/>. Bengel thinks it was remarkable that the angel informed Mary of the sex and age of Elizabeth’s unborn child, even when none of Elizabeth’s other relatives knew of the pregnancy.

⁵⁹ *Brephos*, a neuter Greek noun, appeared eight times in the New Testament: Luke 1:44, 2:12, 2:16, 18:15; Acts 7:19, 2 Tim 3:15, 1 Pet 2:2.

⁶⁰ Leander E. Keck, *Luke – John*, in vol. 9 of *The New Interpreter’s Bible* (Nashville: Abingdon, 1998), 54–55.

⁶¹ Alfred Marshall, *The Interlinear NIV Parallel New Testament in Greek and English* (Zondervan, 1976), 223.

I know that full well. My frame was not hidden from you when I was made in the secret place, when I was woven together in the depths of the earth. Your eyes saw my unformed body; all the days ordained for me were written in your book before one of them came to be. (Ps 139:13–16)

Psalm 139:16 is probably the only passage in the Bible that mentions an embryo. In the Hebrew text, “my unformed body” is *golem*, a term referring to an embryo that is so young that it does not yet have a distinct shape.⁶² Davis describes Psalm 139:13–16 as a “divinely inspired ultrasound” that allows the readers to glimpse into the womb and watch the embryo mature.⁶³ Moreover, the text speaks of God’s relationship with this embryo.

First, God creates this embryo. Verse 13 begins with an emphasized “you” (*attah*). The expression “you created” underscores God’s omnipotence, which continues the theme of his omniscience described in verse 2, “you know.” This creation in verse 13 includes the creation of the soul (inmost being) and the body.⁶⁴ The original verb *qanah* describes a creation by God. “Inmost being” (*kilyah*) means “kidney” in the original language and represents all internal organs (translated to “inward parts” in RSV) or the soul. In verse 13, the psalmist used the verb *sakak* (to weave) to depict God’s act of creation.⁶⁵ “The depths of the earth” is a poetic metaphor for deepest concealment, which refers to the hiddenness of the womb.⁶⁶ Through this verse, the poet points out that even

⁶² John Jefferson Davis, “The Moral Status of the Embryonic Human: Religious Perspectives.” *Ethics & Medicine* 22, no. 1 (Spring 2006): 12. Based on Babylonian Talmud, *golem* refers to human embryos of approximately less than forty days of age.

⁶³ Davis, “Embryonic Human,” 11.

⁶⁴ Willem A. VanGemeren, “Psalms,” in *Psalms, Proverbs, Ecclesiastes, Song of Songs*, The Expositor’s Bible Commentary, ed. Frank E. Gaebelain (Grand Rapids: Zondervan, 1991), 838.

⁶⁵ Heber F. Peacock, *A Translator’s Guide to Selected Psalms* (London: United Bible Societies, 1981), 140.

⁶⁶ Derek Kidner, *Psalms 73–150*, Tyndale Old Testament Commentary (Downers Grove, IL: InterVarsity, 1980), 466.

when he was still a tiny embryo, God was already pouring onto him the love and tender care that will continue throughout the poet's life.⁶⁷

Second, God watches over this embryo. In verse 16, the statement "Your eyes saw my unformed body" has significant theological implications. "God's eyes" or "God sees" not only refers to vision but also to the vigilance and care exercised upon a covenant (see Deut 11:12, Ps 101:6, Jer 24: 6, Gen 16:13, Exod 3:17, 1 Kgs 9:3).

John Stott analyzes Psalm 139 as follows: (1) The creation (like molding clay) and construction (like weaving cloth) of a human in his mother's womb are the divine works of God. (2) Our lives are continuous, so when David traces back to the wondrous creation of his body before he was born, he is filled with awe and gratefulness. (3) Even when we were still in our mother's wombs, God already established communion with us. Just like a joyous parent watching an unborn child on an ultrasound screen, God began to love us and prepare for us far before we were born, far before we became aware of this preparation.⁶⁸

Psalm 139 shows that even at the embryonic stage, God had already established a relationship with the individual. The Bible never depicts such an intimate relationship between the Creator and the created world other than humans. This means the intimate relationship is reserved for God and "persons." In Psalm 139, David refers to the embryo with the first-person pronoun, "me."⁶⁹ "Me" refers to "self," which is the most logical description of a continuous subject. This implicit description of one's continuous self-identity is a recurrent pattern in Scripture.⁷⁰ From David's perspective: if

⁶⁷ VanGemenen, "Psalms," 838.

⁶⁸ Stott, *Decisive Issues*, 315–16.

⁶⁹ When Job described himself and his servants as before birth, he used the first-person pronoun "me" and the third-person pronoun "them," respectively. Job 10:11; 31:13–15.

⁷⁰ Gen 25:22, 38:27; Job 1:21, 3:3,11, 10:18–19, 31:15; Isa 44:2, 24, 49:5; Jer 20:14–18, Hos 12:3. Richard L. Ganz, ed. *Thou Shalt Not Kill: The Christian Case against Abortion* (New Rochelle, NY:

the unformed “I” in my mother’s womb was not yet “I”, why would “I” give thanks on behalf of that unformed object devoid of identity? This is the reason Adam does not need to give thanks on behalf of dust: although Adam came from dust, dust is not Adam. In contrast, when “my” life began, although “I” did not yet have a mature form, “I” had already been fearfully and wonderfully made. From the relationship between humans and God, as well as the pronouns used in the passage, the text suggests that even before an embryo develops into mature human form, it is already a person in the eyes of God.

Personhood Begins at the Moment of Conception

This section will examine two scriptural examples which are relevant to the personhood of an embryo at the moment of conception.⁷¹

Samson

The angel of the LORD appeared to her and said, “You are barren and childless, but you are going to become pregnant and give birth to a son. Now see to it that you drink no wine or other fermented drink and that you do not eat anything unclean. You will become pregnant and have a son whose head is never to be touched by a razor because the boy is to be a Nazirite, dedicated to God from the womb. He will take the lead in delivering Israel from the hands of the Philistines. (Judg 13:3–5)

Samson is the dramatic final character of the fallen cycle in the book of Judges. Hebrews 11:32 lists him as part of the “cloud of witnesses” along with the judges Gideon, Barak, and Jephthah. In Samson’s days, the Philistines had oppressed the Israelites for forty years—twice the time of King Jabin’s reign over Israel.⁷² But this time, even though the Israelites do not cry out to God, God actively raises up salvation.

Arlington House, 1978), 49.

⁷¹ C. E. Cerling, Jr., “Abortion and Contraception in Scripture.” *Christian Scholars Review* (Fall 1971): 56. “Behold, children are a heritage from the Lord, the fruit of the womb a reward.” (Ps 127:3, ESV) Here, the “fruit of the womb” acts as a synonym of “children.” Cerling comments, “No one who reads the Old Testament will deny that the children of Israel thought that children were a direct gift from God.” Lest we question the timing of the divine gift, the very words “fruit of the womb” point to the time when it is given: at conception.

⁷² 2 Sam 8:1; Judg 4:3; 13:1.

“Nazirite” (*nazir*) means “set apart” or “consecrated.” The Bible only mentions Nazirites in two other passages (Num 6:1–21; Amos 2:11–12). Nazirites need to abide by three regulations: they must maintain a clean diet (no fermented drinks or unclean meats), avoid touching corpses, and never shave. Most Nazirites begin this commitment with a vow and eventually end the commitment, but not only was Samson appointed a Nazirite by God, he was to be a Nazirite “from the womb” until his death. “From the womb” (*min-ha-beten*)⁷³ could mean before Samson’s birth or right after his birth.⁷⁴ Either way, it would have been before Samson was able to make the decision.

The angel of the LORD asks Samson’s mother to abide by the rules of Nazirites from the beginning of her pregnancy. Twice, he instructs her to “drink no wine or other fermented drink” and “not eat anything unclean” (Judg 13:4,14). There are two possible explanations for such strict regulations: (1) Through abstaining from unclean foods, Samson’s mother makes her body ceremonially clean for the sake of the son in her womb. This explanation is plausible, but not the best. To shed light into this argument, we can contrast the case of Samson with the case of John the Baptist. Samson’s mother was ordered to abstain from fermented drinks ever since she became pregnant with Samson, whereas John the Baptist was never to take wine or other fermented drink only after he was born (Luke 1:15); no similar regulation was imposed upon his mother. Suppose that the ceremonial cleanliness of the mother was reflected upon the baby in her womb, it seems more reasonable to have instructed John’s mother to abide to ceremonial regulations throughout her pregnancy, since John the Baptist prepared the way for Jesus Christ, was filled with the Holy Spirit from his mother’s womb, and was called the greatest among those born of women (Matt 11:11). However, John’s mother was not

⁷³ Rudolf Kittel, *Biblica Hebranca* (American Bible Society, 1950), 389. “For the child shall be a Nazirite unto God from the womb.” (Judg 13:5b, KJV)

⁷⁴ Kissane, *Isaiah*, 125; Freehof, *Isaiah*, 253; Keil and Delitzsch, *Isaiah*, 468. *Min-ha-beten* (“from the womb”) may be translated alternatively to “in the womb.”

required to refrain from fermented drinks during her pregnancy; only Samson's mother was. This implies that the focus of this abstinence was not on the general ceremonial cleanliness of the mother, but on God's specific calling to the child in her womb. Samson's mother was required to refrain from drinks because Samson was to be a Nazirite, whereas John's mother did not receive the same instructions because John was not to be a Nazirite.⁷⁵ (2) Thus, it is more reasonable to say that Samson was in fact appointed a Nazirite at the moment of conception,⁷⁶ and that in order for him to comply with the consecration rules of Nazirites, his mother had to impose strict regulations on her diet, to avoid ceremonial uncleanness of the embryonic Samson in her womb.⁷⁷ One must be a person to be a Nazirite. Therefore, the Nazirite regulations that begin during Samson's embryonic days assume Samson's personhood begins at the moment of his conception.

David

For I know my transgressions, and my sin is ever before me. Against you, you only, have I sinned and done what is evil in your sight, so that you may be justified in your words and blameless in your judgment. Behold, I was brought forth in iniquity, and in sin did my mother conceive me. Behold, you delight in truth in the inward being, and you teach me wisdom in the secret heart. (Ps 51:3–6, ESV)

⁷⁵ James Hastings, "Nazirite," *Hastings' Dictionary of the New Testament*, 1906–18. <https://www.studylight.org/dictionaries/hdn/n/nazirite.html>. Some hold that John the Baptist was a Nazirite, but the biblical evidence supporting this view is insufficient. John is never referred to as a Nazirite in Scripture. Scripture never points out whether he has long hair, the most prominent trait of a Nazirite. Rather, John is best known for conducting baptisms, a role that is usually irrelevant to Nazirites (Num 6:1–21). Scripture shows that John's primary role is the forerunner of the Messiah (Matt 11:10; Luke 1:76). In the NT, he is often mentioned as a prophet (Matt 11:9, 14:5, 21:26; Mark 11:32; Luke 7:26) who is analogous to Elijah (Matt 17:12; Mark 9:13; Luke 1:17). James Hastings writes, "It cannot be accepted that he 'is described as a Nazirite for life (Luke 1:15). This verse describes him no more as a Nazirite than as an Essene, which some, as groundlessly, have held him to be."

⁷⁶ Cheryl J. Exum, "Promise and Fulfillment: Narrative Art in Judges 13," *Journal of Biblical Literature* 99, no. 1 (March 1980): 43.

⁷⁷ In comparison, John the Baptist is not a Nazirite; therefore, the dietary restrictions for Nazirites do not apply to Elizabeth when she is pregnant with John. The instructions for John's upbringing, including an abstinence from wine, are more likely to be guidelines for his education and preparation for prophethood, and less likely to be ceremonial rules that dedicate him to be a Nazirite.

David writes this psalm after the prophet Nathan rebukes him for sinning with Bathsheba.⁷⁸ Illuminated by the Holy Spirit, he confesses to the LORD the sorrow and regret deep within his heart. Beginning from *ki* (for) in verse 3, the psalm proceeds as five parallel statements that are preceded and succeeded by expressions of acknowledgement (vv. 3, 6). Verses 3 and 4a are both confessions of sin; verses 5 and 6 both begin with “behold.” Between these two couplets lies 4b, a declaration of the rightness and justification of God’s judgment.

The Holy Spirit enlightens David, enabling him to look deeply into the nature of sin. In these verses, he uses a variety of words to describe sin: transgression (*pasha*, 3b), mistake (2b, 3b, 5b contains the same root, *khata*), iniquity (*avon*, 5a), and evil (*ra*, 4). He speaks of his sinful actions in vv. 3, 4 and reflects upon his sinful nature in v. 5: “Surely I was sinful at birth, sinful from the time my mother conceived me.”⁷⁹ The Hebrew text of verse 5b “sinful from the time my mother conceived me” can be translated to “in sin my mother conceived me.” David is not referring to his mother’s sin but his own. He is saying that he was sinful from the moment of his conception, sinful even before he committed any acts of sin.⁸⁰ John Calvin writes that when David examines his own origin, he sees that he was already corrupted in his mother’s womb.⁸¹ But instead of blaming his parents or defending himself, he confesses before the throne of God that his sin was present since his conception,⁸² that he had been a sinner from the first

⁷⁸ 2 Sam 12:9–22.

⁷⁹ John Goldingay, *Psalms 42–89*, Psalms 2, Baker Commentary on the Old Testament Wisdom and Psalms (Grand Rapids: Baker Academic, 2007), 127–29.

⁸⁰ Peacock, *Selected Psalms*, 70.

⁸¹ John Calvin, *Commentary on the Book of Psalms (Psalms 36–92)*, Calvin’s Commentaries, trans. James Anderson (Grand Rapids: Baker, reprint 1993), 5:290–91.

⁸² Hans-Joachim Kraus, *Psalms 1–59: A Commentary* (Minneapolis, Augsburg, 1988), 503.

moment of his existence up to the day he wrote the psalm.⁸³

John Frame aptly summarizes: “Sin in Scripture is a personal quality, never an impersonal one. It is never a property of things, only of persons.”⁸⁴ David calls himself by the first-person pronoun “I” and the unborn “me” a “sinner,” a sinner whose identity can be traced back to the moment of his conception. One can be sinful only if one is a person. Hence, this passage presupposes David’s personhood from the moment of conception.

Wennberg argues that Psalm 51:5 does not demonstrate the full humanity of the unborn, because David is just “being formed,” not a full person in the verse.

Wennberg says of the claim on humanity:

That would be to confuse “formation/creation” of a thing with the “completion/existence” of that thing. The fact is that an entity can be on the way to becoming a particular thing without being that thing . . . If a butterfly is being formed in a cocoon, it does not follow that there is a butterfly there (rather than a caterpillar or something betwixt or between).⁸⁵

Beckwith rightly points out that Wennberg commits a hermeneutical fallacy, because the distinction between the human person and the human being is not a biblical concept but one created by contemporary philosophers. Wennberg fails to interpret the Bible within the intellectual and broadly cultural framework of the Bible itself and uses instead a foreign frame of reference. Beckwith adds:

. . . the insect that is in the process of becoming the butterfly and will eventually be one is still the same insect that was once a caterpillar. In other words, there is underlying ontological unity to the being in question that makes possible accidental changes of the same substantial being . . . Likewise, the being at conception is the same person who will become the infant, the child, the adolescent, the adult, and maybe even a theologian. In any event, it is clear that passages such as Ps 51:5 are describing a person who is in the process of becoming, not a thing that is in the

⁸³ J. J. Stewart Perowne, *The Book of Psalms: A New Translation, with Introductions and Notes Explanatory and Critical*, 7th ed. (London: George Bell and Sons, 1890), 429–33.

⁸⁴ Frame, *Doctrine of the Christian Life*, 722–23.

⁸⁵ Wennberg, *Life in the Balance*, 62–63.

process of becoming a person . . .⁸⁶

Conclusion

Surveying biblical data, the weight of evidence is that the Bible considers each of these examples to be individuals, fully human persons, and treats them as such. The strength of evidence for such notion may differ in various passages, but the overall picture indicates that scriptural authors generally assume full personhood of the unborn. This view is consistently observed in multiple passages in both the OT and the NT. The notion derived directly by exegesis from Scripture is so self-explanatory that such view has been upheld in church tradition since the second century.⁸⁷

Ethical and legal implications of the conclusion are significant. The Sixth Commandment clearly states that “You shall not murder.” Since all fetuses and embryos are regarded as full persons in Scripture, their lives are under the protection of God’s moral laws. Accordingly, church history includes a long and rich tradition against the practice of abortion.⁸⁸ Beckwith comments, “It is safe to say that the interpretation of the Bible through the eyes of the early Church will give contemporary scholars a better idea of what the Bible teaches about prenatal life than relying on contemporary philosophical invention that are often read back into the Biblical text.”⁸⁹

Biblical data not only portray a vivid ontological picture for persons, they further enrich the modern concept of personhood beyond an abstract philosophical notion. From a scriptural perspective, personhood entails an intimate relationship with God from the moment of conception. Davis writes: “God’s special dealings with human

⁸⁶ Beckwith, “Brave New Bible,” 493–95.

⁸⁷ David Jones, “A Theologian’s Brief: On the Place of the Human Embryo Within the Christian Tradition and the Theological Principles for Evaluating its Moral Status.” *Ethics & Medicine* 17, no. 3 (Fall 2001): 143–54.

⁸⁸ Jones, “A Theologian’s Brief,” 143–154.

⁸⁹ Beckwith, “Brave New Bible,” 493–95.

beings can long precede their awareness of a personal relationship with God. God deals with human beings in an intensely personal way long before society is accustomed to treat them as persons in the ‘whole sense.’”⁹⁰ God knows the unborn intimately and personally, as he knows any other person.⁹¹ Such a one-sided relationship long before the baby could respond exists not only horizontally (with the baby’s family) but also vertically (with God). In Scripture, God not only intimately knows the unborn babies in person, he also builds individual relationships with them.⁹² Ultimately, it is God’s conscious, loving commitment to the fetuses that confers personhood upon the tiny beings. If God knows and cares for these unborn persons, what mortal has the right to harm their lives?

⁹⁰ Davis, *Abortion and the Christian*, 43, quoted in Ronald H. Nash, *When A Baby Dies: Answers to Comfort Grieving Parents* (Grand Rapids: Zondervan, 1999), 114.

⁹¹ Geisler, *Christian Ethics*, 146–48.

⁹² Stanley Rudman, *Concepts of Person and Christian Ethics* (Cambridge: Cambridge University Press, 1998), 171–89. Rudman addresses the relational aspect of personhood, including the personhood of fetuses.

CHAPTER 6

AN INTEGRATED RESPONSE: MEDICAL, BIOETHICAL, AND THEOLOGICAL PERSPECTIVES

Over several centuries, *person* and *human* were interchangeable terms.¹ But in today's society, not all humans are considered to be persons. Specifically, fetuses and embryos—even though biologically human—are not universally seen as or treated as persons. Instead, countless political and ethical debates have been raised over the matter, at the center of which lies this question: *When is a biological human a person?* In Hui's words: "No one will deny that the entity so formed is indeed 'human' . . . But the crucial question we must ask is whether these biologically living human entities are entitled to the right to life."² Numerous theories have been devised in response to this question, as people attempt to use philosophy and science to identify the moment when a human embryo becomes a person. Based on conclusions from the previous chapters, I will integrate medicine, bioethics, and systematic theology, to examine and respond to key "dehumanizing" views that undermine embryonic personhood. I will begin by addressing theories that relate to late-stage fetuses and chronologically regress toward theories that relate to early-stage embryos.

Viable Apart from the Womb (Around 23–24 Weeks Gestational Age)

In the later stages of a pregnancy, not only does the fetus have a higher rate of

¹ Edwin C. Hui, *At the Beginning of Life: Dilemmas in Theological Bioethics* (Downers Grove, IL: InterVarsity, 2002), 35.

² Hui, *Beginning of Life*, 58–59.

viability outside the womb, an abortion of the fetus also presents a larger risk to the pregnant woman. Because of this, many countries have laws that limit late-stage abortions. This, of course, requires lawmakers to settle on a definition of “late-stage.” In the 1973 lawsuit *Roe v. Wade*, the United States Supreme Court ruled that a fetus’s viability, or its ability to survive outside the womb, should serve as the chronological threshold for legalized abortion. To distinguish between viable and non-viable fetuses, the court divided a fetus’s age into two segments. It was decided that if the fetus was younger than 28 weeks, it could not survive outside the womb. The court labeled the young fetus as “potential human life,” and during this period, the pregnant woman and her physician are allowed by the court to abort the fetus. Conversely, fetuses over 28 weeks old were considered by the court to be viable outside the womb; by this reasoning, the court reserved the authority to prohibit abortions after 28 weeks of gestation unless the pregnancy threatened the mother’s life or health.³

The court’s ruling is a well-known example of determining fetuses’ personhood based on their viability.⁴ Upon examination, however, the reasoning behind this method quickly falls apart. In 1973, when *Roe v. Wade* took place, a baby born at 23 weeks of pregnancy was unlikely to survive. But as years went by and medicine advanced, the survival rate of premature babies also grew. By 1990, a baby born at 23

³ Harry A. Blackmun and the Supreme Court of the United States, *U.S. Reports: Roe v. Wade*, 410 U.S. 113, 1972, Periodical Retrieved from the Library of Congress, <https://www.loc.gov/item/usrep410113/>; L. Helman and J. Pritchard, *Williams Obstetrics*, 14th ed., 1971, 493, quoted in Victor G. Rosenblum and Thomas J. Marzen, “Strategies for Reversing *Roe v. Wade* through the Courts,” *Abortion and the Constitution: Reversing Roe v. Wade Through the Courts*, ed. Dennis J. Horan, Edward R. Grant, and Paige C. Cunningham (Washington, DC: Georgetown University Press, 1987), 199. The Supreme Court’s ruling states: “viability is usually placed at about seven months (28 weeks) but may occur earlier, even at 24 weeks.” The court cites the *Williams Obstetrics* textbook, which says “attainment of a [fetal] weight of 1,000 g [or a fetal age of approximately 28 weeks gestation] is . . . widely used as the criterion of viability.”

