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E D I T O R I A L



F. Matthew Eppinette, PhD | Editor
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“In a spiritual understanding of clinical ethics, the basic idea is that the individual who is facing a difficult dilemma is not alone.”¹ Robert D. Orr penned these words in reference to the “priesthood of all believers” (1 Pet 2:4–5) and its role in clinical ethics decision-making. The individual believer need not make difficult ethical decisions alone, but participates with the broader Church, as well as the guiding of the Holy Spirit, to discern what is wise, what is true, and what is good.

Dr. Orr himself contributed greatly to this endeavor. As a beloved doctor, professor, author, and Distinguished Fellow with CBHD, he gave generously of his time and wisdom to work directly with patients and their families on the frontlines of ethical decision-making and to participate with the broader bioethics community. My (Anna Vollema) own position as the Robert D. Orr Fellow for the Center is a testament to his passion for educating the next generation of thinkers and leaders in bioethics.

This issue of *Dignitas* seeks to honor the important work of mentoring the next generation. Three of the articles in this edition come from current students, their specialties spread across a variety of disciplines. An essential part of the “priesthood of all believers” concept is the integration of the next generation: the passing on of the torch, the wisdom gained from experience, and the inclusion of their necessary voices. As a center, CBHD is committed to providing space for such student voices.

Thus, Justin Chu, winner of the 2021 Student Paper Competition, develops a theology of addiction and applies it to the current opioid epidemic in the United States. He states that a tension must be allowed to remain between the biological realities of addiction and its nature as an idolatrous pull away from one’s Creator. This allows for an approach that considers both the theological reality of moral culpability and a recognition of the biological interplay that comprises one’s ability to make a licit choice. After exploring the neuropsychological effects of opioid-class drugs and the resultant opioid crisis in North America, Chu lays out the various models developed to understand and respond to such addictions. Including a more detailed analysis of both the moral and disease models of addiction, he asserts that an appropriately developed doctrine of sin and Calvin’s understanding of the misplaced *sensus divinitatis* (“awareness of divinity”) provide an avenue for understanding addiction as a form of idolatry. He thus provides a variety of scholarly perspectives regarding the nature of this idolatrous reality and the sanctification process that must ensue in response. In the end, Chu provides his own exhortation regarding the church’s necessary response to the reality of addiction as “misoriented idolatry in tension with affected agency.”

Bethany Peck writes on the importance of a theology of embodiment for women and how this should affect our response to the ethical viability of abortion. While

recognizing the potentially negative consequences for many women if *Roe v. Wade* were to be reversed, she ultimately asserts that an informed theology of embodiment would better equip the church to both care for potential mothers and yet protect the sanctity of unborn life. Clarifying the theological implications of the fact that women are created in the image of God and their creation as a life that brings forth life is an essential component of that reality, Peck argues that abortion ultimately represents an egregious form of disembodiment. She therefore examines how Gnosticism, in its radical separation between soul and body, is at fault for much of the rhetoric within the current abortion movement. Peck then sets off on the task of reaffirming a theology of embodiment anchored in creation, the incarnation, and the distinctiveness of the female body. Further recognizing that the gravity of the abortion epidemic has diverted the “pro-life” movement away from care of the mother along with that of the child, she reflects that a stance against the “expressive individualism” so prominent in pro-abortion circles should include a “turn inward” within the church so that space is created for the protection of both truth and life holistically.

Continuing on the topic of beginning-of-life issues, Ioan Veres explores partial ectogenesis, otherwise known as artificial womb technologies (AWT), from a Christian perspective. Affirming that partial ectogenesis should be considered morally permissible in cases where a continued pregnancy would pose a serious health risk to the mother, Veres begins by summarizing two differing

F. Matthew Eppinette and Anna Vollema, “Editorial,” *Dignitas* 28, no. 1–2 (2021): 1–2.
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perspectives regarding the personhood of a fetus. After synthesizing and refuting what he labels “The Secular View,” or that which utilizes a hedonistic utilitarianism to determine morality based on what results in the greatest happiness and pleasure for the most amount of people, Veres ultimately lands in an affirmation that Scripture affirms the full personhood of a fetus from conception, utilizing such passages as Psalm 51:5, Genesis 1: 27, and Exodus 21:22–25. With the personhood of the fetus, and thereby the ectogenetic fetus, established, Veres turns to the development of a theological-ethical framework for understanding partial ectogenesis. Stating that mankind is given dominion to rule at creation, he asserts that ethical scientific developments are included in this function. He further affirms the benefits of saving the lives of potentially at-risk infants and mothers. After exploring some of the challenges that embracing partial ectogenesis would pose, he opines that AWT is not intrinsically morally impermissible. However, he concludes his essay with a word of optimistic caution, exhorting the readers to tread carefully into the world of AWT, yet affirming its limited use in extreme circumstances.