⁴ C. Ben Mitchell, Mark T. Coppenger, Chad Owen Brand, Denny Burk, et al., “The SBJT Forum,” *The Southern Baptist Journal of Theology* 13, no. 2 (2009): 71. Coppenger comments, “For decades now, the courts have treated the contents of the womb as mere tissue. For that reason, as Frederica Mathewes-Green has noted, everyone born in America since 1973 is a survivor.”

weeks of pregnancy was likely to survive; in fact, in the 1992 case *Planned Parenthood v. Casey*, the U.S. Supreme Court redefined fetal viability as 23–24 weeks of gestational age instead of 28 weeks.⁵ Here, the viability argument presents an absurd implication: that a 23-week-old baby born in the ‘90s is a person, but a 23-week-old baby born a decade earlier or in a medically underserved village is not a person. This logical fallacy reveals that when a fetus’s personhood rests on its ability to survive outside the womb, the definition of “personhood” becomes inconsistent and easily altered by extrinsic factors like time and location.⁶ The court’s usage of time thresholds creates this logical problem because in reality, a fetus’s life is continuous and cannot be arbitrarily segmented into weeks. A time marker like “23 weeks” may be helpful for scheduling prenatal appointments but is vastly inadequate for determining a fetus’s personhood. Magnuson points out that *fetus*, which is Latin for *offspring*, “[denotes] the stage, not the status of the human being . . . the unborn child is not merely a *potential* human being, but an *actual* human being in an early stage of development in comparison to the newborn.”⁷

As mentioned in chapter 5, OT law grants special protection to pregnant women and the fetuses in their wombs, regardless of whether the fetus is able to survive a premature birth. This law shows the Scriptures’ consistent respectful attitude toward life. It is contrary to biblical principles to determine a fetus’s right to life based on its viability outside of the womb. Charles D. Dern summarizes: “One’s ability to survive in an unnatural environment (as the womb is the natural environment for a fetus) can in no way

⁵ Sandra Day O’Connor, Anthony M. Kennedy, David H. Souter, and the Supreme Court of the United States, *U.S. Reports: Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833, 1991, Periodical Retrieved from the Library of Congress, <https://www.loc.gov/item/usrep505833/>.

⁶ “Viability relates only to the fetus’s location and dependency, not to its essence or personhood.” Scott B. Rae and Paul M. Cox. *Bioethics: A Christian Approach in a Pluralistic Age* (Grand Rapids: Eerdmans, 1999): 164.

⁷ Kenneth Magnuson, “Ethical and Moral Reasoning,” in *Faith and Learning: A Handbook for Christian Higher Education*, ed. David. S. Dockery (Nashville: B&H Academic, 2012), 58. Italics in original.

be a measure of one's humanness."⁸ It is absurd to claim that on the day a fetus can survive outside the womb, it is more human or person than it was the day before. The attempt to determine the value of an unborn human life by an extrinsic timeline is therefore unjustifiable.

Quickening (Around 16–20 Weeks Gestational Age)

Quickening refers to the moment when a pregnant woman first feels fetal movement within her womb. For most pregnant women, quickening occurs between 16 to 20 weeks of pregnancy. First-time mothers tend to notice the fetal movement later, whereas experienced mothers may detect it earlier. Throughout the course of pregnancy, fetal movement increases in frequency and intensity. In late pregnancy, family members are also able to feel fetal movement by placing their hands on the mother's belly.

Before there was any medical technology to observe the activity of a fetus, people used quickening to mark the beginning of a human's life.⁹ Thomas Aquinas even inferred that the moment of quickening is when the fetus is ensouled and becomes a person.¹⁰ However, this theory was disproven when ultrasound imaging revealed that fetuses actually begin moving much earlier in pregnancy, long before the most experienced mother can detect fetal movement. In defining personhood through fetal movement, the subjective sensation of the mother is misconstrued as an objective time point when the fetus becomes a person.¹¹

⁸ Charles D. Dern, "Speaking Clearly About Early Life: Confusion Over Medical Terms," *Ethics and Medics* 34, no. 3 (March 2009): 4.

⁹ Christopher Kaczor, *The Edge of Life: Human Dignity and Contemporary Bioethics* (Dordrecht: Springer Netherlands, 2005), 27.

¹⁰ Katherine Brind'Amour, "Roman Catholic Church Quickening," Embryo Project Encyclopedia, last modified November 11, 2007, <http://embryo.asu.edu/handle/10776/1739>; Brian Kranick, "St. Thomas Aquinas & the Culture of Life," Catholic Exchange, last modified January 26, 2018, <https://catholicexchange.com/st-thomas-aquinas-culture-life>.

¹¹ Nicholas Kristof, "Meet Dr. Willie Parker, a Southern Christian Abortion Provider," New

Chapter 5 discusses a case of fetal movement described in the Bible—namely, that of John the Baptist. The scriptural context reveals that when John was still in his mother’s womb, he was already a person. It is not only unscientific but also unbiblical to judge a fetus’s personhood by an extrinsic standard such as the mother’s sensation of fetal movement.

“Unformed” Embryo (Around 7–8 Weeks Fetal Age)¹²

The earliest abortion laws in the first-century church made no distinction between “unformed” and “formed” embryos.¹³ This changed in the fourth century, when Augustine read the inaccurately translated Exodus 21:22 in the Septuagint (LXX)¹⁴ and concluded that it is a lesser sin to abort an unformed embryo, who does not yet have a “human form,” than to abort a formed embryo, who has acquired a recognizable “human form.”¹⁵ This mistake influenced the seventh-century Anglo Saxon and Celtic

York Times, last modified May 6, 2017, <https://www.nytimes.com/2017/05/06/opinion/sunday/meet-dr-willie-parker-a-southern-christian-abortion-provider.html/>.

¹² *Gestational age* is the length of a pregnancy starting from the pregnant woman’s last menstrual period (LMP), whereas *fetal age* is the age of the growing fetus. Gestational age is approximately two weeks ahead of fetal age.

¹³ Spyros Troianos, “The Embryo in Byzantine Canon Law,” Biopolitics International Organisation, last modified April 22, 2013, <https://biopolitics.gr/biowp/wp-content/uploads/2013/04/VOL-III-ha-troianos.pdf>.

¹⁴ G. R. Dunstan, “The Human Embryo in the Western Moral Tradition,” in *The Status of the Human Embryo* (London: King Edward’s Hospital Fund, 1988), 43; Allan Fitzgerald and John Cavadini, *Augustine Through the Ages: An Encyclopedia* (Grand Rapids: Eerdmans, 2009), 1. LXX erroneously translates Exodus 21:22 as follows: “And if two men strive and smite a woman with child, and her child be born imperfectly formed, he shall be forced to pay a penalty: as the woman’s husband may lay upon him, he shall pay with a valuation. But if it be perfectly formed, he shall give life for life.”

¹⁵ Augustine, “Questions on Exodus,” 21.80; Augustine, *On Marriage and Concupiscence*, 1.15; Ambrose, *Hexameron*, 5.18; Jerome, *Epistle 22*, 13; Chrysostom, “Homily 24”, Epistle to the Romans. David Jones, “A Theologian’s Brief: On the Place of the Human Embryo Within the Christian Tradition and the Theological Principles for Evaluating its Moral Status.” *Ethics & Medicine* 17, no. 3 (Fall 2001): 143–54. Overall, Augustine still considers abortion a serious mistake. Other church fathers at the time, including Ambrose, Jerome, and Chrysostom, assert that abortion is, like the murder of children, against the will of the Creator.

Penitentials, as well as the eleventh-century Latin Church, whose canon law penalized some abortions more severely than others, based on the appearance of the aborted fetus. Nevertheless, “there was no suggestion that the unformed foetus was expendable. The unformed foetus continued to be regarded as sacrosanct.”¹⁶

This view of graded moral status between the formed and the unformed reflects Aristotle’s biology and philosophy, which were heavily utilized by Thomas Aquinas during the medieval ages.¹⁷ The Aristotle-Aquinas theory explains that if a man’s sperm (“seed”) remains in a woman’s womb for seven days after intercourse, the sperm will interact with the blood in the womb and form a living being, and that it takes a male embryo forty days and a female embryo ninety days to become a human.¹⁸ Regarding the embryo’s soul, Aquinas theorizes that each embryo possesses a vegetative soul from its beginning, develops a sensitive soul in the womb, and finally receives a rational human soul.¹⁹ According to the Aristotle-Aquinas theory, only at the final step when an embryo receive a human soul from God (or ensouled) does it become a person.²⁰

This error, rooted in inaccurate translations and ancient biology, remained unchallenged for more than twenty centuries until K. E. von Baer, a nineteenth-century German embryologist, discovered that embryos are in fact made by the union of sperm

¹⁶ Jones, “A Theologian’s Brief,” 143–54.

¹⁷ Mark Coppenger, *Cases and Maps: A Christian Introduction to Philosophy* (Eugene, OR: Wipf and Stock, 2019), 135. Aquinas builds his theology from the blocks of Aristotle’s philosophy and biblical revelation.

¹⁸ Aristotle, *Historia Animalium*, 7.3; Thomas Aquinas, *The Summa Contra Gentiles*, 2.89.

¹⁹ Thomas Aquinas, *The Summa Contra Gentiles*, 2.89; Jason T. Eberl, “The Beginning of Personhood: A Thomistic Biological Analysis,” *Bioethics* 14, no. 2 (April 2000): 134–57.

²⁰ Aquinas, *Summa Theologica*, 3.16.12; Jason T. Eberl, “Aquinas’s Account of Human Embryogenesis and Recent Interpretations,” *The Journal of Medicine and Philosophy* 30, no. 4 (August 2005): 380. Aquinas thinks that all human beings are persons but that an embryo is not yet a human being until it becomes ensouled with a rational soul.

and ova.²¹ The advance in medical science gradually displaced ancient biological misunderstandings and disposed of the classification of embryos as unformed or formed. In 1869, Pope Pius IX formally enacted the *Apostolicae Sedis Moderationi*, which annulled the distinction between aborting a formed embryo and an unformed embryo, acknowledging that an embryo's form had no bearing on whether it had a human soul.

But even today, many people assert that the early-stage embryo looks nothing like a human and need not be acknowledged as a human.²² This claim, which Davis calls "ethnocentrism," assumes that personhood presupposes a postnatal form.²³ I will argue that the so-called "form" of the embryo is merely an external factor that has little bearing on its personhood.

There are obvious faults in judging an embryo's personhood by its appearance. First, this method ignores nuances that are invisible to the naked eye. Scientists have long been using more precise instruments than the naked eye to distinguish one organism from another; biologists today need only a microscope and dye to examine a cell's chromosomes and determine whether or not it is a human cell. Judging a being's personhood only by its exterior "form" is an imprecise and outdated practice that harkens back to the Middle Ages. Second, the definition of the "human form" is subjective and arbitrary. The first European settlers in Australia thought the aboriginal people were not humans, simply because the aboriginals looked too different from the humans they previously knew.²⁴ In retrospect, we know that the aboriginals were just as human as the settlers were; the problem was that the settlers had a limited understanding

²¹ Scott F. Gilbert, *Developmental Biology*, 7th ed. (Sunderland, MA: Sinauer, 2003).

²² Robert P. George and Christopher Tollefsen, *Embryo: A Defense of Human Life* (New York: Doubleday, 2008), 159.

²³ Davis, "Embryonic Human," 17.

²⁴ Judith Becker, ed., *European Missions in Contact Zones: Transformation Through Interaction in a (Post-)Colonial World* (Göttingen, Germany: V&R Academic, 2015), 133.

of what a human ought to look like. Similarly, those who assert today that some embryos “do not look like humans” have an overly narrow definition of what a human ought to look like. By biological design, a three-month-old infant has very different body proportions and physiology from those of a three-year-old child or a thirty-year-old adult. Likewise, a three-week-old embryo ought to look less like an adult and more like a three-week-old embryo.²⁵ The so-called “unformed” appearance is actually how the normal human being ought to look like during that stage of growth. Davis summarizes: “this objection assumes that personhood presupposes a postnatal form. A little reflection, however, will show that the concept of a ‘human form’ is a dynamic and not a static one. Each of us, during normal growth and development, exhibits a long succession of different outward forms.”²⁶

King David, inspired by the Holy Spirit, said in Psalms 139:16, “Your eyes saw my unformed body; all the days ordained for me were written in your book before one of them came to be.” God sees and cares for an embryo, even if he or she has yet to resemble a mature human being. No mortal has the authority to end such a life. When God built relationships with the Jacob, Samson, Jeremiah, John the Baptist, and Paul when they were still in their mothers’ wombs, the Bible never distinguished whether or not the embryos were “formed” at the time. “The Lord does not look at the things people look at. People look at the outward appearance, but the Lord looks at the heart.” (1 Sam 16:7) Since God does not judge by outward appearances, to use an embryo’s form to determine its personhood is contrary to God’s principles.²⁷

²⁵ Immanuel Chih-Ming Ke, *Fetus and Death Row Inmates: The Christian Idea of Man and Bioethics* (New Taipei: Chinese Christian Literary Mission, 2013) 22–23, 34. Immanuel Chih-Ming Ke calls this standard the “healthy adult manifesto” and asks: “What right do sinful adults have, to deny embryos and fetuses the right to live their pure and innocent lives?”

²⁶ John Jefferson Davis, *Abortion and the Christian* (Phillipsburg, NJ: P&R, 1984), 58–59.

²⁷ “But those who seemed to be the leaders—I say this because it makes no difference to me what they were; God does not judge by outward appearances—those leaders, I say, made no new

Embryo Develops a Heartbeat or Brainwaves (Around 3–6 Weeks Fetal Age)

Twenty-two or twenty-three days after conception, the embryo develops a heartbeat.²⁸ Forty-four days after conception, its brainwaves can be observed.²⁹ In common belief, a heartbeat and brainwaves represent life and consciousness. Thus, some have proposed that the presence of these vital signs makes an embryo a person.³⁰

Heartbeat

Usually, when a human's heartbeat stops, the human dies. Some people may thus reason that an embryo's first heartbeat marks the beginning of its life. However, I explained in chapter 2 that an embryo's biological life begins at conception, long before it develops a heartbeat. Current medical knowledge also reveals that the lack of a heartbeat does not always correspond to the lack of life. In fact, during the typical open-heart surgery, the surgeon would stop the patient's heartbeat—usually for several hours—

suggestions to me.” (Gal 2:6, GNB)

²⁸ Mark C. Fishman and Kenneth R. Chien, “Fashioning the Vertebrate Heart: Earliest Embryonic Decisions,” *Development* 124 (1997): 2099–117; Tim Mohun and Duncan Sparrow, “Early Steps in Vertebrate Cardiogenesis,” *Current Opinion in Genetics & Development* 7 (1997): 628–33; Keith L. Moore and T. V. N. Persaud, *The Developing Human: Clinically Oriented Embryology*, 6th ed. (Philadelphia: W. B. Saunders, 1998), 29; “Your Life Before Birth,” Vimeo video, 7:26, The Endowment for Human Development, accessed March 18, 2019, <https://www.ehd.org/your-life-before-birth-video/>. This refers to the embryo's first heartbeat, not the heartbeat first detectable by transvaginal ultrasound four weeks after conception.

²⁹ J. Goldenring, “Development of the Fetal Brain,” *New England Journal of Medicine* (August 26, 1982), 564; H. Hellegers, “Fetal Development,” in *Contemporary Issues in Bioethics*, ed. T. L. Beauchamp (Encino, CA: Dickenson, 1978), 194–99; “Your Life Before Birth,” The Endowment for Human Development.

³⁰ Hsiu-Chen Hsu-Yu, “Huashen Tongxue men Duiyu Shengming Lunli Yiti de Renzhi he Kanfa—Wenjuan Diaocha Jieguo zhi Zhaiyao [Summary of Survey Results—the Knowledge and Opinion of Students at China Evangelical Seminary on Bioethical Issues,]” China Evangelical Seminary, last updated December 2005, <http://www.ces.org.tw/main/action/message/2005-12/0512-d.htm/>; “Model Heartbeat Bill,” Heartbeat Bill, last modified April 2019, http://f2a.org/images/Model_Heartbeat_Bill_Apr._2019_version.pdf/. As described in the introduction of this dissertation, 6% of surveyed theological seminary students thought a human's life began when the fetus developed a heartbeat. Several states in the USA have adopted the “heartbeat bill,” which points to fetal cardiac activity as a marker of “an unborn human individual,” thus defining the beginning of the embryo's life by its heartbeat.

and have a machine carry out the heart's functions until the surgery is complete. This technology enables patients to survive surgeries like valve replacements and heart transplantations. Similar surgeries around the world continue to succeed and prove that hearts are replaceable organs, we ought to become receptive to the notion that a human, at the beginning of its development, can function without a beating heart. In other words, long before an embryo develops a heartbeat or a heart, its body is already capable of circulating blood and carrying out cellular respiration to keep the embryo alive.

Just as the presence of a heartbeat does not always indicate the presence of life (for example, the heart of a brain-dead patient may continue to beat), the lack of a heartbeat does not always indicate the lack of life. It is no longer reliable to use the beginning of a heartbeat to mark the beginning of an embryo's life or personhood.

Brainwaves

Brainwaves reflect the electrical potential of the cerebral cortex and may be related to rational thought. Those who judge an embryo's personhood based on the presence or absence of brainwaves usually support their arguments with one of two lines of reasoning.

The first reason is that since the cessation of brainwaves is a sign of brain death,³¹ the emergence of brainwaves, detectable by an electroencephalogram (EEG), appears to signify the beginning of life.³² Proponents of this view argue that since the entity in the womb will not generate brainwaves until the forty-fifth day after conception,

³¹ Ko Wen-je, "Siwang yu Naosi" [Death and Brain Death], *Journal of the Organ Donation Association R.O.C.* 3 (1994): 2. Brainwaves only reflect the function of the cerebral cortex, not of the midbrain, pons, or medulla oblongata.

³² Baruch Broday, *Abortion and the Sanctity of Human Life: A Philosophical View* (Cambridge, MA: MIT Press, 1975), 102; David Boonin, *A Defense of Abortion* (Cambridge: Cambridge University Press, 2003), 99.

it cannot be recognized as a human being before then.³³ However, this line of reasoning has two pitfalls. First, an adult's need for a brain is different from an embryo's need for a brain. When an adult undergoes brain death, the adult's organs will rapidly deteriorate, because the large and complex body of a human adult needs an intricate and powerful brain to sustain it. In contrast, an embryo's tiny body has no need for complicated cerebral functions; all it requires is a few early-stage brain cells that can produce electrical potential. Thus, the significance of brainwaves to an adult's body is not comparable to the significance of brainwaves to an embryo.³⁴ In Buratovich's words: "We should not say that the early embryo does not have a brain, but that it does not have a brain yet."³⁵ The second pitfall is a chronological fallacy. When an adult undergoes brain death, brainwaves will gradually cease as the adult progresses from life into death. In this case, the cessation of brainwaves is irreversible. In contrast, an embryo which had just become a living being produces brainwaves with an increasing intensity, and unless its life is cut short, it will continue to produce brainwaves for decades. Those who use brainwaves to determine personhood seem to suggest that terminating the growth of an early embryo is comparable to allowing the brain of an adult to die naturally, when in reality, these are two very different actions. Hui summarizes,

[In] the first trimester, the fetus has not reached the stage of maturity for functioning independently as a whole, and so the brain does not have to serve any integrative function yet, whereas at the other end of the life spectrum, when the brain ceases to function, the whole human organism ceases to function. There is no symmetry between the beginning and the end of life as far as the function of the brain is

³³ Roland Chia, *Biomedical Ethics and the Church: An Introduction* (Singapore: National Council of Churches of Singapore and Genesis Books, 2010), 137.

³⁴ Edwin C. Hui, "Jidutu Kan Shiguan Yinger Yu Rengong Shengzhi Keji De Lunli" [The Christian's Perspective on the Ethics of Test Tube Babies and Assisted Reproductive Technologies], in *Jidutu Yixue Lunli Xilie (6)—Buyunzheng Yu Rengong Shengzhi Keji Lunli* [The Christian Medical Ethics Series Vol. 6—Infertility and the Ethics of Assisted Reproductive Technologies], ed. Liming Chang (Taichung: Chinese Christian Medical Mission, 2010), 52.

³⁵ Michael A. Buratovich, *Stem Cell Epistles: Letters to My Students about Bioethics, Embryos, Stem Cells, and Fertility Treatments* (Eugene, OR: Cascade, 2013), 72.

concerned.³⁶

Brainwaves and Functionalism. Of those who use brainwaves to determine an embryo's personhood, the second group believes that the development of brainwaves is similar to the formation of a primitive streak.³⁷ The Belgian priest Joseph F. Donceel, following Aristotle and Aquinas' hylomorphist thoughts,³⁸ proposed that not all bodies are capable of carrying souls.³⁹ He writes: "The soul is the substantial form of a man. A substantial form can exist only in matter capable of receiving it. In the case of a man's soul this means that the human soul can exist only in a highly organized body."⁴⁰ To Donceel, the body of the early human embryo is insufficient for this purpose, because "at the start there is not at once a highly organized body, a body with sense, organs and a brain."⁴¹ Using this logic, Donceel argues that before the embryo's cerebral cortex is fully developed, it is incapable of carrying a human soul and thus not yet a person. Twenty years later, Thomas A. Shannon and Allan B. Wolter, O.F.M. argued for this position as well.⁴² Donceel reasons that the soul is related to the body as sphericity to a

³⁶ Hui, *Beginning of Life*, 29.

³⁷ Norman Ford, *When Did I Begin? Conception of the Human Individual in History, Philosophy, and Science* (Cambridge: Cambridge University Press, 1988), 168–77; Eberl, "The Beginning of Personhood," 134–157. When an embryo is two weeks old, a symmetrical and narrow groove called the "primitive streak" appears on its body. The streak will eventually develop into the central nervous system. Some countries base their embryonic stem-cell research policies on the development of the primitive streak. This will be discussed in the following section.

³⁸ Thomas Ainsworth, "Form vs. Matter," *The Stanford Encyclopedia of Philosophy*, last modified February 8, 2016, <http://plato.stanford.edu/archives/spr2016/entries/form-matter>. Hylomorphism is Aristotle's theory that every physical object is a compound of matter (*hule*) and form (*morphe*).

³⁹ Eberl, "Aquinas's Account," 379–94. In *Quaestiones Disputatae de Potential Dei* (QDP) III 12, Aquinas asserts that a body must have the proper organic structure if it is to have a rational soul as its substantial form.

⁴⁰ Joseph F. Donceel, "Immediate Animation and Delayed Hominization," *Theological Studies* 31 (1970): 79.

⁴¹ Donceel, "Immediate Animation and Delayed Hominization," 80.

⁴² Thomas A. Shannon and Allan B. Wolter, "Reflections on the Moral Status of the Pre-embryo," *Theological Studies* 51, no. 4 (1990): 603–26.

ball: “An embryo is like a deflated ball; it cannot contain the form of ball until it is actually spherical.”⁴³ He continues:

The least we may ask before admitting the presence of a human soul is the availability of these organs: the senses, the nervous system, the brain, and especially the cortex. Since these organs are not ready during early pregnancy, I feel certain that there is no human person until several weeks have elapsed.⁴⁴

Logical and Scientific Arguments Against Functionalism. Many Catholic scholars, such as Benedict Ashley O.P.,⁴⁵ Germain Grisez,⁴⁶ Patrick Lee,⁴⁷ and Stephen J. Heaney, disagree with Donceel’s erroneous application of hylomorphism.⁴⁸ Grisez points out that the primitive streak is a precursor of the brain, but argues that since this precursor satisfies Donceel’s version of hylomorphism, all earlier precursors of the brain should also satisfy the criteria, and since the earliest precursor is the human zygote, Donceel ought to acknowledge the human zygote’s ability to hold a soul.⁴⁹

Donceel’s hypothesis has other logical and scientific problems. First, the argument contains a Cartesian fallacy. If, as Donceel claims, one must have a fully functioning cerebral cortex to be considered a person, then individuals whose brain

⁴³ Joseph F. Donceel, “Abortion: Mediate v. Immediate Animation,” *Continuum* 5 (1967): 169.

⁴⁴ Donceel, “Immediate Animation and Delayed Hominization,” 101.

⁴⁵ Benedict Ashley, O.P., “A Critique of the Theory of Delayed Hominization,” in *An Ethical Evaluation of Fetal Experimentation*, ed. Donald G. McCarthy and Albert S. Moraczewski (St. Louis, MO: Pope John XXIII Medical-Moral Research and Education Center, 1976), 113–33. Ashley argues that the zygote’s nucleus can serve as the organ for the soul.

⁴⁶ Germain Grisez, “When Do People Begin?” *The Proceedings of the American Catholic Philosophical Association* 63 (1989): 27–47.

⁴⁷ Patrick Lee, *Abortion and Unborn Human Life* (Washington, D.C.: University of America Press, 1996), 79–91. Lee points out that Donceel addresses the soul’s “synchronic function” but ignores the soul’s “diachronic function” as described by Aquinas.

⁴⁸ Stephen J. Heaney, “The Human Rational Soul in the Early Embryo,” *The Thomist* 56 (1992): 19–84.

⁴⁹ Grisez, “When do People Begin?” 34.

injuries led to paralysis or a loss of consciousness would not be persons.⁵⁰ Oliver O'Donovan argues that the theory relating personal identity to brain function is “inconclusive because it rests on a *philosophical* preference rather than a scientific one, a preference for qualitative conceptions of personal identity . . .”⁵¹ Second, Donceel’s hypothesis assumes that before brainwaves begin, an embryo is merely a collection of cells without organized and integrated intelligence. But more recent scientific evidence shows that long before the embryo develops a brain, it already displays organized and integrated intelligence. Hui describes this phenomenon:

[The] fact that embryonic tissues such as the zona and placenta originate from the embryo rather than from maternal tissue is evidence that the embryo is capable of goal-oriented activities to preserve its own integrity and survival as an individual organism . . . biological evidence indicates that the time when restriction and differentiation begin is determined by a precise intrinsic ‘clock mechanism’ within the developing embryo, providing strong support that the zygote/embryo is a substantial unity with an intrinsic goal-directedness that ensures and maintains its growth as a whole individual organism.⁵²

It is this intrinsic mechanism that distinguishes the cells in an embryo’s body from all other kinds of cells. A lump of human skin cells, even when placed in an environment conducive to growth, will not spontaneously develop into a fetus, but a lump of embryonic cells will.⁵³ Indeed, the cells in the embryo’s body are not like a handful of marbles, related to each other only by proximity; rather, those cells are like teammates who strategically coordinate with each other to grow and develop.⁵⁴ As I described in

⁵⁰ John Jefferson Davis, “The Moral Status of the Embryonic Human: Religious Perspectives.” *Ethics & Medicine* 22, no. 1 (Spring 2006): 17.

⁵¹ Oliver O'Donovan, *Begotten or Made?* (Oxford: Oxford University Press, 1984), 57–58.

⁵² Hui, *Beginning of Life*, 68. See Anthony Fisher, “‘When Did I Begin?’ Revisited,” *Linacre Quarterly* 58 (August 1991): 60; Ann McLaren, “The Embryo,” in *Embryonic and Fetal Development, Reproduction of Mammals 2*, ed. C. R. Austin and R. V. Short, 2nd ed. (Cambridge: Cambridge University Press, 1982), 682–83, quoted in Lee, *Abortion and Unborn Human Life*, 86.

⁵³ Jan Deckers, “Why Eberl is Wrong. Reflections on the Beginning of Personhood,” *Bioethics* 21, no. 5 (June 2007): 270–82.

⁵⁴ Alan Holland, “A Fortnight of My Life is Missing: A Discussion of the Status of the Human

chapter 2, as soon as a sperm cell combines with an ovum, the fertilized ovum transforms its outer layer to prevent further sperm entry; as soon as the first mitosis starts, the embryo's cells begins to send signals to its mother's immune system, in order to prevent immune attacks. Similarly, the cells of an early embryo that has only undergone three cellular cleavages already "communicate extensively by gap junctions."⁵⁵ Merely a few hours after conception, the embryo has already established the genetic blueprint for its developed body, specifying such minute details as the geometrical axes of the primitive streak.⁵⁶ These scientific observations demonstrate that, long before an embryo develops a brain or brainwaves, it already has the necessary intelligence to grow and develop in an organized manner.⁵⁷ Scott Gilbert describes this fascinating intelligence in his biology textbook:

To become an embryo, you had to build yourself from a single cell. You had to respire before you had lungs, digest before you had a gut . . . form orderly arrays of neurons before you knew how to think . . . a machine is never required to function until after it is built. Every animal has to function as it builds itself.⁵⁸

This scientist's portrayal of an embryo's development almost parallels Psalm 139, the beautiful song that celebrates God's marvelous creation of a new life.

As discussed in the previous section, it is illogical and unbiblical to judge a being's personhood solely by its appearance.⁵⁹ The claims in this section have a similar

Pre-embryo," *Journal of Applied Philosophy* 7, no. 30 (1990): 25–37.

⁵⁵ T. W. Sadler, *Langman's Medical Embryology*, 9th ed. (Philadelphia: Lippincott Williams & Wilkins, 2004), 42.

⁵⁶ Helen Pearson, "Developmental Biology: Your Destiny, from Day One," *Nature* 418 (2002): 14–15.

⁵⁷ Christopher Tollefsen, "Embryos, Individuals, and Persons: An Argument against Embryo Creation and Research," *Journal of Applied Philosophy* 18 (2001): 65–77.

⁵⁸ Gilbert, *Developmental Biology*, 3.

⁵⁹ "But the LORD said to Samuel, 'Do not consider his appearance or his height, for I have rejected him. The LORD does not look at the things people look at. People look at the outward appearance, but the LORD looks at the heart.'" (1 Sam 16:7)

functionalist pitfall: when one uses the heartbeat and brainwaves as criteria to determine an embryo's personhood, one is using physiological functions to judge the embryo's moral status.⁶⁰ As I explained earlier in this section, medicine has showed that many physiological functions that appear crucial to life can actually be substituted (e.g. the beating heart can be substituted with a machine during a heart surgery) and may even be absent in a live human being (e.g. a patient in a deep coma may lack brain waves).⁶¹ This is because physiological functions are *manifestations* of life but are not life itself. To reduce the essence of a person to a set of functions is to “[ignore] the ‘individual substance . . .’, which does not point to a quality, or complex of qualities, but to a ‘someone who . . .’. To a person in *that* sense these qualities may belong, but he is not one with them; he acquired them as events in his history.”⁶²

Functionalists may argue that the analogy between a comatose patient and an embryo fails “because the former at one time in their existence functioned as persons and will probably do so in the future, while the latter did not.”⁶³ However, Beckwith cogently points out that the speaker who makes this argument assumes “there is some underlying personal unity to this individual” who was once functional, became non-functional, and may return to a state of function; yet in the argument, the speaker denies this assumption

⁶⁰ Bruce A. Ware, “Human Personhood: An Analysis and Definition,” *Southern Baptist Journal of Theology* 13, no. 2 (Summer 2009): 18–31; F. Earle Fox, “Two Kinds of Personhood: A Reply to Clifford Grobstein,” *Perspectives on Science and Christian Faith* 45 (March 1993): 45–56. Ware names this school of thought “functionalism.” F. Earle Fox proposes a similar division of the two camps—namely, the operational definition and the substantive definition of personhood.

⁶¹ Tony Wu, “Hope is Found Even in Flat-lined EEG,” *The Johns Hopkins News-letter*, October 3, 2013. <https://www.jhunewsletter.com/article/2013/10/hope-is-found-even-in-flat-lined-eeeg-13855/>.

⁶² O'Donovan, *Begotten or Made?*, 59. Italics in original.

⁶³ Francis J. Beckwith, “Abortion, Bioethics, and Personhood: A Philosophical Reflection,” *The Southern Baptist Journal of Theology* 4, no. 1 (Spring 2000): 19.

of personal unity.⁶⁴ Beckwith continues: “the function of personhood (first-order capacities) are grounded in the essential nature of humanness (second-order capacities), it follows that the unborn are human persons of great worth and should be treated with the utmost in human dignity.”⁶⁵ Because functionalism inverts the logical cause and effect, it is not a reliable standard for personhood. The functionalist criteria presented by Warren and others “can tell us that a being is a person” but “are not adequate to declare a being a non-person.”⁶⁶

In conclusion, whenever one uses appearance, sentience or function as markers for personhood or ontology, one is trapped in the fallacy of reductionism. Since personhood cannot be reduced to a single characteristic, the reductionist approach is unsustainable.

Biblical arguments against functionalism. According to the Bible, a person’s function neither enhances nor diminishes a person’s value. God, in his sovereignty, endowed to each person unique talents and functions. But while an individual may display different abilities, disabilities, strengths, and weaknesses in different stages of life, God’s love for that person will remain constant. In fact, God has often shown mercy to the weak, the disabled, and the overlooked.⁶⁷ “A bruised reed he will not break, and a smoldering wick he will not snuff out.”⁶⁸ On those parts of the body that people may

⁶⁴ Beckwith, “Abortion, Bioethics, and Personhood,” 19.

⁶⁵ Francis J. Beckwith, “Abortion and Public Policy: A Response to Some Arguments.” *Journal of the Evangelical Theological Society* 32 (1989), 510.

⁶⁶ Beckwith, “Abortion, Bioethics, and Personhood,” 18.

⁶⁷ “The King will reply, ‘Truly I tell you, whatever you did for one of the least of these brothers and sisters of mine, you did for me.’” (Matt 25:40)

⁶⁸ “A bruised reed he will not break, and a smoldering wick he will not snuff out. In faithfulness he will bring forth justice.” (Isa 42:3)

think less honorable, he bestows the greater honor.⁶⁹

Scripture does not differentiate between those with and without heartbeats, brainwaves, or other functions. Samson was called a Nazarite in his mother's womb, not because his brain was highly developed, nor because his heartbeat foretold great physical strength, but because God chose and consecrated him. While functionalism attempts to determine an embryo's personhood and right to life by a list of traits and functions, Scripture emphasizes God's grace, which is not dependent on the recipient's abilities but on God's love. Gilbert Meilaender concludes, "God cares and his hands are on those who have no capacities."⁷⁰ This scriptural truth is the strongest counterargument against functionalism.

Primitive Streak Appears (Around 2 Weeks Fetal Age)

The primitive streak, which is the earliest form of the central nervous system, appears in a human embryo about fourteen days after its conception.⁷¹ Some ethicists have proposed that an embryo's personhood begins when its primitive streak appears. They reason that since the primitive streak might allow the embryo to sense pain, it is unethical to abort an embryo after it develops a primitive streak.⁷² These ethicists endow a moral significance upon the primitive streak, associating the neurological structure with the embryo's personhood and right to live, because "the primitive streak is the first visible physical sign of a rudimentary nervous system that may develop into the tissues

⁶⁹ "[And] the parts that we think are less honorable we treat with special honor. And the parts that are unpresentable are treated with special modesty." (1 Cor 12:23)

⁷⁰ Bob Smietana, "When Does Personhood Begin?" *Christianity Today* 48, no. 7 (July 2004): 27.

⁷¹ Eberl, "The Beginning of Personhood," 134–157.

⁷² William P. Cheshire, "The Moral Significance of Pain for Synthetic Human Entities Derived from Embryo-Like Cells," *Ethics & Medicine* 33, no. 3 (Fall 2017): 135–42.

associated with sensation, thought, and self-awareness.”⁷³ This line of reasoning has shaped national policies in many countries.⁷⁴

Primitivism

In this dissertation, I will refer to the practice of using the primitive streak to determine personhood as “primitivism.” Norman Ford may have been the earliest scholar to write about primitivism when he published his book, *When Did I Begin?* in 1988. Referencing the philosophies of Aristotle and Aquinas, Ford presents this theory: (1) Within fourteen days of conception, an embryo is neither a person nor an ontological individual because (a) it can split into twins or fuse with another embryo, and because (b) it can develop into a placenta, hydatidiform mole, or dermoid cyst; (2) however, when the embryo turns fourteen days old, develops a primitive streak, establishes its body’s axes, and implants into the endometrium, it becomes a continuous ontological individual with a human nature.⁷⁵

Ford’s underlying assumption is that early embryos are genetically distinct, non-human, non-ontological beings that later become human.⁷⁶ On biological development, he argues: “It is very difficult to sustain that the human embryo could be a human individual prior to the blastocyst stage when it differentiates into that which will

⁷³ Cheshire, “The Moral Significance of Pain,” 137.

⁷⁴ Mary Warnock, *Report of the Committee of Inquiry into Human Fertilisation and Embryology* (London: Her Majesty’s Stationery Office, 1984). Insoo Hyun, Amy Wilkerson, and Josephine Johnston, “Embryology Policy: Revisit the 14-day Rule,” *Nature* 533 (May 2016): 169–71; Cheshire, “The Moral Significance of Pain,” 136. Similarly, in 2007, Taiwan’s Department of Health issued a new policy on the ethics of human embryo research with the same criterion. “Policies,” Taiwan Society for Stem Cell Research, accessed June 28, 2020, <http://www.tsscr.org.tw/o-7/>. The fourteen-day rule is associated with the Britain’s Warnock Report authored in 1984 by the Committee of Inquiry into Human Fertilisation and Embryology. The fourteen-day criterion is later endorsed by the Human Embryo Research Panel and the Ethics Advisory Board of the United States’ National Institutes of Health (NIH).

⁷⁵ Ford, *When Did I Begin?* Preface, xvi.

⁷⁶ Ford, *When Did I Begin?* 117. Ford asserts that genetic individuality and ontological individuality are two different concepts that must be distinguished.

develop into the embryo, fetus and adult human.”⁷⁷ Regarding ontology, he writes: “A human person cannot exist before the formation of a distinct living ontological individual with a truly human nature that retains the same ontological identity throughout successive stages of development.”⁷⁸

Ford’s theory of primitivism became widely influential. Many contemporary primitivists, such as Thomas Shannon, Allan B. Wolter O.F.M., and Richard McCormick S.J., use Ford’s line of reasoning to reject the personhood of early embryos.⁷⁹

McCormick writes: “Until fourteen days after fertilization, when the primitive streak appears and splitting into identical twins will no longer happen, an ‘individual’ does not exist.” John Harris even likens the moral status of an embryo to that of a placenta, a sperm cell, and an ovum.⁸⁰

Arguments Against Primitivism

Nevertheless, within the root of primitivism are three incorrect biological assumptions. First, primitivism assumes that all embryos implant and develop primitive streaks exactly fourteen days after conception. In reality, not every embryo develops at the same rate, and implantation can occur as early as seven to ten days after conception. Second, primitivism assumes that an embryo can develop into a hydatidiform mole or a dermoid cyst. As I explained in chapter 2, hydatidiform moles and dermoid cysts are tumors that grow from diploid sperm and diploid ova, not from embryos. Third,

⁷⁷ Ford, *When Did I Begin?* 156.

⁷⁸ Ford, *When Did I Begin?* 168–77.

⁷⁹ Shannon and Wolter, “Moral Status of the Pre-embryo”, 603–26; Richard McCormick, “Who or What is the Pre-embryo?” *Kennedy Institute of Ethics Journal* 1 (1991), 1–15.

⁸⁰ John Harris, *Clones, Genes, and Immortality: Ethics and the Genetic Revolution* (New York: Oxford University Press; 1998), 63–64, 106–7, 114–5. As discussed in chapter 2, placentas, sperm, and ova are not persons, because the placenta does not display integrated signs of life, whereas the sperm and the ovum are haploid cells.

primitivism assumes that an embryo's axis is only confirmed after it develops a primitive streak. However, studies have shown that the embryonic body's axes are determined within hours of fertilization.⁸¹

Although Ford's school of thought is biologically erroneous, its logic is still worth reasoning against. Ford's first point was that an embryo becomes a person after fourteen days of life, because it will have implanted and developed a primitive streak. I argue that using fourteen days as a cutoff mark for personhood is an unscientific practice of chronologism. It may be easy to imagine the embryo's growth as a series of stagnant phases, with the primitive streak appearing exactly at the end of the fourteenth day. In reality, an embryo's growth is continuous; every minute, more cells divide and each organ matures a little more. The arbitrary fourteen-day mark implies that it is acceptable to kill the continuously growing organism during the final minute of its fourteenth day, but not one minute later, when it turns fifteen days old. Such a standard may be convenient for lawmaking purposes, but philosophically and scientifically, its implications are difficult to justify.⁸² In Hui's words: "In the ethic of personhood, the right to life is an all-or-none matter rather than a matter of degrees." The embryo does not increasingly acquire more rights to life as it matures and passes thresholds such as the fourteen-day mark; rather, it already possesses human dignity and an absolute right to life at its very beginning. Finally, as I discussed in the previous section, using physical qualities (such as a primitive streak) to define personhood is an example of functionalism, which runs against Scripture's perspective on humanity. Before the embryo develops a primitive streak or turns fourteen days old, it is already alive—not just as any organism, but as a human with twenty-three unique pairs of chromosomes.

⁸¹ Pearson, "Developmental Biology," 14–15.

⁸² Hui, *Beginning of Life*, 70. Very rarely, monozygotic twinning can take place after the fourteen-day period and the formation of the primitive streak, at which point even Ford does not deny the embryo's ontological individuality.

Ford's second point is that because an early embryo can potentially split into twins, and that two embryos can merge into one, it lacks individuality and continuity.⁸³ As I addressed in chapter 2 from a biological perspective, neither twinning nor chimerism undermines the individuality and identity of each embryo involved. The ontology of the twinning or chimeric embryo has been challenged as well, so I will respond to those challenges here. The first challenge is the half-soul argument raised by Dunnett, another proponent of primitivism. Dunnett states: "if conception is the point at which the soul is present, then a twin would have half a soul."⁸⁴ My response is that Dunnett neglects the fact that a pair of twins once had only one body. Beckwith comments that Dunnett's half-soul argument "makes no more sense than to say that a twin only has half a body. If a complete body can be spawned from a complete zygote, why not a complete soul from another complete soul?"⁸⁵

The second challenge is how to explain the ontological continuity of twins. Ingmar Persson restates Ford's assertion as follows: If embryo Z splits into embryo X and embryo Y, then X is not Z and Y is not Z, because if both X and Y are Z, then logically, X equals Y; but in reality, X is not Y; thus, neither X nor Y is Z. Persson explains that, according to Ford's reasoning, the logical proof above shows that X and Y are entities independent of Z, and there is no ontological continuity between Z and X, nor between Z and Y.⁸⁶ Ingmar Persson goes on to refute Ford's reasoning, pointing out that the proof

⁸³ Geisler, "When Did I Begin? A Review Article," 511. In the midst of the debate regarding twinning and chimerization, Geisler writes: "it is moot to debate when a continuous individual (person) begins. Human life has sanctity whether it is yet individuated or not."

⁸⁴ Dolores Dunnett, "Evangelicals and Abortion," *Journal of the Evangelical Theological Society* 33, no. 2 (June 1990): 220.

⁸⁵ Francis J. Beckwith, "Brave New Bible: A Reply to the Moderate Evangelical Position on Abortion," *Journal of the Evangelical Theological Society* 33, no. 4 (Dec 1990): 498.

⁸⁶ Ingmar Persson, "Two Claims About Potential Human Beings," *Bioethics* 17, no. 510 (2003): 503–16.

above only shows that X and Y cannot simultaneously *be* Z, but it does not deny that X and Y once *was* Z. Since X and Y are both formed from Z, X is a continuation of Z, and Y is also a continuation of Z. This reasoning actually proves that X, Y, and Z are independent and ontologically continuous individuals.⁸⁷ Referencing an earlier example, if an earthworm is cut into two, each segment will grow into a new earthworm. Each of the two new worms is an independently continuous individual, as is the initial uncut worm. The individual continuity of twinning embryos can be explained the same way: Even when an embryo splits into a pair of twins, the splitting does not threaten each twin's ongoing ontological continuity, since the twins' ontology had begun when they were one embryo and not after they split into two.

This examination of primitivism reveals many scientific and logical flaws within the concept, showing that the development of a primitive streak at fourteen days is an insufficient definition for personhood.

Implantation (About 7–10 Days After Conception)

Another group of scholars believe that an embryo does not become a person until it implants itself onto the uterine lining, approximately 7–10 days after conception. They reason that since the majority of implantations are unsuccessful and result in miscarriages, it is unlikely that pre-implantation embryos are persons.⁸⁸

Some Christians may be inclined to agree with this reasoning, doubting that God would allow so many persons to die before they get a chance to grow. But Christians must realize that behind this assertion lies an extensive political agenda. If it can be proven that a pre-implantation embryo is not a person, then three bioethically controversial practices would be morally acceptable: (1) It would be acceptable to take

⁸⁷ Persson, "Two Claims," 503–16, quoted in Deckers, "Why Eberl is Wrong," 278–79.

⁸⁸ Eve Herold, *Stem Cell Wars: Inside Stories from the Frontlines* (New York: Palgrave Macmillan, 2006), 123.

the abortifacient RU486, which kills embryos by preventing implantation. (2) It would be acceptable to select and destroy embryos for the sake of assisted reproduction, as long as destruction occurs before implantation. Currently, some infertility clinics cultivate dozens of embryos, implants the healthiest embryos, then destroys or donates the rest to researchers. (3) It would be acceptable to conduct experiments on pre-implantation human embryos. By 2006, nineteen variations of human embryonic experiments have been recorded,⁸⁹ including fusing two ova, fusing two sperms, stimulating a single ovum to make it reproduce, inducing mutations in embryos so they lose the ability to implant, infusing mouse stem cells into human blastocysts, injecting a human ovum nucleus into a mouse ovum, creating human-rabbit and human-cattle hybrid embryos, and so on.⁹⁰ John Harris even suggests cloning human embryos and harvesting their organs in the future.⁹¹ These sobering accounts ought to show that if the personhood of the pre-implantation embryo is disproven, ethical and practical implications would be enormous.

A Medical Response to the Pre-Implantation Argument

The rate of miscarriage, however, is an inadequate reason to disprove the personhood of early embryos, because there is no clear evidence that pre-implantation embryos are more likely to be miscarried. The rate of miscarriage among pre-implantation embryos has recently been estimated to be 10–40%.⁹² After implantation,

⁸⁹ J. K. Findlay, M. L. Gear, P. J. Illingworth, S. M. Junk, et al., “Human Embryo: A Biological Definition,” *Human Reproduction* 22, no. 4 (2007): 905–11.

⁹⁰ Jose B. Cibelli, Ann A. Kiessling, Kerriane Cunniff, Charlotte Richards, et al., “Somatic Cell Nuclear Transfer in Humans: Pronuclear and Early Embryonic Development,” *E-biomed: The Journal of Regenerative Medicine* 2 (2001), 25–31, http://www.bedfordresearch.org/articles/cibelli_jregenmed.pdf/; Ying Chen, Zhi Xu He, Ailian Liu, Kai Wang, et al., “Embryonic Stem Cells Generated by Nuclear Transfer of Human Somatic Nuclei into Rabbit Oocytes,” *Cell Research* 13, no. 4 (2003): 251–63.

⁹¹ John Harris, *Clones, Genes, and Immortality*, 34.

⁹² Gavin E. Jarvis, “Estimating Limits for Natural Human Embryo Mortality,” *F1000 Research* 5 (2016): 2083; Christopher Chen, “Early Reproductive Loss,” *Australian and New Zealand Journal of*

the rate of miscarriage becomes 10–50%.⁹³ These broad ranges are rough estimates because in natural pregnancies, early-stage miscarriages can be difficult to detect or confirm. Since an early-stage miscarriage can easily be mistaken as late or heavy menstruation; many women who miscarry do not know that they had ever been pregnant. Therefore, most medical researchers use indirect methods to calculate early-stage miscarriage rates, leading to large variations in the statistic.⁹⁴

Some have claimed that for each successful implantation and pregnancy, there are five miscarriages.⁹⁵ However, this statistic is an outdated estimate from the 1970s.⁹⁶ Later research have led scientists to conclude that the 1:5 ratio is “exaggerated and not supported by the available data.”⁹⁷ In the 1990s, the New York University School of Medicine conducted a prospective clinical study to calculate the rate of miscarriages in 232 pregnant women. Using ultrasound imaging to observe the embryos, the researchers found that the rate of miscarriage is 11.5% when the embryo’s gestational sac appears (2–3 weeks gestational age), 8.5% when its secondary yolk sack grows (4 weeks), 7.2%

Obstetrics and Gynaecology 26, no. 3 (August 1986): 215–18. Most papers estimate less than 30% of early pregnancy loss. See Moore and Persaud, *The Developing Human*, 33, 35; Allen J. Wilcox, Clarice R. Weinberg, John F. O'Connor, Donna D. Baird, et al., “Incidence of Early Loss of Pregnancy,” *The New England Journal of Medicine* 319, no. 4 (1988): 189–94.

⁹³ Melissa Conrad Stöppler, “Miscarriage (Spontaneous Abortion),” MedicineNet, accessed March 19, 2010; <http://www.medicinenet.com/miscarriage/page2.htm/>.

⁹⁴ “Q&A: Miscarriage,” BBC News, last modified August 6, 2002, <http://news.bbc.co.uk/2/hi/health/2176898.stm>. Most early-stage miscarriages are caused by genetic abnormalities, according to statistics reported by the Royal College of Obstetricians and Gynaecologists.

⁹⁵ Wen-Shan Chen, *Fei Fei Fan Pan: Bentu Funyu yu Shenxue de Duihua* [Not a Non-Rebellion: A Dialogue Between Taiwanese Women and Theology], (Taipei: Yung-Wang, 2005), 81. Some claim 70% embryonic loss by the end of the first trimester. Robert G. Edwards, “Causes of Early Embryonic Loss in Human Pregnancies,” *Human Reproduction* 1, 185.

⁹⁶ C. J. Roberts and C. R. Lowe, “Where Have All the Conceptions Gone?” *Lancet* 305, no. 7905 (1975): 498–99; Henri Leridon, *Human Fertility: The Basic Components*, trans. Judith F. Helzner (Chicago: University of Chicago Press, 1977), 68–73.

⁹⁷ Gavin E. Jarvis, “Early Embryo Mortality in Natural Human Reproduction: What the Data Say,” *F1000 Research* 5 (2016): 2765.

when the embryo's height reaches 5 mm, 3.3% when it reaches 10 mm (5–6 weeks), and 0.5% at 6.5 weeks gestational age. In this study, no miscarriages occurred between 6.5 and 12 weeks, and 2% of the miscarriages occurred between 12 and 18 weeks.⁹⁸

According to the study, successful births are the majority and miscarriages the minority (around 10%). This is quite different from the claims of pro-abortion activists.

In addition, the statistics from this clinical study suggest that over the course of pregnancy, the embryonic mortality rate first decreases, then increases. Other published papers have shown a similar finding: that throughout early pregnancy, the risk of spontaneous miscarriage decreases, first gradually, then sharply, not around the time of implantation (1–2 weeks) but at 8 weeks.⁹⁹ Researchers eventually discovered that most early-stage miscarriages are caused by the embryo's genetic mutations while late-stage miscarriages are often linked to the mother's irregular uterine structure, smoking history, or illness. There was no clear association between miscarriages and failed implantations.¹⁰⁰ Recall that the rate of pre-implantation miscarriage is 10–40% and the rate of post-implantation miscarriage 10–50%. It makes sense that the two ranges overlap, because implantation is merely a change in the embryo's extrinsic circumstances, whereas intrinsic mutations are the main cause for early-stage miscarriages. In conclusion, medical research has not found that pre-implantation embryos are more likely to be miscarried than implanted embryos. It is therefore

⁹⁸ Steven R. Goldstein, "Embryonic Death in Early Pregnancy: A New Look at the First Trimester," *Obstetrics and Gynecology* 84, no. 2 (1994): 294–97. Very few other large prospective clinical studies have been conducted to study early-stage miscarriages. In this study, the time of miscarriage is recorded as the time elapsed since the woman's LMP, since this form of measurement is the obstetric convention. For the sake of consistency, those statistics are converted to embryo age in this paper. There is a two-week difference between the time since LMP and the embryo age.

⁹⁹ Lennart Nilsson and Lars Hamberger, *A Child Is Born* (Garden City, NY: Doubleday, 1990), 91.

¹⁰⁰ Michiko Ohno, Tohru Maeda, and Akira Matsunobo, "A Cytogenetic Study of Spontaneous Abortions with Direct Analysis of Chorionic Villi," *Obstetrics and Gynecology* 77 (1991), 394–98.

medically unsound to use the status of implantation to determine the embryo's personhood.

A Philosophical Response to the Pre-Implantation Argument

It is not difficult to respond philosophically to the same claim that easily miscarried embryos are not persons. Simply stated by Roland Chia: “the nature of the embryo cannot be determined by the number of miscarriages.”¹⁰¹ Geisler illustrates the role of implantation with an analogy: “An acorn, like a human zygote, is a tiny, living oak tree in a dormant state. Planting the acorn does not begin the life of an oak tree but only its growth. Likewise, when a living human zygote is ‘planted’ (implanted) in his (her) mother’s womb, this does not begin its unique, individual life. It simply facilitates its further growth.”¹⁰² The mortality rate, on its own, is insufficient for determining personhood. It is probable that a cohort of end-stage cancer patients would have an 80% mortality rate, but by no means does this rate diminish those patients’ rights and personhood. Similarly, the mortality rate of embryos is irrelevant to their ethical and moral status.

Some pro-choicers argue that if every fertilized ovum is human, then physicians would be obligated to rescue all spontaneously aborted embryos—an impossible task. Geisler refutes this notion: “protecting life is a moral obligation, but resisting natural death is not necessarily a moral duty.”¹⁰³ Similarly, Beckwith asserts, “it confuses our obvious *prima facie* moral obligation not to commit homicide (that is, to perform an abortion) with the questionable moral obligation to interfere with natural

¹⁰¹ Chia, *Biomedical Ethics and the Church*, 139.

¹⁰² Geisler, “When Did I Begin? A Review Article,” 512.

¹⁰³ Geisler, *Christian Ethics*, 153.

death (that is, to permit the conceptus to abort spontaneously).”¹⁰⁴ It is a naturalistic fallacy to say that natural phenomena are always morally acceptable,¹⁰⁵ or to assume that, even in a fallen world, the majority of human embryos ought to survive pregnancy and birth. Oliver O’Donovan comments: “I do not see how a merely statistical argument can give us a sufficient indication of discontinuity in individual identity. There seems to be a category-leap, which can only be defended on the thesis that nature is perfect and never wastes human beings—a hypothesis that is manifestly false.”¹⁰⁶ In reality, humans have a mortality rate of 100 percent, so the observation that many embryos die before birth ought not to be shocking.

Conclusion

It is medically and philosophically unsound to judge an early embryo’s personhood only based on its likelihood to survive or die. Similarly, the embryo’s age, developmental stage, and physiological functions do not affect its moral status and value as a developing human person.

¹⁰⁴ Francis J. Beckwith, “Answering the Arguments for Abortion Rights? Part Three: Is the Unborn Human Less Than Human?” *Christian Research Journal* (Spring 1991): 8, <http://christian.net/pub/resources/text/crj/crj-jrnl/web/crj0077a.html>.

¹⁰⁵ George and Tollefsen, *Embryo: A Defense of Human Life*, 138.

¹⁰⁶ O’Donovan, *Begotten or Made?*, 57.

CHAPTER 7
REFLECTIONS FROM A SYSTEMATIC THEOLOGY
PERSPECTIVE: PERSONAL ESCATOLOGY AND
CHRISTOLOGY

In the previous chapter, I used medical facts and philosophical reasoning to refute the claim that because early embryos are likely to die in miscarriages, they cannot be persons. It is more difficult, however, to respond to the same argument from a theological perspective, since prenatal death is depicted in Scripture as a “particularly terrible form of that curse which rests upon man because of sin.”¹ Believers and unbelievers may ask: Why would a loving Heavenly Father allow this curse to fall upon this many innocent children? Since Scripture does not provide a direct answer to this question, some scholars attempt to uphold God’s righteousness by denying the personhood of miscarried embryos.² Ironically, there is even less biblical support for such a speculation. It can be said that this line of reasoning is only an attempt to avoid answering the question.³

This chapter attempts to establish that the souls of miscarried embryos are not only accepted but also known and understood by the loving God. As a demonstration of

¹ John M. Frame, Robert L. Malarkey, Joseph Memmelaar, and Paul Woolley, “Report of the Committee to Study the Matter of Abortion,” Orthodox Presbyterian Church, accessed March 20, 2010. <http://www.opc.org/GA/abortion.html/>.

² Jason T. Eberl, “The Beginning of Personhood: A Thomistic Biological Analysis”, *Bioethics* 14, no. 2 (April 2000): 134–57; Bob Smietana, “When Does Personhood Begin?” *Christianity Today* 48, no. 7 (July 2004): 24–28. The Roman Catholic scholar Eberl, for example, asserts that an embryo becomes a person after implantation. Christian biology professor Hessel Bouma even asserts that an embryo becomes a person twelve weeks after fertilization because a younger embryo has a high chance of being miscarried. See Chapter 1.

³ Jan Deckers, “Why Eberl is Wrong. Reflections on the Beginning of Personhood,” *Bioethics* 21, no. 5 (June 2007): 270–82.

this love, the second Person of the Godhead became a human embryo and went through every stage of development of a human, in order to identify with the humanity of “his brothers.” (Heb 2:16)

A Theological Reflection on Embryonic and Fetal Deaths

I propose that although many embryos and fetuses do not survive the full pregnancy, the following verses demonstrate that God still loves them.

First, in Scripture, miscarriages and stillbirths are sometimes issued as curses (Ps 58:8, Hos 9:14b, Exod 23:25).⁴ A closer examination reveals that all of those curses are directed toward sinful adults and not toward the stricken children. To illustrate with a similar example: when David commits adultery with Bathsheba, God punishes David by causing his child to die soon after birth. In this punishment, God’s anger is directed at David and not at his child. Because the child is innocent, God will not let him suffer in hell, as one would expect for a cursed person, but will enjoy *shalom* with God forever.⁵

Second, Scripture makes no distinction between the moral value of a stillborn fetus, a newborn infant, and an adult. It uses the same word to describe a stillborn fetus

⁴ “May they be like a slug that melts away as it moves along, like a stillborn child that never sees the sun.” (Ps 58:8) “Give them wombs that miscarry and breasts that are dry.” (Hos 9:14b) “and none will miscarry or be barren in your land. I will give you a full life span.” (Exod 23:26)

⁵ Wayne Grudem, *Systematic Theology: An Introduction to Biblical Doctrine* (Grand Rapids: Zondervan, 1994), 501, footnote 20. “But now that he is dead, why should I go on fasting? Can I bring him back again? I will go to him, but he will not return to me.” (2 Sam 12:23) Some suggest that David was declaring nothing more in this verse than his own mortality. However, the original text places an emphasis on the child rather than the child’s destination; instead of “I shall go where he is,” it more closely translates to “I shall go to him” with a third-person, singular, masculine suffix. Therefore, David was declaring he shall reunite with his child in the future. Many psalms (e.g., Ps 23:6) show that David knows he will ultimately go to God. Therefore, it is reasonable to say he knows his child has gone to the Lord. This also explains why he did not mourn upon learning of the child’s death but instead got up to eat.

and an infant⁶ and treats their deaths equally.⁷ Furthermore, it equates the death of a fetus to that of an adult (Jer 20:17)⁸ and makes the status of a stillborn fetus parallel to that of an adult (Eccl 6:3b,5b; Ps 58:8).⁹ Finally, it refers to embryos and fetuses by the first-person point of view, to indicate the continuity of personhood.¹⁰ Frame concludes, “If indeed the child should die before birth . . . such death is closely analogous to infant death (and for that matter to all human death)—for it is the death of one whom up until that point God had cared for, preserved and blessed.”¹¹ These examples illustrate Scripture’s attitude toward intrauterine lives: that God views miscarried and stillborn lives the same way he views infants who have been born.

Third, does a shortened life span undermine a human being’s worth? Scripture shows that an early death does not indicate that a life was less valuable. When Adam sinned, every member of the human race received a death sentence; to this day, humans (including embryos and fetuses) have a 100% mortality rate. In this sense, death by miscarriage is no more of a curse than death as an adult, since the wages of sin is death (Rom 6:23) and all humans, including embryos, are recipients of this wage. From an eternal perspective, a human life, whether dying after one or eighty years of life, is like a

⁶ “Or why was I not hidden away in the ground like a stillborn child, like an infant (*olel*) who never saw the light of day?” (Job 3:16) *Olel*, H5768: a suckling babe, (young) child, infant, little one.

⁷ *Sakal*, the word used for miscarriage in the Old Testament, is not only used for expressing the death of a fetus but also the death of a child after birth. Jer 15:7, Ezek 5:17, Ezek 36:12, Hos 9:12.

⁸ “For he did not kill (*muth*) me in the womb, with my mother as my grave, her womb enlarged forever.” (Jer 20:17) *Muth*, H4191: A primitive root; to die (literally or figuratively); causatively to *kill*. This word is used to describe murder or execution, no different from describing the death of an adult.

⁹ “I say that a stillborn child is better off than he . . . it has more rest than does that man.” (Eccl 6:3b,5b) “May they be like a slug that melts away as it moves along, like a stillborn child that never sees the sun.” (Ps 58:8)

¹⁰ “Why then did you bring me out of the womb? I wish I had died before any eye saw me. If only I had never come into being, or had been carried straight from the womb to the grave!” (Job 10:18–19)

¹¹ John M. Frame, *Medical Ethics: Principles, Persons, and Problems* (Phillipsburg, NJ: P&R, 1988), 95.

moan, a passing mist, or grass:¹² “In the morning it springs up new, but by evening it is dry and withered.” (Ps 90:6). It makes sense, then, that God neither judges a person’s value according to his length of life, nor withholds his love from a person who dies relatively young. In contrast, he often cares for the weak and the small: “A bruised reed he will not break, and a smoldering wick he will not snuff out.” (Isa 42:3). No matter how short a human’s life may last, that life is precious and invaluable in God’s eyes. Jesus said, “If that is how God clothes the grass of the field, which is here today and tomorrow is thrown into the fire, will he not much more clothe you—you of little faith?” (Matt 6:30). If God looks after grass that will be burnt the next day, he surely looks after a one-day-old embryo, who is immensely more valuable than grass.

Fourth, after Genesis 3, the Bible is filled with descriptions of suffering, disease, and death. Those hardships were not present at the beginning of creation (Gen 1:31) and will not exist in the new heavens and the new earth (Rev 21:4), but they are a looming reality in the fallen world (John 16:33).¹³ Infant mortality is one example.¹⁴ When I was a little boy living in Taiwan, the parents of most of my classmates waited until their babies turned a month old to register them with the government, because the newborn mortality rate was high, and until a baby turned a month or even a year old, it was hard to say whether or not the baby would survive.

¹² “All our days pass away under your wrath; we finish our years with a moan.” (Ps 90:9) “Why, you do not even know what will happen tomorrow. What is your life? You are a mist that appears for a little while and then vanishes.” (Jas 4:14)

¹³ “God saw all that he had made, and it was very good. And there was evening, and there was morning—the sixth day.” (Gen 1:31) “He will wipe every tear from their eyes. There will be no more death or mourning or crying or pain, for the old order of things has passed away.” (Rev 21:4) “I have told you these things, so that in me you may have peace. In this world you will have trouble. But take heart! I have overcome the world.” (John 16:33)

¹⁴ William E. May, *Catholic Bioethics and the Gift of Human Life* (Huntington, IN: Our Sunday Visitor, 2000), 166–67. William May asks, “Would those who invoke the ‘fact’ of ‘fetal wastage’ to support their claim that it is unreasonable and even sacrilegious to say that individual personal life begins at conception want to deny that the millions of babies who have died in infancy were not persons and that an all-wise God would allow such “bungling” of the infancy period?”

Why do newborns die? Why are fetuses stillborn and embryos miscarried?¹⁵ In Scripture, diseases and God’s punishment of sin are often mentioned in the same paragraph,¹⁶ whereas healing is often correlated to God’s salvation. Although the Bible does not explain each individual case of suffering, it reveals that suffering, as a whole, began when sin entered the world.¹⁷ God had said of the tree of knowledge of good and evil: “When you eat from it you will certainly die.” (Gen 2:17) His warning comes true after Adam sins: not only does the human race experience physical and moral corruption, which ends in death, the entire universe is also marred by the curse (Gen 3:16–19).¹⁸ The book of Romans¹⁹ explains that all (*pas*)²⁰ of creation is helplessly corrupted (*fthorah*),²¹

¹⁵ Children born with Down syndrome can go on to live for more than fifty years, but children born with Pompe disease and several other genetic disorders only have a life expectancy of one or two years. Most embryos with genetic disorders are miscarried early in pregnancy.

¹⁶ See Exod 15:26, 23:25; Deut 7:15, 28:22, 28:58–61; Luke 8:2.

¹⁷ “Therefore, just as sin entered the world through one man, and death through sin, and in this way death came to all people, because all sinned.” (Rom 5:12)

¹⁸ “To the woman he said, ‘I will make your pains in childbearing very severe; with painful labor you will give birth to children. Your desire will be for your husband, and he will rule over you.’ To Adam he said, ‘Because you listened to your wife and ate fruit from the tree about which I commanded you, “You must not eat from it,” cursed is the ground because of you; through painful toil you will eat food from it all the days of your life. It will produce thorns and thistles for you, and you will eat the plants of the field. By the sweat of your brow you will eat your food until you return to the ground, since from it you were taken; for dust you are and to dust you will return.’” (Gen 3:16–19)

¹⁹ “I consider that our present sufferings are not worth comparing with the glory that will be revealed in us. For the creation waits in eager expectation for the children of God to be revealed. For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that the creation itself will be liberated from its bondage to decay and brought into the freedom and glory of the children of God. We know that the whole creation has been groaning as in the pains of childbirth right up to the present time. Not only so, but we ourselves, who have the first fruits of the Spirit, groan inwardly as we wait eagerly for our adoption to sonship, the redemption of our bodies. For in this hope we were saved. But hope that is seen is no hope at all. Who hopes for what they already have? But if we hope for what we do not yet have, we wait for it patiently.” (Rom 8:18–25)

²⁰ *Pas*, G3956: all, any, every, the whole. Although “all creation” in this verse refers to nature, human genetics and diseases follow the course of natural laws. Therefore, the curse on nature also affects all humans.

²¹ *Fthorah*, G5356: *decay*, i.e., *ruin* (spontaneous or inflicted, literal or figurative): corruption, destroy, perish.

transient (*matahyotes*),²² and suffering (*pathemah*).²³ This tells us that each miscarriage is a manifestation of the sin that Adam and humans committed. It is not a curse directed at the miscarried embryo, and certainly not a basis for nullifying the embryo's personhood.

With regards to the calamities throughout human history, Ware perceptively points out that when it comes to good and evil, God's providence over human affairs is "asymmetrical." Ware explains,

. . . the mechanism by which we conceive of God's control over and supervision of human affairs must involve asymmetrical aspects, one of which works in a direct and immediate fashion, causing particular events and actions to occur (e.g., creation, regeneration), but the other of which works in an indirect and permissive manner, allowing human activities or natural conditions to proceed as they are.²⁴

Applying this logic, perhaps God controls miscarriages and embryonic loss in an indirect and permissive manner, rather than directly killing the embryos.

In the same grain of thought, Graham Scott states that "[God's] will is for our good and although He may permit even a 99% rate, this is under the circumstances of the fall."²⁵ This version of theodicy is more plausible and biblical than denying the personhood of miscarried embryos in order to preserve divine justice.

Fifth, we ought not to explain miscarriage as God's direct curse on a particular embryo or its parents, because Jesus does not issue such a condemnation to the man blind from birth (John 9:3) or to the slain Galileans (Luke 13:1–5). In Luke 1, Zachariah and Elizabeth are said to be blameless, yet Elizabeth was barren; evidently, their barrenness

²² *Matahyotes*, G315: inutility; figuratively, transience; moral depravity; vanity.

²³ *Pathemah*, G3804: something undergone, i.e., hardship or pain; subjectively, an emotion or influence; affection, affliction, motion, suffering.

²⁴ Bruce A. Ware, *God's Greater Glory: The Exalted God of Scripture and the Christian Faith* (Wheaton, IL: Crossway, 2004), 26. Ware gives the examples of natural disasters and the rejection of Christ by the non-elect, saying that God could have prevented these tragedies from happening "if what he sees would come from them stands in conflict with his wise and good purposes."

²⁵ Graham A. D. Scott, "Abortion and the Incarnation," *Journal of the Evangelical Theological Society* 17, no. 1 (Winter 1974): 39.

was not a direct punishment for their sins. The Bible includes several examples of undeserved suffering, such as that of Joseph and Job, which warrant Christians to avoid erroneously asserting a causal relation between individual suffering, such as miscarriage, and divine wrath.

The deaths of embryos and fetuses ought to remind us of the frailty of life and show that each living person is experiencing God's grace.²⁶ Nonetheless, for the reasons explained above, miscarriages cannot hinder the loving relationship between God and those unborn children.²⁷

The Eternal Destination of Miscarried and Stillborn Children

The next theological question is, when children die before birth or in infancy, where do their souls go? Scripture does not give a clear answer. If these young souls all descend into hell, we would again face the problem of theodicy, but nowhere does Scripture support this conjecture. King David believed that his son who died as an infant would go to the Lord and "he would one day see and be with his son."²⁸ Some scholars point out that David's son was born into a covenanted household and conclude that children of believing parents are saved by the divine covenant, whereas children of unbelieving parents do not fall within this covenant.²⁹ Others think Scripture is silent concerning the infants of unbelievers who die, and that we ought not to speculate

²⁶ God extends common grace to everyone in the world. "Let everything that has breath praise the Lord. Praise the Lord." (Ps 150:6) "And he is not served by human hands, as if he needed anything. Rather, he himself gives everyone life and breath and everything else." (Acts 17:25)

²⁷ "For I am convinced that neither death nor life, neither angels nor demons, neither the present nor the future, nor any powers, neither height nor depth, nor anything else in all creation, will be able to separate us from the love of God that is in Christ Jesus our Lord." (Rom 8:38–39)

²⁸ Grudem, *Systematic Theology*, 501, footnote 20.

²⁹ John Cumming, *Infant Salvation: Or, All Saved that Die in Infancy* (Philadelphia: Lindsay and Blakiston, 1855), 21.

excessively over the status of their salvation.³⁰

However, many theologians reason that, according to God's mercy and compassion, he will accept all miscarried embryos, stillborn fetuses, and deceased infants into his kingdom.³¹ Scott argues that "the destiny of every child conceived in the womb is the kingdom of God."³² Thomas Schreiner says of children who die before birth or in infancy:

Because they don't have that opportunity [to understand and reject God's general revelation], God extends mercy to them . . . I'm not arguing infants go to heaven because they're innocent. They're not innocent; they're born into the world as sinners. So [God] could justly judge them, but because they haven't had the opportunity to express the guilt and sin they have as sons and daughters of Adam, God shows them mercy and grants them eternal life.³³

John Calvin and many Reformed theologians share a similar view, without differentiating between the offspring of believers and the offspring of unbelievers. Calvin comments on Luke 18:15–17, "it shows that Christ receives not only those who, moved by holy desires and faith, freely approach unto him, but those who are not yet of an age to know how much they need his grace. Those *little children* have not yet any understanding to desire his blessing."³⁴ Referencing Matthew 19:14, Calvin declares: "Jesus bears witness that

³⁰ Grudem, *Systematic Theology*, 500–501; Canons of Dort, I.17: "godly parents ought not to doubt concerning the election and salvation of those of their children whom God calls out of this life in infancy," quoted in Anthony A. Hoekema, *Created in God's Image* (Grand Rapids: Eerdmans, 1986), chapter 8, footnote 78, Canons of Dort quote translated by Hoekema.

³¹ Millard J. Erickson, *Christian Theology* (Grand Rapids: Baker, 1998), 2:258; Augustus Hopkins Strong, *The Doctrine of Man*, Systematic Theology 2 (Philadelphia: American Baptist Publication Society, 1907), 661–63; Charles Hodge, *Systematic Theology* (Grand Rapids: Eerdmans, 1970), 2:211; William G. T. Shedd, *Calvinism: Pure and Mixed, A Defense of The Westminster* (Edinburgh: Banner of Truth, 1986), 127–30; Kenneth M. Gardoski, "The Salvation of Infants," *By His Grace Blog*, last modified April 2011, <https://butbyhisgrace.files.wordpress.com/2011/04/salvationinfants.pdf>.

³² Scott, "Abortion and the Incarnation," 39.

³³ Thomas Schreiner, "What Happens to Babies When They Die?" YouTube video, 6:21, "Southern Seminary," May 10, 2017, <http://www.youtube.com/watch?v=KaiGy-EJKsE/>.

³⁴ John Calvin, *A Harmony of the Gospels, Matthew, Mark and Luke*, Calvin's Commentaries, trans. A. W. Morrison, ed. D. W. Torrance & T. F. Torrance Grand (Grand Rapids: Eerdmans, 1972), 2:388, quoted in Ronald H. Nash, *When A Baby Dies: Answers to Comfort Grieving Parents* (Grand

He wishes to receive children, and in the end He both embraces them in His arms and blesses them by laying His hands upon them . . . It is an irreligious audacity to drive from Christ's fold those whom He nursed in His bosom, and to shut the door on them as strangers when He did not wish to forbid them."³⁵

Stephen Tong, a famous Chinese evangelist and theologian, says: "Some theologians say that a baby born into a Christian household will be saved, whereas a baby not born into a Christian household will not be saved. My personal view is that when innocent babies die, God will make his mercy and grace fall directly upon them." He explains the theological basis behind his theory: God judges people according to their deeds, not according to original sin.³⁶ Ronald H. Nash asserts the same view: "God's condemnation is based on the actual commission of sins. This important point is taught throughout Scripture . . . Divine judgment is administered on the basis of sins committed in the body."³⁷ Similarly, Robert A. Webb insists:

. . . future and final retribution will be [proportional] to 'deeds done in the body' . . . dead infants have been prevented by the providence of God from committing any responsible deeds of any sort in the body, and consequently infants are not damnable upon *these premises*; and there is no account in Scripture of any other judgment based upon any other grounds.³⁸

It is clear that infants and embryos are not condemned based on their deeds. However, orthodox Christian theology teaches that personal faith is a prerequisite to salvation.

Rapids: Zondervan, 1999), 67. Italics by Nash.

³⁵ Calvin, *A Harmony of the Gospels*, 2:251–52, quoted in Nash, *When A Baby Dies*, 67–68.

³⁶ "Fa Wen: Yuanzui yu Siwang Yinger" [Question: Original Sin and Infants who Die], Jidujiao Xiaoxiaoyang Yuandi, last modified February 20, 2008, <https://mickey1124.pixnet.net/blog/post/269193684>. Translation mine.

³⁷ Nash, *When A Baby Dies*, 60.

³⁸ Robert A. Webb, *The Theology of Infant Salvation* (Richmond, VA: Presbyterian Committee of Publications, 1907), 4, quoted in Nash, *When A Baby Dies*, 62.

Although an embryo neither affirms nor rejects faith,³⁹ its inevitable mortality shows that it is Adam's descendant and "a prisoner of sin."⁴⁰ If infants and embryos cannot express faith, on what basis can they be saved? Bavinck responds to this question,

With respect to the salvation . . . of children who die in infancy, we can on the basis of Scripture go no further than to refrain from uttering a determinative and decisive judgment [*beslist en stellig oordeel*] either in a positive negative sense . . . For the Reformed did not wish, in the first place, . . . to determine the grade or extent of the knowledge that was considered indispensable for salvation. And, in the second place, they maintained that the means of grace were not absolutely necessary for salvation, but that God could also regenerate to eternal life outside of or without Word and sacraments.⁴¹

A. H. Strong argues that when infants die, God does not require them to express personal faith: "the condition of salvation for adults is personal faith. Infants are incapable of fulfilling this condition. Since Christ has died for all, we have reason to believe that provision is made for their reception of Christ in some other way."⁴² Kenneth M. Gardoski explains, "infant salvation differs from the salvation of others in the matter of faith. Salvation is a gift which God is free to give *as* He pleases and *when* He pleases. God need not require faith from those intellectually incapable of exercising it."⁴³ Gardoski cites John Calvin's commentary on Rom 10:17 to support infant salvation, saying "Attempting to bind God to this rule of salvation through personal faith is like 'giving a law to God,' that is, dictating to God how He must or must not save individuals.

³⁹ "He will eat curds and honey when he knows enough to reject the wrong and choose the right. But before the boy knows enough to reject the wrong and choose the right, the land of the two kings you dread will be laid waste." (Isa 7:15–16) This verse explains that until children reach a certain age, they do not have the ability to make moral decisions.

⁴⁰ "But the Scripture declares that the whole world is a prisoner of sin, so that what was promised, being given through faith in Jesus Christ, might be given to those who believe." (Gal 3:22)

⁴¹ Herman Bavinck, *Gereformeerde Dogmatiek*, 3rd ed. (Kampen: Kok, 1918), 4:810, quoted in Hoekema, *Created in God's Image*, 165, quote translated by Hoekema. Bavinck's statement refers to John Calvin, *Institutes of the Christian Religion*, IV.16.19. and concerns all those who die in infancy.

⁴² Strong, *Doctrine of Man*, 662.

⁴³ Gardoski, "Salvation of Infants," 7. Italics in original.

As Calvin puts it, God ‘sanctifies whom he pleases.’⁴⁴

“For God has bound all men over to disobedience so that he may have mercy on them all.” (Rom 11:32) The OT often mentions God’s attribute of caring for the weak and young, and God’s decision not to prosecute the legal responsibilities of the underaged.⁴⁵ His grace and compassion extend not only toward children of the elect but also to children of Gentiles⁴⁶ and children of evildoers.⁴⁷ Ezekiel 18:20 says God does not punish children for the offenses of their parents.⁴⁸ Jesus says it even clearer in the NT: “Let the little children come to me, for the kingdom of God belongs to such as these.”⁴⁹

The willful act of obedience versus rebellion is a key factor associated with the eternal destination of a person. Romans 5:1 clearly indicates that we are “justified through faith.”⁵⁰ This biblical truth may illustrate what is implied in Romans 5:18, “Just as one trespass resulted in condemnation for all people, so also one righteous act resulted

⁴⁴ Gardoski, “Salvation of Infants,” 5. See John Calvin, *Institutes of the Christian Religion*, book IV, 541–42.

⁴⁵ “In this desert your bodies will fall—every one of you twenty years old or more who was counted in the census and who has grumbled against me . . . As for your children . . . I will bring them in to enjoy the land you have rejected.” (Num 14:29–31) “In those days people will no longer say, ‘The fathers have eaten sour grapes, and the children’s teeth are set on edge.’ Instead, everyone will die for his own sin; whoever eats sour grapes—his own teeth will be set on edge.” (Jer 31:29–30) “What do you people mean by quoting this proverb about the land of Israel: ‘The fathers eat sour grapes, and the children’s teeth are set on edge’? As surely as I live, declares the Sovereign LORD, you will no longer quote this proverb in Israel . . . The soul who sins is the one who will die.” (Ezek 18:2–4). See also Deut 10:18–19 and Jer 22:3.

⁴⁶ “But Nineveh has more than a hundred and twenty thousand people who cannot tell their right hand from their left, and many cattle as well. Should I not be concerned about that great city?” (Jonah 4:11)

⁴⁷ “When you set foot in your city, the boy will die. All Israel will mourn for him and bury him. He is the only one belonging to Jeroboam who will be buried, because he is the only one in the house of Jeroboam in whom the LORD, the God of Israel, has found anything good.” (1 Kgs 14:12b–13)

⁴⁸ “The soul who sins is the one who will die. The son will not share the guilt of the father, nor will the father share the guilt of the son. The righteousness of the righteous man will be credited to him, and the wickedness of the wicked will be charged against him.” (Ezek 18:20)

⁴⁹ See Matt 19:14, Mark 10:14, and Luke 18:16.

⁵⁰ “Therefore, since we have been justified through faith, we have peace with God through our Lord Jesus Christ.” (Romans 5:1)

in justification and life for all people.” What Paul means by “justification for all people” is not a universal salvation regardless of faith but a salvation that is given to all people who express faith. By the same token, his statement that “one trespass resulted in condemnation for all people” applies only to those who willfully reject God’s merciful gift of salvation. This rationale suggests that embryos and fetuses are beyond the scope of this condemnation. I agree with Nash that “infants are saved because they do not meet conditions for divine judgment. The reason this is true is because infants lack the ability to behave in a morally responsible way.”⁵¹ My conclusion is as follows:

First, Jesus is God incarnated (1 Tim 3:16), the exact representation of God’s being (Heb 1:3), and the clearest revelation of God’s attributes (Col 2:9, 1 John 1:1, Heb 1:2). Therefore, to see him is to see God (John 14:9).

Second, the Bible vividly describes Jesus’ love for children, which mirrors God’s attribute of having mercy on the weak and young, as shown in the OT. Jesus took the children in his arms, put his hands on them, and blessed them, without discriminating between the children of believing parents and those of unbelieving parents.⁵² For this reason, I think it is hard to imagine Jesus refusing to save a child simply because his or her parents do not have faith.

Third, God’s final judgment on humanity is based on each person’s deeds and not on original sin.⁵³ The judgment and punishment of original sin has already come, in the form of unavoidable death for all humans, including miscarried embryos. Judgment according to deeds, on the other hand, does not occur until the last day. Since a

⁵¹ Nash, *When A Baby Dies*, 68–69.

⁵² “People were bringing little children to Jesus to have him touch them, but the disciples rebuked them. When Jesus saw this, he was indignant. He said to them, ‘Let the little children come to me, and do not hinder them, for the kingdom of God belongs to such as these. I tell you the truth, anyone who will not receive the kingdom of God like a little child will never enter it.’ And he took the children in his arms, put his hands on them and blessed them.” (Mark 10:13–16)

⁵³ See Matt 16:27, 25:31–46; 2 Cor 5:10; 1 Pet 1:17; Rev 2:23, 20:1–13, 22:12.

miscarried embryo did not have a chance to express faith or demonstrate it by actions, its judgment rests on God's mercy. It must be noted that if an embryo is saved, it is not because it is sinless, but because Jesus extended his salvation to it despite its sin.⁵⁴ If Jesus extends mercy and salvation to these youngest humans, then miscarriages do not contradict the lovingkindness of God, and it is not necessary to deny the personhood of an embryo in an attempt to uphold theodicy.

Fourth, I agree with Calvin, who said, "I everywhere teach that no one can be justly condemned and perish except on account of actual sin; and to say that the countless mortals taken from life while yet infants are cast down from their mother's arms into eternal death is a blasphemy to be universally detested."⁵⁵ According to the verses above and according to Jesus's attitude toward children in the four Gospels, I believe that God, in his compassion and mercy, accepts and saves the souls of children who die before birth or in infancy. Such a salvation would be in accordance to the attributes and principles he reveals throughout Scripture.

Christ Incarnated

Not only does God care for the youngest human beings, but he also understands and relates to them. In this section, I will explore the assumption that the incarnated Jesus experienced the embryonic stage, just as all humans have, and that his divine lordship as a person was biblically endorsed at his earliest embryonic stage in Mary's womb. In addition, I will explore the idea that because the embryonic Jesus is fully incarnated, any intentional harm done to him at this stage would have been no less a

⁵⁴ "Salvation is found in no one else, for there is no other name under heaven given to men by which we must be saved." (Acts 4:12)

⁵⁵ Charles W. Shields, "The Doctrine of Calvin Concerning Infant Salvation," *Presbyterian and Reformed Review* 1, (1890), 641. This excerpt was taken from John Calvin's letter to Calumnies of Castalio.

sin than any harm inflicted after he was born. At the end of this chapter, I will argue that the same principle is applicable to all human embryos.

The Incarnation involves all three Persons of the Godhead. The Son was sent by the Father into the world (John 3:16–17; Gal 4:4; Heb 1:1–2; 1 John 4:9–10) and was conceived through the Holy Spirit (Matt 1:18; Luke 1:35). The Nicene Creed says of the Son: “For us men and for our salvation he came down from heaven, and by the Holy Spirit was incarnate of the Virgin Mary, and became man. For our sake he was crucified . . .”⁵⁶ In order to save sinners from eternal wrath and destruction, the eternal Son entered into temporality in human history. Through his death on the cross, he reconciles sinners with the Father. Through the Son, we now have access to the Father through the Holy Spirit (Eph 2:18).

Christ: The Word Became an Embryo

Luke’s training as a physician (Col 4:14) made him a man committed to scientific accuracy. Each of his compositions were written after “careful investigation” (Luke 1:3) and have been confirmed by archaeologists to be precise and accurate. Scholars from different schools of thought agree that Luke was a reliable historian.⁵⁷

Luke’s accounts of Mary’s and Elizabeth’s pregnancies are not only historical but also medical in nature. In light of Luke’s background, we can infer that his recorded timeline of the pregnancies is medically accurate. In the following paragraphs, I will investigate the divine lordship and personhood of Jesus, even during the early embryonic

⁵⁶ “Nicene Creed,” *Encyclopaedia Britannica*, last modified May 15, 2020, <http://www.britannica.com/topic/Nicene-Creed/>.

⁵⁷ Leon Morris, *The Gospel According to St. Luke: An Introduction and Commentary*. Tyndale New Testament Commentaries. (Grand Rapids: Eerdmans; London: Tyndale / InterVarsity Press; 1974), 36.

stages and before implantation in Mary’s womb—that is, six to nine days of embryonic age—based on the timeline recorded in Luke 1:39–45 (fig. 1).⁵⁸

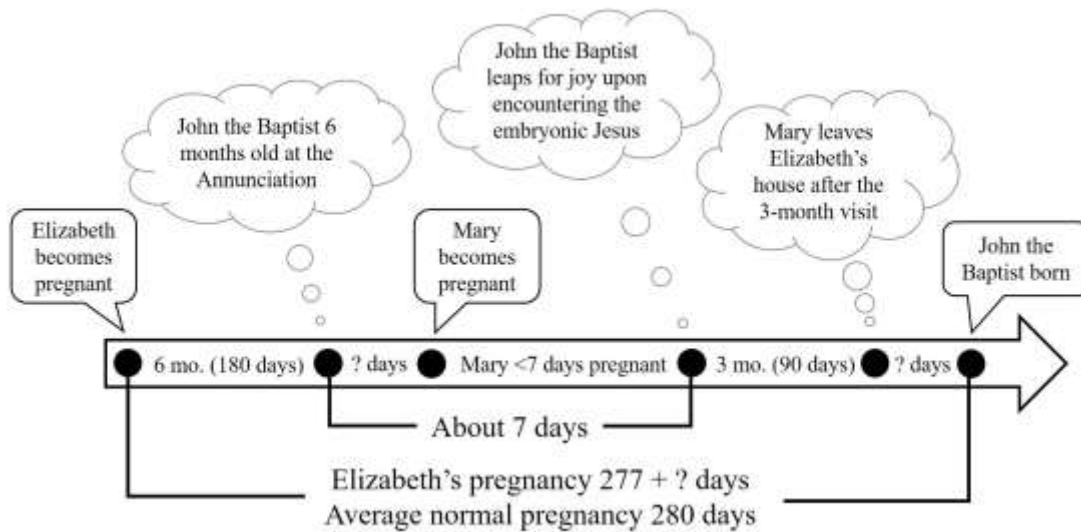


Figure 1. Timeline of Elizabeth’s and Mary’s pregnancies

Mary received the angel’s greeting in the sixth month of Elizabeth’s pregnancy (Luke 1:26).⁵⁹ When the angel appeared to Mary, Mary was not yet pregnant. Luke 2:21 says “Jesus” was “the name the angel gave him before he had been conceived (*sullephthenai*).” Although the exact time cannot be determined from the text, it is clear that Mary was not yet pregnant when the angel visited her. God sent the angel in order to

⁵⁸ The following discussion is inspired by two articles: Davis, “Embryonic Human,” 14–18 and Scott, “Abortion and Incarnation,” 37.

⁵⁹ The “sixth month” covers a range of days, but the narrative does not provide a more precise timeline. We know from verses 56–57 that Elizabeth gave birth to John after about three additional months of pregnancy. Considering that the average pregnancy lasts for 280 days (9 months + 10 days), it seems plausible to assume that the Annunciation occurred toward the end of the sixth month of Elizabeth’s pregnancy (6 months + 3 months = 9 months). Even with minor variations in the number of days, it remains valid to conclude that the incarnated Word was in his embryonic stage when Elizabeth uttered her Spirit-inspired exclamation.

inquire of Mary's willingness to partake in this mission, and the Spirit enabled the conception after Mary responded obediently to God's calling.

According to Luke, Mary "hurried" to the hill country of Judea soon after the angel departed from her. The hill country of Judea was 80–100 miles away from Nazareth. Historian Josephus estimates that Mary's journey would have lasted three days.⁶⁰ As shown by the following evidence, Mary was already pregnant with Jesus when she greeted Elizabeth:

First, when Elizabeth cried out, "the mother of my Lord," she was filled with the Holy Spirit (Luke 1:43). This declaration, recorded in the Scriptures, should be viewed as an inspiration by the Holy Spirit.

Second, Elizabeth said "blessed is the fruit of your womb (*koilias su*)" (Luke 1:42b, NKJV), revealing that Mary was pregnant at the time of this statement.

Third, Elizabeth continued, "the baby in my womb leaped for joy." This leap of joy was related to Elizabeth's declaration. It would not have been necessary for Luke to describe an ordinary fetal movement if it did not carry theological significance.

Fourth, why did John the Baptist "leap for joy"? Considering the context, this is the most logical explanation: John the Baptist leaped because he was moved by the Holy Spirit upon the arrival of Jesus.

Fifth, Luke 1:56–57 says, "Mary stayed with Elizabeth for about three months and then returned home. When it was time for Elizabeth to have her baby, she gave birth to a son." Here, Luke indicates that Elizabeth's pregnancy lasted for nine months (six months plus three months). The average pregnancy lasts 280 days, which is approximately nine months and ten days. Since Mary's departure from Elizabeth's house was recorded before the birth of John the Baptist, it is implied that Mary did not stay long enough to witness the birth of Elizabeth's son. She might have done so to avoid the

⁶⁰ Davis, "Embryonic Human," 15.

difficulty of explaining her virgin pregnancy to the families and friends who came to congratulate Elizabeth.⁶¹ According to the order of Luke's records, the "time for Elizabeth to have her baby" did not come until Mary returned to Nazareth.

We can calculate the timeline of Elizabeth's and Mary's pregnancies based on the evidence and reasoning above. If Elizabeth had been pregnant for approximately nine months (270 days) by the time Mary returned to Nazareth, and if Mary's one-way trip took three days (which would make the round trip six days), these two periods would add up to 276 days, which is the typical length of a full term: a normal full-term pregnancy lasts for 280 days. The complete duration of Elizabeth's pregnancy would have been these 276 days, in addition to any time Mary took to prepare for her journey, and possibly a few more days after Mary went home. Suppose Elizabeth's pregnancy lasted for 280 days and Mary spent six days on her journey, she would have had no more than four days to prepare for the long journey. Thus, Luke is correct in writing that Mary "hurried" (Luke 1:39) to Elizabeth's house. Following the calculation above, Mary arrived at Elizabeth's house merely four to seven days (up to four days of preparation and three days of travel) after the angel visited her.⁶²

We cannot determine the time elapsed between the angel's departure and the embryonic Jesus's formation, but it is reasonable to say that Jesus was likely an early, pre-implantation embryo when his mother, Mary, greeted Elizabeth. Notably, the Holy Spirit inspired Elizabeth not to consider Jesus as a mere cluster of cells but to declare Jesus as "my Lord" (Luke 1:43). Since "Lord" is an expression of absolute personhood, this scriptural passage reveals the personhood of the embryonic Jesus at his earliest stage of incarnation.

⁶¹ Morris, *The Gospel According to St. Luke*, 77.

⁶² Graham A. D. Scott estimates seven days. Scott, "Abortion and the Incarnation," 37.

It could be argued that this embryo flesh was not yet a person, and John was responding not to the embryo, but to the Second Person of the Trinity, who had not yet manifested as a human. In response to this challenge, Scott writes: “[The] biblical reply is surely found in the prophetic words, ‘the mother of my Lord.’”⁶³ He quotes John Calvin:

In calling Mary the mother of her Lord, the unity of person in the two natures of Christ is intended, as if she had said, he who is born a mortal man in the womb of Mary is at the same time the eternal God . . . The title of Lord really belongs to the Son of God revealed in the flesh.⁶⁴

Scott continues, “Elizabeth’s Spirit-inspired utterance “mother of my Lord” tells us that the conceptus is both God and also man.”⁶⁵

Incarnated Embryo: Fully Man and Fully God

This naturally leads us to the next question: Even if the embryonic Jesus was a person, can the principle of his embryonic personhood be applied to every human being? After all, unlike all other human beings, Jesus already existed as God the Son long before his incarnation. Frame adds: “since other persons do not antedate their physical existence, we do not have the same reason to suppose that they are persons from conception that we have in the case of Christ.”⁶⁶

I suggest it is unbiblical to claim that Jesus was uniquely different from all other humans during his embryonic stage. Two passages provide the context of my argument. First, “For surely it is not angels he helps, but Abraham’s descendants. For this reason he had to be made like his brothers in every way, in order that he might become a merciful and faithful high priest in service to God, and that he might make atonement for

⁶³ Scott, “Abortion and the Incarnation,” 38.

⁶⁴ Calvin, *A Harmony of the Gospels*, 1:32, quoted in Scott, “Abortion and the Incarnation,” 37.

⁶⁵ Scott, “Abortion and the Incarnation,” 38.

⁶⁶ Frame, *Medical Ethics*, 108.

the sins of the people.” (Heb 2:16–17) Second, “Since the children have flesh and blood, he too shared in their humanity so that by his death he might destroy him who holds the power of death—that is, the devil—and free those who all their lives were held in slavery by their fear of death.” (Heb 2:14–15)

Because of the oath of the Father, the Son becomes the only and permanent mediator between God and men (Heb 7:20–22; 1 Tim 2:5). Christ, who through the eternal Spirit offers himself unblemished to God the Father, sheds his blood and cleanses our consciences from acts that lead to death, so that we may serve the living God (Heb 9:14). Once the Son takes up humanity, he never gives it up again.⁶⁷ The human nature became an integral and eternal part of his being, even after he returns to heaven. Retaining this full humanity, he is forever able to identify with humans, represent them before the Father, and intercede on their behalf (Heb 7:25).

The truth that Jesus is fully God and fully man is so crucial to orthodox Christology that the church uses it as a standard to discern between true doctrine and heresy. Jesus’s humanity is essential because he is the second Adam (1 Cor 15:45) who bears the curse of sin (2 Cor 5:21) and offers a sacrifice (Heb 2:16–17) on behalf of all humans.⁶⁸ The full human nature of the Son undergirds his complete unity with humankind. If Christ’s humanity was different from that of sinners, how could he take their place or represent them in front of the Father? The Creed of Chalcedon affirms the deity and humanity of the Son with the following statement:

[The] same perfect in Godhead and also perfect in manhood; truly God and truly man, *of a reasonable [rational] soul and body*; consubstantial [co-essential] with the Father according to the Godhead, and consubstantial with us according to the Manhood; in all things like unto us, without sin; begotten before all ages of the

⁶⁷ Grudem, *Systematic Theology*, 617.

⁶⁸ Marc Cortez, *ReSourcing Theological Anthropology: A Constructive Account of Humanity in the Light of Christ* (Grand Rapids: Zondervan, 2017), 19. Cortez asserts that theological anthropology must begin with Christology because Jesus reveals what it means to be truly human.

Father according to the Godhead, and in these latter days, for us and for our salvation, born of the Virgin Mary, the Mother of God, according to the Manhood.⁶⁹

Based on the spiritual insight in the Council of Chalcedon, the human nature of the Son is no different from ours except in his sinlessness and his conception by a virgin. The implication of the Chalcedon Christology is that the rest of Jesus' life on earth, including his earliest incarnated stage as an embryo, was no different from that of an ordinary human.

Of note, the Creed precludes Apollinarius's view that the Son's Spirit controls a soulless human body.⁷⁰ Instead, the Creed affirms that the incarnated Son has a rational human soul and a human body. Gregory Nazianzen, in his argument against Apollinarius, declares that the Son "needed flesh for the sake of the flesh which had incurred condemnation, and soul for the sake of our soul."⁷¹

We know that the soul and the body are the two fundamental elements for a human being; once a body is ensouled, he is a full human person. Now the question is, when did the incarnated Son acquire a human soul? It makes the most sense to say that it happened at the moment of conception, when the tiny incarnated body was generated through the Holy Spirit. At that moment, the divine Son left his heavenly throne and became a human embryo in Mary's womb. The Third Ecumenical Council of Ephesus in 431 AD affirms that "God the Word took flesh and became man and from his very conception (*kai ex tes sullempseos*) united to himself the temple he took from [Mary]."⁷² He was then called "Lord" by the Spirit-filled Elizabeth several days later. No scriptural

⁶⁹ Grudem, *Systematic Theology*, 557. Italics added.

⁷⁰ Grudem, *Systematic Theology*, 555–56. This view, later named Apollinarianism, is inconstant with Heb 2:17 and was rejected as heresy.

⁷¹ Gregory of Nazianzus, "To Cleodnius the Priest against Apollinarius (Epistle 101)", in *Christology of the Later Fathers*, ed. Edward R. Hardy, The Library of Christian Classics, vol. 3 (Louisville: Westminster John Knox, 1954), 221.

⁷² Davis, "Embryonic Human," 16.

passages suggest that the “Lord” whom Elizabeth recognized in Mary’s womb was any different from the “Lord” born in a manger. It would be strange to call the embryonic Jesus “Lord” if he did not yet have a human soul; indeed, such an assumption renders him a strange hybrid of fully God and incomplete human. Therefore, it is more reasonable to say that during his earliest embryonic stages, the embryonic Christ was a full human with a human soul and a human body, rather than an incomplete human without a soul.

“Since therefore the children share in flesh and blood, he himself likewise partook of the same things.” (Heb 2:14a, ESV) This pair of parallel statements show that Christ identifies with the earthly children of God. “Flesh and blood” (*haimatos kai sarkos*) represent the humanity of Christ, flesh referring to the body and blood referring to life. *Paraplesios*, the adverb translated as “likewise,” only appears once in the entire Bible. It means “in an identical way” and modifies the verb “to partake.” Just as each human being comes into the world through a woman’s pregnancy and childbirth, Christ came into the world by being “born of a woman.” (Gal 4:4)

Hebrews 2:17 re-emphasizes that Christ “had to be made like (*homoio*) his brothers, fully human in every way (*kata panta*).” *Homoio* means resemblance and *kata panta* indicates Christ’s full humanity in all respects. Although Christ is fully human, he is not merely human;⁷³ he is also fully divine and absolutely distinct from God’s creation. Heinrich Meyer explains: “Christ is in all things similar to men, His brother, inasmuch as He had assumed a truly human nature; He was distinguished further, however, by his absolute sinlessness.”⁷⁴

The preceding may be summarized as follows:

⁷³ Thomas Morris, *Our Idea of God* (Notre Dame, IN: University of Notre Dame Press, 1991) 165.

⁷⁴ Heinrich August Wilhelm Meyer, *I–II Timothy, Titus, Hebrews*, Meyer’s Commentary on the New Testament, trans. Peter Christie, (Peabody, MA: Hendrickson, 1983), 444.

First, before and after the incarnation, Christ is the second divine Person of the Godhead, with the same nature as God the Father. (Phil 2:6).

Second, Christ was conceived in a different manner than other humans, as he was conceived by the Holy Spirit and born of the virgin Mary.

Third, at the moment of conception, Christ retained his divine nature but also acquired a full human nature, possessing a human soul and a human embryonic body. The divine nature and the human nature now coexist within the incarnated Christ “without confusion, without change, without division, without separation; the distinction of natures being by no means taken away by the union, but rather the property of each nature being preserved, and concurring in one person and one subsistence.”⁷⁵

Fourth, starting from the moment of conception and lasting through his death and resurrection, the incarnated Son retains a human nature that is no different from that of other human beings except in sinlessness.

Fifth, it is therefore against scriptural evidence to claim that the human nature of Christ the embryo was different from that of other human embryos.

Erickson concurs: “although [Christ’s] conception was unique in that it did not involve a male human, the process from that point on was apparently identical to what every human fetus experiences.”⁷⁶ Frame echoes the view:

This fact does not prove by itself that every human being is a person from conception, but it would be difficult to show from Scripture how and why Jesus should be different from us in this particular respect. To say that he is like us as a person from conception fits the larger biblical pattern we have seen, that the unborn are persons from the beginning, and also fits the pattern of Hebrew 2:17–18; 4:15, that Jesus is like us in all things except sin, that he shares our experiences to the full.⁷⁷

⁷⁵ “Creed of Chalcedon.” *Protestant Reformed Churches in America*. Accessed December 5, 2019. <http://www.prca.org/about/official-standards/creeds/ecumenical/chalcedon/>.

⁷⁶ Millard J. Erickson, *Introducing Christian Doctrine*, ed. Arnold Hustad (Grand Rapids: Baker, 2001), 225.

⁷⁷ John M. Frame, *The Doctrine of the Christian Life*, A Theology of Lordship 3 (Phillipsburg,

According to the doctrine of the incarnation, Jesus did not come to earth as a newborn infant but as an embryo. His incarnation began at conception, the very beginning of human development. Chia concludes that the early beginning of Jesus's humanity "stresses that the redemptive activity of Jesus Christ for us is comprehensive, covering every stage of human development—from the darkness of the womb to the darkness of the tomb—and touching every aspect of what it means to be human."⁷⁸

Conclusion

This chapter explores two themes in systematic theology relevant to embryonic personhood: personal eschatology and Christology. In discussing the eternal destination of miscarried embryos, I present biblical rationale to support the belief that the embryos' souls will experience God's salvation, not because their souls are sinless, but because God extends to them his divine grace. This view plausibly integrates the fact of miscarriage and theodicy without compromising embryonic personhood. I also explore the human nature of the incarnated Christ according to the doctrine of Christology; through this discussion, I reason that a complete and doctrinal picture of the Incarnation should not exclude the embryonic stage of Jesus' earthly life.

NJ: P&R, 2008), 724.

⁷⁸ Roland Chia, *Biomedical Ethics and the Church: An Introduction* (Singapore: National Council of Churches of Singapore and Genesis Books, 2010), 136.

CHAPTER 8
WHY PERSONHOOD MATTERS: TWO
CURRENT ISSUES

In chapter 1, I wrote that the contention around embryonic personhood is a pressing ethical issue that can be addressed with principles derived from Scripture. In this chapter, I will apply such principles—drawn from the previous chapters—to two current bioethical topics that relate to human embryos: ART and stem cell research.

Assisted Reproductive Technology

ART has advanced rapidly over the past few decades. Although it provides a solution to infertility, it also produces a number of ethical dilemmas.¹ Unlike God, medical professionals who use ART cannot create life from nothing; they merely apply God’s natural reproductive laws to medicine. However, one must remain reverent to God when using ART because human lives, created in God’s image, are at stake. When an ART procedure successfully gives rise to a human life, this success does not necessarily mean God agrees to this type of reproduction, because in the fallen world, not all things that *are*, *ought* to be. In certain cases, God temporarily permits sinful acts that he condemns (Rom 1:18–32) or tolerates human decisions that do not please him (Matt 19:3–9). Nevertheless, all deeds will ultimately be brought before his judgement seat (Heb 9:27). For this reason, human beings must consider carefully what we *ought* to do,

¹ Liming Chang, “Buyunzheng yu Rengong Shengzhi Keji de Shenxue Sikao” [Theological Considerations Regarding Infertility and Assisted Reproductive Technology], in *Jidutu Yixue Lunli Xilie (6)—Buyunzheng Yu Rengong Shengzhi Keji Lunli* [The Christian Medical Ethics Series Vol. 6—Infertility and the Ethics of Assisted Reproductive Technologies], ed. Liming Chang (Taichung: Chinese Christian Medical Mission, 2010), 16–37. Prenatal testing, contraception, surrogate motherhood, multifetal pregnancy reduction, and fertility treatment are among the types of assisted reproductive technology that present ethical issues.

not merely what we *can* do. Capability falls within the boundaries of science, whereas ethical principles transcend science and must be drawn from theology. When ART is used cautiously, with reverence to God and to the sanctity of life, it can be a part of God's general blessing to humankind.² Conversely, misused ART, just like God-given free will misused by sinners, can easily trespass boundaries that God has instituted for humans. On this account, professionals who administer ART must evaluate the technology through the lens of Scripture and the Holy Spirit, to avoid sinning against God.

Applying Scriptural Wisdom to Contemporary Matters

Even though the Bible does not directly mention ART or the lives it helps to create, God uses the Bible to shed wisdom into every era and every debate. God has also given us reasoning capability and filled the earth with knowledge.³ Hence, if we humbly interpret the entirety of Scripture and cautiously apply God's general revelations, I believe we can find sufficient biblical guidance to navigate any ethical issue.⁴

Unfortunately, because our rationality has been tainted by sin, none of us can claim to

² "Final Communiqué on 'The Dignity of Human Procreation and Reproductive Technologies: Anthropological and Ethical Aspects,'" Pontifical Academy for Life Tenth General Assembly, last modified March 16, 2004, http://www.vatican.va/roman_curia/pontifical_academies/acdlife/documents/rc_pont-acd_life_doc_20040316_x-gen-assembly-final_en.html; Chang, "Theological Considerations Regarding Infertility," 21–23. I disagree with the Roman Catholic Church's opinion on ART. The Vatican opposes nearly all types of ART, explaining that because ART deviates from natural reproduction, it goes against God's natural laws. I propose that artificial means do not all disobey God. For example, medical devices (e.g. dentures) and medical procedures (e.g. measuring blood pressure) are artificial, but when used properly, they can be a conduit of God's general blessing to humankind. Isaiah 66:1 states, "This is what the Lord says: 'Heaven is my throne, and the earth is my footstool. Where is the house you will build for me? Where will my resting place be?'" Nothing in the universe is outside God's reign; his authority covers all tools and methods invented by humans. That said, because not every human action pleases God, Christians ought to discern carefully.

³ Peter S. Heslam, *Creating a Christian Worldview: Abraham Kuyper's Lectures on Calvinism* (Grand Rapids: Eerdmans, 1998), 110–14. Abraham Kuyper said: "There is not a square inch in the whole domain of our human existence over which Christ, who is Sovereign over all, does not cry, Mine!"

⁴ John M. Frame, *The Doctrine of the Christian Life, A Theology of Lordship 3* (Phillipsburg, NJ: P&R, 2008), 156–75.

have the sole correct interpretation of the Bible. We must instead learn with a reverent attitude and seek to understand God’s “good, pleasing, and perfect will” amidst current ethical debates.⁵

To apply biblical wisdom to matters that the Bible has not directly discussed, John Frame proposed the following three principles in line with the Westminster Confession of Faith: “(1) the ‘content of Scripture’ includes all the logical implications of Scripture, (2) the logical implications of Scripture have the same authority as Scripture, and (3) logical deductions from Scripture do not add anything to Scripture.”⁶ Logically speaking, a presumption of truth that undergoes correct logical reasoning will produce conclusions of truth. For example, Jesus Christ is God; therefore, to believe in Jesus Christ is to believe in God. Similarly, if an idea was derived from a correct logical analysis of a biblical revelation, one can say that idea is supported or implied by the Bible.⁷ Yet church history warns us that because human minds are limited and corrupt, the above model of perfect reasoning is only theoretical; in reality, sinners are unable to draw conclusions that carry the same authority as Scripture. A perfect exposition of Scripture and strictly accurate logical understanding are necessary for such reasoning. Furthermore, both actions must be guided and illuminated by the Holy Spirit; without the Holy Spirit, even the most brilliant mind and the most excellent exposition cannot perfectly reflect the heart of God. Because of these limitations, we must humbly and reverently meditate on the Word of God when facing any ethical debate. I believe the

⁵ “Do not conform to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God’s will is—his good, pleasing and perfect will.” (Rom 12:2)

⁶ Frame, *Doctrine of the Christian Life*, 157–58. Frame derived his principles from the Westminster Confession of Faith 1.6: “The whole counsel of God concerning all things necessary for his own glory, man’s salvation, faith and life, is either expressly set down in Scripture, or by good and necessary consequence may be deduced from Scripture.”

⁷ I drew these conclusions from the writings of Immanuel Chih-Ming Ke.

Holy Bible is the definite and highest authority that ought to dictate the practice of Christian ethics. Secondary to the Bible are creeds and principles that saints of the past have synthesized from the Bible; these spiritual pearls of wisdom, having been tried and tested for centuries, are less likely to be erroneous than the theories of individual contemporary theologians.⁸ Third in authority are conclusions that today's saints derived from correct logical reasoning. In short, doctrines and moral guidelines derived from the Bible do not hold the same authority as the Bible. The Word of God does not change, but human doctrines and guidelines are continually reshaped by new theological insights and scientific findings.

Lives Conceived by ART

Nan-Chi Chang, a Taiwanese Christian stem cell researcher, while acknowledging the personhood of embryos conceived from natural reproduction, nevertheless asserts that human embryos created from SCNT should not be regarded as persons. His rationale is that the latter are artificially created from somatic cells instead of parental gametes.⁹ To respond to Chang, I will first argue that human embryos conceived by ART are persons. Then, I will apply the principle to prove that human embryos created through SCNT techniques are no less than persons.

Logical proof. First, I will reason that the souls of children conceived by ART begin at conception.

(1) A human's soul comes into being when the human's body is formed.¹⁰

⁸ This includes doctrines and creeds, such as the Apostle's Creed, that the saints throughout the ages derived from the Bible, having collectively studied it for centuries. Doctrines and creeds can be considered as texts with a high authority that is surpassed only by the Bible.

⁹ Nan-Chi Chang, "Shengwu Keji Lunli zhi Xingsi" [Reflections on the Ethics of Biotechnology], accessed January 26, 2020, <http://life.fhl.net/Science/life/biotechic.htm>.

¹⁰ See the conclusion of chapter 4. Each human's soul comes into being at the moment the body is formed according to God's reproductive laws. The same logic applies to humans conceived through ART, since ART is governed by the same reproductive laws.

- (2) The body of an embryo conceived by ART is formed at conception.
- (3) Therefore, the souls of embryos conceived by ART also begin at conception.

Materials used in ART. Currently, fertility institutes across the globe use the biological parents' gametes to perform a variety of ART procedures, including intrauterine insemination (IUI), in vitro fertilization (IVF), zygote intrafallopian transfer (ZIFT), gamete intrafallopian transfer (GIFT), and intracytoplasmic sperm injection (ICSI). In this sense, the same materials are used in ART and in natural conception.

Location of fertilization. In GIFT and in natural conception, fertilization occurs in the fallopian tube. In IUI, fertilization occurs in the uterus. In other types of ART, fertilization takes place in vitro, outside the mother's body.

Method of fertilization. In ICSI, a thin needle is used to help sperm cells penetrate the ovum cell in order to complete fertilization. In other types of ART, the process of fertilization mirrors that of natural conception.

Pregnancy. In all types of ART and in natural conception, the course of pregnancy is completed in the uterus.

Result. Genetically speaking, a child conceived by ART and a child conceived naturally each carry 46 unique human chromosomes. Medically, these two children express human vital signs and can be diagnosed by the same standards and treated with the same methods.¹¹ Socially, they are recognized as members of their families, have been protected since the moment of conception, and can produce offspring via natural sexual reproduction or ART.¹² Legally, they possess the same rights as other humans.

¹¹ Michèle Hansen, Carol Bower, Elizabeth Milne, Nicholas de Klerk, et al., "Assisted Reproductive Technologies and the Risk of Birth Defects—A Systematic Review," *Human Reproduction* 20, no. 2 (2005), 328–38. Sources such as this one report a higher risk of birth defects among children conceived by ART, but the statistics are not significant enough to support a conclusion.

¹² European Society of Human Reproduction and Embryology, "World's number of IVF and ICSI babies has now reached a calculated total of 5 million," ScienceDaily, last modified July 2, 2012, www.sciencedaily.com/releases/2012/07/120702134746.htm/. The world's first test tube baby, Louise

Ethically, a child conceived by ART undeniably has personhood. Theologically, all children conceived naturally or by ART are descendants of Adam, created in God's image, and sinners who need the gospel.¹³ The church has no reason to doubt that a child conceived by ART possesses a human soul.

Soul and personhood. As discussed in the conclusion of chapter 4, each human's soul originates from the sexual union of the mother and father, according to the reproductive laws that God established. The same reproductive laws govern ART. Humans cannot create lives without these God-given laws. The biggest differences between ART and natural conception are the locations (in the womb or in vitro) and the methods of fertilization (with or without artificially puncturing ova). I will argue that neither the location nor the method of fertilization is a necessary condition for the personhood of the resulting embryo.¹⁴ Fertilizing in the womb and fertilizing in vitro can be compared to sowing one batch of seeds in two separate flower pots: As long as all the seeds have the same intrinsic qualities, the sprouts in the second pot will not cease to be recognized as sprouts just because their seeds were sown outside the first pot. Similarly, fertilizing with or without puncturing the ovum is like sowing with or without digging holes in the ground: As long as all the seeds have the same intrinsic qualities, the sprouts in the holes will not cease to be recognized as sprouts just because their seeds were not

Brown, was born on July 25, 1978. Since then, approximately five million babies have been born as a result of ART. This figure was reported by the International Committee for Monitoring Assisted Reproductive Technologies (ICMART) at a conference in Istanbul on July 2, 2012.

¹³ Millard J. Erickson, *Christian Theology* (Grand Rapids: Baker, 1998), 2:247–59. Augustine asserted that the original sin of Adam was sexually transmitted to his offspring. Conversely, Reformed theology states that original sin exists in Adam's offspring on a representative basis and cannot be transmitted through sexual reproduction. By the Bible's definition, humans conceived by ART are, like all other humans, sinners who need God's grace. This is true even though ART does not involve sexual intercourse. See Romans 5:12–19.

¹⁴ J. P. Moreland and Scott B. Rae, *Body and Soul: Human Nature and the Crisis in Ethics* (Downers Grove, IL: InterVarsity, 2000): 270–71. Differences in location and methods are not morally significant factors for embryonic personhood.

sown on flat ground.¹⁵ In conclusion, ART and natural conception begin with the same hereditary materials (a sperm cell with 23 chromosomes and an ovum with 23 chromosomes), follow the same course of pregnancy (inside the mother's body), and produce the same result (an embryo that grows into an infant). Therefore, we should not doubt the personhood of a child conceived by ART, even though the location and methods of fertilization may be different.

Lives Conceived by Somatic Cell Nuclear Transfer

SCNT begins with a differentiated somatic cell nucleus artificially encapsulated in the cytoplasm of an ovum. Sperm-ovum fusion is not involved.¹⁶ A well-known example of SCNT is the cloning of Dolly the Sheep. Dolly had nearly identical genes and physical traits as her DNA donor sheep, as if the two were identical twins born years apart.¹⁷ Reproductive cloning of humans by SCNT, although theoretically possible, is considered unethical and hence banned around the globe.¹⁸ Consequently, SCNT only takes place in the research lab (research cloning) and not in fertility institutes

¹⁵ As described above, most ART procedures use the same fertilization method as seen in natural conception. The only exception is ICSI, in which a fine needle is used to assist the sperm cell to penetrate the surface of the ovum. In other words, a hole is created in the ovum's shell and a sperm cell inserted into the hole. I liken the process to digging a hole in the ground and burying a seed in the hole.

¹⁶ In SCNT, a somatic cell, such as a skin cell, is collected from a DNA donor ("organism A") and an ovum from an ovum donor ("organism B"). The nuclei of both cells are extracted. Next, the nucleus of A's somatic cell is inserted into B's enucleated ovum, forming a hybridized cell. Subsequent physical and chemical stimulus cause the hybridized cell to divide like a fertilized ovum and develop into an embryo. Genetically, this embryo is nearly identical to organism A and is commonly known as its "clone".

¹⁷ Nevertheless, the clone's genetics and appearance are not completely identical to the DNA donor, partially because during the SCNT procedure, a small amount of cell residue may have remained in the supposedly empty ovum capsule. The mitochondria within the cell residue contains a fraction of maternal DNA from the ovum donor, rather than the DNA donor.

¹⁸ Liming Chang, "Yijiang Gongcheng Wangu Ku" [The Success of One Man from the Demise of Thousands], *CCMM Magazine* 168 (Feb 2003): 13–14, www.cmm.org.tw/magazine/listview/magazine1view.asp?key=109/. Dolly the Sheep was born only after 276 failed cloning attempts. Similarly, human cloning experiments may cause countless human embryos to be sacrificed before one is successfully cloned.

(reproductive cloning).¹⁹ The following paragraphs will discuss the theoretical reproduction of humans by SCNT.

Assume that the nucleus of a human somatic cell was transferred into the cytoplasm of a human ovum. Once this SCNT-produced cell begins to divide like a fertilized ovum, it starts to grow and develop according to its genetic blueprint in a synchronized and organized fashion.²⁰ It is no longer a somatic cell but a human embryo with personhood who, if placed in the uterus, can develop into an infant.²¹ I will argue that an embryo produced by human cells in SCNT is a human embryo:

- (1) An embryo that has 46 human chromosomes and can develop inside the mother's body into an infant is a human embryo.
- (2) A human embryo produced by SCNT has 46 human chromosomes and can develop inside the mother's body into an infant.
- (3) Therefore, a human embryo produced by SCNT is a human embryo.

Although SCNT does not involve sperm-ovum fusion, it begins with the same hereditary material: the DNA inside human chromosomes. In natural conception, sperm and ova transmit this DNA to the offspring, but when the DNA can be artificially

¹⁹ John Harris, *Clones, Genes, and Immortality: Ethics and the Genetic Revolution* (New York: Oxford University Press, 1998), 34–35. Fu-Chang Tsai, “Yisheng! Wo de Xiaohai Si Le, Nin Neng Wei Wo Fuzhi Ta Ma?” [Doctor! My Child Died; Can You Clone Her for Me?] *Science Development* 354 (June 2002): 18–25, ejournal.stpi.narl.org.tw/NSC_INDEX/Journal/EJ0001/9106/9106-03.pdf. Although reproductive cloning is globally banned, it is still supported by a small number of scholars who have a low regard for embryonic life. John Harris, for example, proposed cloning human embryos in order to donate their organs to other humans.

²⁰ J. K. Findlay, M. L. Gear, P. J. Illingworth, S. M. Junk, et al., “Human Embryo: A Biological Definition,” *Human Reproduction* 22, no. 4 (2007): 905–11.

²¹ Hsiao-Chih Sun, “Renlei Peitai zhi Xingshang yu Daode Diwei” [The Metaphysics and Moral Status of Human Embryos], *National Taiwan University Philosophical Review* 34 (October 2007): 79, http://ntur.lib.ntu.edu.tw/bitstream/246246/281884/1/0034_200710_2.pdf; William J. FitzPatrick, “Totipotency and the Moral Status of Embryos: New Problems for an Old Argument,” *Journal of Social Philosophy* 35, no. 1, (2004): 108–22. Once the somatic cell's nucleus (from the DNA donor) fuses with the ovum's cytoplasm (from the ovum donor) and the fused cell begins to develop, the nucleus and the cytoplasm are no longer considered two independent entities but one embryo. The SCNT-created human embryo, like all other human embryos, can continue to develop according to the human genetic blueprint when placed in the proper environment, such as a uterus. As discussed in chapter 2, embryonic cells are able to strategically organize themselves into the form of a developed human.

transferred, as seen in SCNT, the natural transmitters are no longer necessary. Just like a fertilized ovum, the somatic cell in SCNT contains 46 chromosomes, half from a paternal sperm cell and half from a maternal ovum. In other words, the hereditary material in SCNT is the same as in natural conception.

SCNT and natural conception begin with the same hereditary material (46 human chromosomes), follow the same course of pregnancy (inside the mother's body), and produce the same result (an embryo that grows into an infant). The difference is that DNA is transmitted by a somatic cell in SCNT and by gametes in natural conception. Nonetheless, the transmitter does not change the intrinsic quality of the hereditary material, just as the intrinsic quality of a traveler (the DNA) remains the same whether the traveler is carried by a bus or a train (by the somatic cell or gametes). In other words, the transmitter is not a necessary condition for full humanness. Therefore, the difference in transmitters does not extinguish personhood from a child produced by SCNT. The aforementioned proof for the soul can be applied to these children as well:

- (a) A human's soul comes into being when the human's body is formed.
- (b) The body of a child conceived by SCNT is formed at conception.
- (c) Therefore, the souls of children conceived by SCNT also begin at conception.

In conclusion, there is no difference in intrinsic quality or in personhood between an embryo conceived by ART and an embryo conceived naturally. The transmitters, methods, and locations of fertilization may be different, but there is no difference between the two individuals' hereditary material or their biological growth and development. Because both are persons with human souls, both should be treated with the same ethical principles. No matter how a human embryo was produced, intended for reproduction or research, its life must be protected, respected, and treated as any other human, beginning from the moment of conception.

Other Ethical Considerations Related to ART

How should Christians view ART and contraception methods that are tied to the moment of conception, the beginning of a human life?

Fertility. God’s message to married couples, “be fruitful and multiply,” is a blessing, not a command.²² Infertile couples who do not actively seek fertility treatment are not disobeying God.²³ Infertile couples who seek fertility treatment, however, may keep this ethical principle in mind: human life should be protected from the moment of conception. I will describe various ART techniques and evaluate them by this principle:

In vitro fertilization (IVF). Also known as the “test tube baby” procedure, IVF involves mixing sperm and ova in a petri dish, incubating the fertilized ova, and finally transplanting the embryos into the uterus.

IVF begins with transvaginal oocyte retrieval, during which ova are collected from a woman’s ovaries with an ultrasound-guided needle that penetrates the vagina. A large number of ova is collected each time, as to prevent the need to repeat the painful and risky procedure.

To minimize medical costs, most clinics would fertilize and incubate more ova than needed during each IVF procedure. Next, clinical personnel would examine the embryos under the microscope and select a few to transplant into the mother’s uterus. At this point, an ethical question arises: What should be done with the unchosen embryos?

²² “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.’” (Gen 1:28, NASB) For a discussion on “be fruitful and multiply,” See Kenneth Magnuson, “Marriage, Procreation and Infertility: Reflections on Genesis 1,” *The Southern Baptist Journal of Theology* 4, no. 1 (Spring 2000), 26–39.

²³ Some infertile couples use their own sperm and ova in ART procedures; other couples use gametes donated by a third party. The Bible does not directly comment on the morality of gamete donation, but I believe that because God intended marriage to be a holy institution, a marriage must consist of only one man and one woman. This principle is violated when a couple decides to use gametes from a third party. Although such a decision is technically not adulterous, it is unwise and carries complicated ethical and psychological implications. For this reason, I advise Christian couples to use their own gametes in ART and refrain from donating and receiving donated gametes.

In most Asian countries, clinics would destroy those embryos immediately. In Western countries, the embryos may be used in experiments or preserved under a freezing temperature.²⁴ But preservation is costly, and even frozen embryos cannot survive forever. Considering that life begins at conception, all of these actions are equivalent to killing human lives.²⁵

To maximize the chance of pregnancy, several embryos are implanted into the mother's uterus at once. However, if all of those embryos grow and develop normally, they could eventually overload the uterus, leading to fetal malnourishment, premature birth, or pre-eclampsia. To prevent these complications, the physician and the parents may decide to kill some fetuses so the other fetuses can survive. At this point, the fetuses are likely ten weeks old, healthy, and developing well. But in the termination procedure, deadly potassium chloride is injected from an ultrasound-guided needle into their abdominal or thoracic cavities until their hearts stop beating. This is one of the most excruciating choices in obstetrics: to choose which babies to kill and which babies to save. To prevent such dilemmas, guidelines should be that no more than three ova be fertilized and implanted during each IVF procedure. Not only does this prevent the problem of "leftover" embryos, it also removes the need to kill some fetuses to save others. Even if all three implanted ova develop normally into fetuses, the mother still has a reasonable chance of carrying the triplets to full-term.²⁶

²⁴ Bob Smietana, "When Does Personhood Begin?" *Christianity Today* 48, no. 7 (July 2004): 24–28. As of 2004, approximately 400 thousand embryos in the United States had been preserved by freezing.

²⁵ Steve Jalsevac, "Leading Infertility Expert Rips Ineffective, Costly IVF: 'Built on Foundation of Destroying Life,'" Life Site News, last modified March 2, 2012, <http://www.lifesitenews.com/news/leading-infertility-expert-rips-ineffective-costly-ivf-built-on-foundation/>. Approximately 5 million babies have been born as a result of ART. Fertility medical experts estimate that if all 5 million were conceived by IVF, at least six times that number (30 million embryos) were killed in the process. In nearly every successful IVF procedure, a few embryos are given the chance to grow up while a larger number of embryos are frozen or destroyed.

²⁶ Human Fertilisation and Embryology Authority, "Code of Practice," 8th ed., R.11 (October

Intra-cytoplasmic sperm injection (ICSI). In ICSI, a thin needle is used to help the sperm penetrate the ovum in order to complete fertilization, after which the fertilized ovum is implanted into the uterus. ICSI is utilized when the sperm cells are low in number or unable to penetrate the ovum's surface. As in IVF, the ethical principle is to avoid fertilizing too many ova by ICSI or implanting too many fertilized ova at once.²⁷

Zygote intrafallopian transfer (ZIFT). In ZIFT, fertilized ova are incubated in vitro and subsequently transferred into fallopian tubes. After the transfer, the pregnancy progresses naturally. As in IVF, it is ethical to avoid fertilizing too many ova or implanting too many fertilized ova by ZIFT at once.

Embryo screening and selection. Some couples opt to screen their embryos or fetuses, in an effort to specify their offspring's sex or ensure their health status.

Pre-implantation genetic diagnosis (PGD). After in vitro fertilization, the embryo's DNA is examined to distinguish the embryo's sex and detect hereditary diseases. Only embryos that fit the selection criteria are implanted; the other embryos are discarded. This procedure is used overwhelmingly to select for male embryos and against female embryos, especially in cultures that value males over females. Yet whoever discards female embryos or embryos with hereditary diseases is, in effect, denying that all girls, women, and disabled individuals are created in the image of God, and instead arrogantly assuming the life-giving and life-taking role of God. For this reason, Christians must oppose such screening and selection of embryos.

Prenatal testing. Non-invasive prenatal tests include ultrasound imaging and

2017): 7.4–7.5, <https://www.hfea.gov.uk/media/2062/2017-10-02-code-of-practice-8th-edition-full-version-11th-revision-final-clean.pdf/>. The Human Fertilisation and Embryology Authority of the United Kingdom advises transferring no more than two embryos in each IVF procedure if the mother is under forty years old. Although women forty years or older have a lower probability of conception, it is still advised that no more than three embryos be transferred in one IVF procedure.

²⁷ Joseph P. Alukal and Dolores J. Lamb, "Intracytoplasmic sperm injection (ICSI)—what are the risks?" *Urologic Clinics of North America* 35, no. 2 (May 2008): 277–88. Children conceived by ICSI are at a higher risk of congenital defects and epigenetic syndromes.

prenatal array comparative genomic hybridization (CGH);²⁸ invasive tests include amniocentesis. Prenatal testing itself is ethically neutral; the ethical considerations depend on the purpose of the test. Christians may perform prenatal testing in order to diagnose and treat the fetus (e.g. perform fetal heart surgery) as long as precautions are taken to protect the fetus's safety. Conversely, if the purpose of a prenatal test is to abort female or diseased fetuses, the test is unethical and must be avoided by Christians.

Contraception. Since contraception is a broad topic, a full elaboration is not within the scope of this dissertation.²⁹ However, it is worth mentioning that some contraceptive methods are potentially abortive. As Kenneth Magnuson puts it, “Evangelicals generally accept the use of contraception in marriages that are open to children, but are typically opposed to forms of birth control that prevent implantation, and are strongly opposed to those are clearly abortive.”³⁰

²⁸ Liming Chang, “Jiyin Yixue Shi Wei Jiuzhi, Er Fei Shahai” [Genetic Medicine Ought to Heal, not Kill], *Christian Ethics for Chinese*, <https://christianethicsforchinese.org/sharestuff/articles/thought/acgh.html>; Emy Lucassen, “Prenatal Genetic Testing: The Need for Legislation,” *Ethics & Medicine* 14, no. 3 (1998): 78–84. Currently, prenatal array CGH technology can detect more than a hundred congenital diseases. This can indirectly lead to more abortions, including that of healthy fetuses.

²⁹ Liming Chang, “Buyunzheng yu Rengong Shengzhi Keji de Shenxue Sikao” [Theological Considerations Regarding Infertility and Assisted Reproductive Technology], in *Jidutu Yixue Lunli Xilie (6)—Buyunzheng Yu Rengong Shengzhi Keji Lunli* [The Christian Medical Ethics Series Vol. 6—Infertility and the Ethics of Assisted Reproductive Technologies], ed. Liming Chang (Taichung: Chinese Christian Medical Mission, 2010), 20–21; “Catechism of the Catholic Church,” 3.2.2.6.3, accessed July 2, 2020, http://www.vatican.va/archive/ccc_css/archive/catechism/p3s2c2a6.htm/. I disagree with the Roman Catholic Church's opposition toward contraception. The Vatican asserts that God's natural law renders sex and procreation inseparable, and that anyone who engages in sexual intercourse must accept pregnancy as a result; in other words, no one may engage in sexual intercourse for purposes other than procreation. This opinion arose as early as Augustine's time. However, I believe that sex, besides being the means to procreate, is also a gift from God to married couples. Otherwise, it could be argued that anyone who refrains from childbearing is not allowed to marry. When a couple uses contraception, instead of abortion, to plan out the timeline of childbearing and accordingly prepare resources for each child, not only are these parents working with God's reproductive laws to build a family, they are also wisely stewarding the resources God has given them. On the other hand, Catholic nations that ban contraception have caused already impoverished families to bear more children than they can support. Is such a ban truly a wise choice?

³⁰ Kenneth Magnuson, “What Does Contraception Have to Do with Abortion? Evangelicals v. Augustine and *Roe v. Wade*,” *Southern Baptist Journal of Theology* 7, no. 2 (Summer 2003): 56.

In many cases, however, the precise mechanism of action of a contraceptive medication or device is not entirely understood. This is because much of the existing evidence came from animal experiments.³¹ It is an ethical choice to avoid performing contraceptive clinical trials in humans, since those trials will certainly lead to the death of many embryos. But based on animal data, we can only identify contraceptive methods *that* are potentially abortive, without necessarily knowing exactly *how* they might kill human embryos. Since the choice of contraception method could influence the life and death of embryos, Christians are advised to be prudent and avoid the moral risk of choosing a potentially abortive contraception method, especially since plenty of alternative contraceptive options are available.

Intrauterine devices (IUD) are potentially fatal for embryos and should be avoided. Although the primary mechanism of action of an IUD is altering the uterine environment to eliminate sperm cells and thickening cervical mucus to block sperm entry, its high effectiveness for emergency contraception implies that IUD must be able to prevent pregnancy after fertilization.³²

The routine use of oral contraceptives does not pose an ethical concern.³³ On the other hand, emergency contraception, also known as “Plan B” or “the morning-after pill,” has caused ethical controversies. It should be noted that there are three types of emergency contraceptive pills (ECPs): progestin-only ECPs, combined ECPs, and ECPs

³¹ Horacio B. Croxatto, Luigi Devoto, Marta Durand, Enrique Ezcurra, et al., “Mechanism of Action of Hormonal Preparations Used for Emergency Contraception: A Review of the Literature,” *Contraception* 63, no. 3 (Mar 2001), 111–21.

³² James Trussell, Elizabeth G. Raymond, and Kelly Cleland, “Emergency Contraception: A Last Chance to Prevent Unintended Pregnancy,” Princeton University Office of Population Research, last modified January 2019, <http://ec.princeton.edu/questions/ec-review.pdf>.

³³ Christian Medical & Dental Associations, “Christian Medical & Dental Associations Scientific Statement: Possible Post-conceptional Effects of Hormonal Birth Control,” last modified April 2018, <https://cmda.org/wp-content/uploads/2018/04/Hormonalbirthcontrol-1.pdf>. The Christian Medical & Dental Associations issued this statement: “Our current scientific knowledge does not establish a definitive causal link between the routine use of hormonal birth control and abortion.”

containing antiprogestin.³⁴ From an ethical perspective, it is important to distinguish between ECPs that are potentially abortion-inducing and ECPs that are not. Generally, ECPs containing antiprogestin are potentially abortifacients and ought to be avoided.³⁵ Combined ECPs (containing both estrogen and progestin) may act by impairing endometrial receptivity to subsequent implantation of a fertilized ovum. The mechanism of action could put embryos at risk and is not recommended.³⁶ Levonorgestrel, a progestin ECP, provides contraception by inhibiting or delaying ovulation.³⁷ It does not inhibit human embryos from attaching to endometrial tissue. Clinical trials show that the contraceptive effectiveness of levonorgestrel is 100% prior to ovulation and no different from placebo after ovulation. Gabriela Noé's research concludes that levonorgestrel is "very effective when it is administered before ovulation, but is ineffective in preventing

³⁴ Trussell, et al., "Emergency Contraception."

³⁵ Pamela Stratton, Eric D. Levens, Beth Hartog, Johann Piquion, et al., "Endometrial Effects of a Single Early Luteal Dose of the Selective Progesterone Receptor Modulator CDB-2914," *Fertility and Sterility* 93, no. 6 (April 2010): 2035–41. One type of antiprogestin ECP contains mifepristone, which is a known abortion-inducing drug. Another antiprogestin ECP contains ulipristal acetate (UPA), whose primary mechanism of action is interfering with ovulation and thereby preventing pregnancy. However, Stratton's study shows that UPA also alters the structure of the endometrium, although it is unclear whether this change will inhibit the implantation of an embryo. For the sake of prudence and the moral weight of life and death, I do not recommend the use of ECPs containing UPA.

³⁶ Ali A. Kubba, John O. White, John Guillebaud, and Murdoch G. Elder, "The Biochemistry of Human Endometrium After Two Regimens of Postcoital Contraception: A dl-norgestrel/ethinylestradiol Combination or Danazol," *Fertility and Sterility* 45, no. 4 (April 1986): 512–16; William Y. Ling, William Wrixon, Ismail Zayid, Tanya Acorn, et al., "Mode of Action of DI-Norgestrel and Ethinylestradiol Combination in Postcoital Contraception. II. Effect of Postovulatory Administration on Ovarian Function and Endometrium," *Fertility and Sterility*, 39, no. 3 (March 1983): 292–97.

³⁷ Lena Marions, Kjell Hultenby, Ingrid Lindell, Xiaoxi Sun, et al., "Emergency Contraception with Mifepristone and Levonorgestrel: Mechanism of Action," *Obstetrics and Gynecology* 100, no. 1 (July 2002): 65–71; Lena Marions, Sten Z. Cekan, Marc Bygdeman, and Kristina Gemzell-Danielsson, "Effect of Emergency Contraception with Levonorgestrel or Mifepristone on Ovarian Function," *Contraception* 69, no. 5 (May 2004): 373–77; Idris A. Okewole, Ayodele O. Arowojolu, Okanlawon L. Odusoga, Olufemi A. Oloyede, et al., "Effect of Single Administration of Levonorgestrel on the Menstrual Cycle," *Contraception* 75, no. 5 (May 2007): 372–77; P. G. L. Lalitkumar, S. Lalitkumar, C. X. Meng, A. Stavreus-Evers, et al., "Mifepristone, but Not Levonorgestrel, Inhibits Human Blastocyst Attachment to an in Vitro Endometrial Three-Dimensional Cell Culture Model," *Human Reproduction* 22, no. 11 (November 2007): 3031–37.

pregnancy once fertilization has occurred.”³⁸ In other words, there is no risk of killing an embryo with this contraceptive pill. Therefore, I conclude it is acceptable for Christians to use levonorgestrel (progestin ECP) as an emergency contraceptive measure.

The Bible exhorts Christians to have love that abounds “more and more in knowledge and depth of insight,” in order to “discern what is best” and to be “pure and blameless for the day of Christ” (Phil 1:9–10). Many political attempts have been made to redefine pregnancy.³⁹ The reason is clear: “by redefining pregnancy— when it begins, the nature of the embryo, etc.—the way will be made smooth for the more rapid introduction of RU-486 . . .” and all sorts of contraception-labeled abortifacients.⁴⁰ Although the variety of ART and contraception evolves over time, one ethical principle does not change: That a human, created in the image of God, shall not be harmed. To destroy an embryo is to kill a person. Hence, when it comes to ART and contraception, we Christians must let biblical principles guide our judgment and actions, in order to avoid trespassing the ethical boundaries that God established for humankind.

Stem Cell Research

Every stem cell has two jobs: to differentiate and to multiply continuously. A single stem cell can transform into more than two hundred types of specialized cells and build complex tissues like blood and heart muscles. Researchers hope to utilize this

³⁸ Gabriela Noé, Horacio B. Croxatto, Ana María Salvatierra, Verónica Reyes, Claudio Villarroel, Carla Muñoz, Gabriela Morales, and Anita Retamales, “Contraceptive Efficacy of Emergency Contraception with Levonorgestrel Given Before or After Ovulation,” *Contraception* 81, no. 5 (May 2010), 414–20.

³⁹ “Protection of Human Subjects,” 45 C.F.R. Sect. 46.202 (2009); The American College of Obstetricians and Gynecologists Committee on Terminology, *Obstetric-Gynecologic Terminology*, ed. Edward C. Hughes, (Philadelphia: F. A. Davis, 1972). Medical authorities such as the United States FDA, NIH, and the American College of Obstetricians and Gynecologists have redefined pregnancy as beginning with implantation, instead of fertilization.

⁴⁰ John Wilks, “The Impact of the Pill on Implantation Factors—New Research Findings,” *Ethics & Medicine* 16, no. 1 (2000): 15–22.

differentiating ability of stem cells to develop new cures for diseases. Human embryonic stem cell research, in particular, has become a hot topic in the biomedical sector and in the media, despite—or perhaps, because of—its questionable ethics. The debate over human embryonic stem cell research has become so heated that Coppenger observes: “Now, in the hysterical drive for health at any cost, those who oppose embryonic stem cell research are called enemies of science.”⁴¹ Oliver O'Donovan analyzes society's interest in this controversial research:

The embryo is of interest to us because it is human; it is ‘ourselves.’ On the other hand it is considered a suitable object of experiment because it is *not* like us in every important way. It has no ‘personality.’ It is us and not us . . . The embryo is humanity in a form that is especially open to our pinning it down as scientific object and distance ourselves from it in transcendent knowledge.⁴²

In 2001, former president George W. Bush cut federal funding for human embryonic stem cell research; only a few existing cell lines still received funds. Many churches and Christian scholars in the United States applauded this policy. In 2009, then-president Barack Obama signed an executive order to again support human embryonic stem cell research with federal funds. Soon, however, he signed a bill to prohibit research initiatives that involved the destruction of human embryos.⁴³ Obama also appointed the National Institute of Health (NIH) to develop ethical guidelines for embryonic stem cell research in the United States. Current NIH guidelines only allow federal funding if the researcher uses “leftover” embryonic cells. Stem cell lines of other origins are banned. In effect, President Bush's funding cut is still in place.⁴⁴ These shifts in policy and the

⁴¹ C. Ben Mitchell, Mark T. Coppenger, Chad Owen Brand, Denny Burk, et al., “The SBJT Forum,” *The Southern Baptist Journal of Theology* 13, no. 2 (2009): 71.

⁴² Oliver O'Donovan, *Begotten or Made?* (Oxford: Oxford University Press, 1984), 64.

⁴³ The bill was the Dickey-Wicker amendment, initially drafted in 1996. It outlined the annual budget of the United States Department of Health and Human Services (HHS).

⁴⁴ Rob Stein, “Embryonic Stem Cell Research Stalled Despite Obama's Try at Lifting Restrictions,” *The Washington Post*, last modified March 14, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/03/14/AR2010031402353.html/>.

ensuing debates projected embryonic stem cell research from the laboratory onto the political platform.

Stem cells are classified, by their origins, into two types: embryonic stem cells and adult stem cells. I will compare and contrast the two below.

Embryonic Stem Cells

Embryonic stem cells are usually collected from human embryos that were miscarried, aborted, left over from fertility treatment, or created for research purposes (sometimes hybridized with animal genes). Because embryos die when their stem cells are extracted, embryonic stem cell research has faced countless objections on ethical grounds. Yet the research effort has continued, in part because early experiments showed that embryonic stem cells had a higher plasticity, or versatility, than adult stem cells. A higher plasticity suggests a greater potential to cure diseases. Consequently, many have continued to invest in this unethical research effort.

Adult Stem Cells

Adult stem cells are collected from the body tissue of adults or infants—for example, from umbilical cord blood. The collection process is not morally problematic because it poses no harm to the adults or infants. Adult stem cell research has rapidly progressed in recent years. It is now possible to reprogram any adult cell’s genetic code to transform the cell into an induced pluripotent stem cell (iPSC),⁴⁵ which possesses as much plasticity as an embryonic stem cell.⁴⁶

⁴⁵ Hongyan Zhou, Shili Wu, Jin Young Joo, Saiyong Zhu, et al., “Generation of Induced Pluripotent Stem Cells Using Recombinant Proteins,” *Cell Stem Cell* 4, no. 5 (May 2009): 381–4.

⁴⁶ Charles A. Goldthwaite, Jr., “The Promise of Induced Pluripotent Stem Cells (iPSCs),” *Stem Cell Information*, National Institutes of Health, accessed July 2, 2020, https://stemcells.nih.gov/info/Regenerative_Medicine/2006chapter10.htm.

Adult stem cell research has additional advantages besides the lack of moral compromise. Compared to embryonic stem cells, adult stem cells have a weaker association to carcinogenicity.⁴⁷ Furthermore, since adult stem cells are not created by IVF, the risky and painful transvaginal oocyte retrieval procedure can be omitted. Due to clinical advantages and moral impeccability, adult stem cell research has gained mainstream recognition among clinical scientists and advanced rapidly in recent years.⁴⁸ As of 2019, the United States Food and Drug Administration (FDA) has approved more than a dozen cell therapies derived from adult stem cells.⁴⁹ Embryonic stem cell research, in contrast, is still in its early phases.

Applying the Biblical Perspective to Embryonic Stem Cell Research

For the following reasons, I believe human embryonic stem cell experiments are incompatible with biblical principles. First, because every human life begins at conception, every embryo is a small human fully known by God. In God's eyes, the embryo's life has the same value as the life of an infant. Just as it is unacceptable to kill an infant, it is also unacceptable to kill embryos in the stem cell research process.⁵⁰ Second, even though embryonic stem cell research could potentially give rise to new

⁴⁷ Monya Baker, "Adult Cells Reprogrammed to Pluripotency, without Tumors," *Nature Reports Stem Cells*, last modified December 12, 2007, <http://www.nature.com/stemcells/2007/0712/071206/full/stemcells.2007.124.html/>; Karen Kaplan, "Scientists Create Stem Cells Purged of Carcinogens Used in Process," *Los Angeles Times*, last modified March 6, 2009, <http://www.latimes.com/archives/la-xpm-2009-mar-06-sci-stemcell6-story.html/>.

⁴⁸ Louis Aldrich and Yung-Hsin Ning, "Peitai Ganxibao Yanjiu de Misi" [Myths About Embryonic Stem Cell Research], Fu Jen Faculty of Theology of St. Robert Bellarmine, accessed January 26, 2020, <http://www.catholic.org.tw/theology/klife/cell/022609001.htm/>.

⁴⁹ "Approved Cellular and Gene Therapy Products," U.S. Food and Drug Administration, last modified March 29, 2019, <http://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/approved-cellular-and-gene-therapy-products/>.

⁵⁰ Chang, "Reflections on the Ethics of Biotechnology." I disagree with Nan-Chi Chang, who advocates the production of embryonic stem cells by SCNT cloning, arguing that such an act does not violate Christian principles.

medical treatments, the research process destroys many embryos. It is unethical to create human lives with the intent to destroy them.⁵¹ Third, now that embryonic stem cells in the laboratory can be successfully substituted with adult stem cells,⁵² there is no more reason to sacrifice embryos' lives for the sake of research. Fourth, even though some researchers have claimed to collect embryonic stem cells without killing embryos,⁵³ I oppose this practice for two reasons: (1) Because the collection method involves freezing the embryo and performing a biopsy, it may cause permanent damage to the embryo; (2) this cell collection is performed without the embryo's consent and reflects a disdainful attitude toward the embryo's health and rights.

For the reasons above, Christians ought to oppose the unbiblical practice of human embryonic stem cell experiments because "It is not 'humane'—in the true sense of that word . . ." ⁵⁴ On the other hand, Christians may support adult stem cell experiments because those are free of ethical concerns.⁵⁵

⁵¹ Liming Chang, "Renlei Peitai Ganxibao de Lunli Kaoliang" [Ethical Considerations Regarding Human Embryonic Stem Cells], *Medical Education* 2, no. 8 (2004): 189–201. The term "therapeutic cloning" was coined to differentiate this process from the outlawed "reproductive cloning". Secular ethicists who support therapeutic cloning argue that it produces medical materials, unlike reproductive cloning, which produces humans. Yet I believe the fate of a cloned embryo does not influence the embryo's intrinsic quality. Just as a rabbit is intrinsically a rabbit, whether it is a pet or a lab animal, a human embryo is intrinsically a human embryo, whether it was cloned for reproduction or for research. Therefore, "therapeutic cloning" and the subsequent killing of embryos are ethically impermissible.

⁵² Konrad Hochedlinger, "Your Inner Healers," *Scientific American* 302, no. 5 (May 2010), 28–35.

⁵³ Daver Solter, "Politically Correct Human Embryonic Stem Cells?" *New England Journal of Medicine* 353 (2005), 2321–3; Frame, *Doctrine of the Christian Life*, 791, footnote 11. One example is the single blastomere biopsy, in which one cell is removed from a developing embryo and used to cultivate stem cells. The developers of this technology applied for U.S. Federal funds, claiming the biopsy makes it possible to extract embryonic stem cells without killing embryos. John Frame does not oppose this methodology but only discusses the embryo's mortality without considering other ethical factors.

⁵⁴ O'Donovan, *Begotten or Made?*, 65.

⁵⁵ Frame, *Doctrine of the Christian Life*, 791–92.

CHAPTER 9

CONCLUSION

William Wilberforce (1759–1833) was a British politician who once considered devoting his life to full-time missions, but, heeding God’s calling, instead spent his life endeavoring to end the British slave trade. After two tumultuous decades of tireless labor against staunch politicians and powerful lobbyists, Wilberforce finally led the British Parliament to abolish slavery from the nation in 1807. His story was memorialized in the 2006 movie *Amazing Grace*. If not for this Christian who devoted his life to fighting the Lord’s battle against the currents of the world, countless slaves may have suffered in Britain throughout the subsequent decades, and Great Britain could have fractured under a civil war like that of the United States. Yet those tragedies were avoided, in part because Wilberforce followed God’s calling.

How does this relate to the controversy over the beginning of personhood? C. Ben Mitchell notes similarities between the promotion of slavery and the denial of embryonic personhood.¹ First, both of these actions blatantly reject of the sanctity of humankind. In the days of the British slave trade, government propaganda and scholars taught that slaves were subhuman beings who did not deserve human rights. Today, most people would readily reject this dehumanizing assertion; yet at the same time, a similar assertion eerily echoes throughout contemporary institutions that deny the personhood of the smallest humans. Second, Wilberforce fought against large forces of lobbyists and politicians. Under the instigation of powerful slave traders, members of the Parliament

¹ C. Ben Mitchell, “William Wilberforce & Bioethics,” The Center for Bioethics and Human Dignity, last modified March 8, 2007, <http://cbhd.org/content/william-wilberforce-bioethics>.

insisted that the slave trade was essential to the British economy and did everything to halt the abolition of the slave trade. Similarly, lawmakers today are heavily swayed by pro-choice lobbyists, thus rejecting the personhood of embryos and causing Christians to face overwhelming opposition in policymaking discussions.

John Davis prefers the term “embryonic human” over “human embryos,” because when *human* is the noun and *embryonic* the adjectival qualifier, the emphasis rests on *human*. Davis explains: “the entity at the center of the current debate is a living member of the human community that, for the time being, is developmentally in an embryonic state.”² Sadly, these embryonic humans have not been treated as humans in our generation. Proverbs 31:8 says, “Speak up for those who cannot speak for themselves, for the rights of all who are destitute.” Proverbs 24:11–12 echoes, “Rescue those being led away to death; hold back those staggering toward slaughter. If you say, ‘But we knew nothing about this,’ Does not he who guards your life know it? Will he not repay each person according to what he has done?” This debate is about justice, righteousness, and the defense of human life created in the image of God at its most vulnerable. Christians ought to contend for the lives of those embryonic humans, who cannot speak for themselves, with a prayerful heart: “Thy will be done in earth, as it is in heaven.”

² John Jefferson Davis, “The Moral Status of the Embryonic Human: Religious Perspectives.” *Ethics & Medicine* 22, no. 1 (Spring 2006): 9.

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ABSTRACT

WHEN DOES PERSONHOOD BEGIN?

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Chapter 1 introduces the main research question to be answered: when does personhood begin? The chapter outlines the context of the debate, explains the importance of this issue and its relevance to Christian life, and presents the thesis and methodology of this dissertation.

Chapter 2 sets a foundation for the debate by explaining the biological facet, which is a general revelation that God displays to the whole world. Referencing scientific literature, this chapter presents a biological overview of the human embryo's development from a fertilized ovum, and explains scientific terms that appear in later discussions.

Chapter 3 reviews the development of the concepts of personhood and soul throughout history. This chapter examines words in the original biblical language that refer to the soul or to the image of God, in order to clarify Scripture's description of the components of a person and Scripture's definition of *Imago Dei*.

Chapter 4 compares creationism and traducianism, two major theological schools of thought on the soul's origin, and argues that traducianism is more plausible and consistent with biblical and scientific data.

Chapter 5 systematically analyzes biblical descriptions of embryonic and fetal development, in a reversed chronological order (i.e. from the fetal stage back to

conception), to argue that Scripture assumes full personhood for every human being from the moment of conception.

Chapter 6, relying on conclusions from previous chapters, responds to various lines of challenges that undermine the personhood of embryos. This chapter is organized by stages of embryonic development and covers topics such as the personhood of twins and the ontological identity of an early embryo.

Chapter 7 explores personal eschatology and Christology, two themes in systematic theology that relate to embryonic personhood.

Chapter 8 makes practical applications to ART and embryonic stem cell research, two contemporary bioethical issues closely linked to embryonic personhood.

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