Also essential within the communal aspect of the “priesthood” that Dr. Orr affirms is the perspective that each individual within the community needs the other. As the “Body of Christ” (1 Cor 12:12–27), we not only step into complementary functions as we serve and participate with the Church

(vv. 1–11), but we also enter the collective wisdom of fellow believers. Thus, both continued dialogue and charitable critique are a conduit of building and reforming such understanding. Two of our fellows, Calum MacKellar and Russell DiSilvestro, exemplify a commitment to this process as they continue a discussion of the ethical viability of gene editing.

In this issue, MacKellar further develops his argument affirming that a necessary distinction be made between the ethical viability of genome editing on a pre-conception egg or sperm versus a post-conception embryo. Building his argument from the philosophical foundation of Origin Essentialism, he affirms that the circumstances of a person’s origin are essential to the development of that person. Thus, to alter the circumstances of one’s origins is to create a whole new person altogether. The extent of this difference is not what matters. Rather, pertinent is the fact that only one person, in all that makes up his or her essence and form, can exist at a given point in both space and time. With this established, MacKellar clarifies the “Non-Identity Dilemma,” or the reality that when faced with a potential flaw in a human person, to choose to erase that blemish would not alleviate such a person, but would in fact create a dissimilar person. Thus, well-meaning parents, MacKellar argues, who choose genome editing do not allay “Carson’s” potential disease, but in fact create “Donald.” He further states that this in fact displays a hidden preference for a

non-disabled child, when the value of both the disabled and non-disabled child is in fact equal before God. However, he also qualifies this by stating that extenuating circumstances, such as a lack of resources, may be the reason behind the choice against a non-disabled child. Yet, if no such circumstances exist, then a “pro-equality” society must choose against genome editing that occurs before conception, while genetic editing that occurs on an embryo or fetus is acceptable. Finally, responding to DiSilvestro’s argument that a moral distinction should be allowed for intentional versus unintentional pre-conception genome editing, MacKellar states that this in fact highlights the need for education, not acceptance, regarding such a practice.

With the recent passing of Dr. Orr, our hope is that the issue before you will honor him in more ways than one. To that end, John Kilner provides a beautiful tribute to the life and work of this beloved man. We also desire that the pieces published here are reflective of the work to which he was committed throughout his life.

As a final note, as we mentioned in the previous *Dignitas* issue, this edition marks the transition to a fully online, open access publication. By making this switch, we hope that *Dignitas* can benefit a wider audience. Members will continue to receive our sister publication, *Ethics & Medicine: An International Journal of Bioethics* in print format. ●●●

¹ Robert D. Orr, *Medical Ethics and the Faith Factor: A Handbook for Clergy and Health-Care Professionals* (Grand Rapids, MI: Eerdmans, 2009), 473.

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03



A Life Observed: A Tribute to Robert D. Orr

John Kilner, PhD | CBHD Emeritus Fellow

Dr. Robert Orr was a committed Christian, good friend, and exemplary physician. His medical prowess and wisdom were perhaps most powerfully evidenced in his book *Medical Ethics and the Faith Factor*. That book was the third project developed for CBHD's second book series, *Critical Issues in Bioethics*. His volume brilliantly demonstrates how the work of earlier books in the series produced by Biola's Scott Rae and Harvard's Arthur Dyck cash out in the everyday practice of medicine. It is a wonderful discussion of a great array of real-life case studies, filled with the insight that comes from a lifetime of faithful service to patients.

I remember picking up Dr. Orr at the airport in the summer of 2018 when he flew to Chicago to make a presentation at CBHD's annual conference. Over lunch en route to campus we reflected over the many projects he had tackled in his life. His *Medical Ethics and the Faith Factor* stood out especially in his mind. He fondly remembered clearing

enough space in his busy schedule to spend some time writing the book in what had been the home of C. S. Lewis in England. As he reflected on the records of countless sessions with patients, he was overwhelmed by how the guiding hand of God had consistently been upon him—the "Faith Factor" indeed.

Sharing that book with the world reflected the same heart that motivated Dr. Orr to serve students so effectively as their clinical ethics professor in TIU's bioethics degree program. He was sensitive to the ways that culture and race influence what good healthcare looks like, long before that became a topic of widespread interest. He recognized, for instance, that to equip students well through Trinity's bioethics initiatives in India, China, and Africa, his clinical ethics courses had to be tailored to their needs. Students in the U.S. and around the globe gave him the highest marks as a clinician and a human being.

CBHD's wide reach today owes a lot to Dr.

Orr. During the Center's first decade, when the Center was running half a dozen or so conferences each year around the U.S. and in Europe, he was willing and even eager to serve as a speaker. He and Dr. Edmund Pellegrino frequently provided captivating clinical presentations to complement the more overtly theological presentations of others.

Dr. Orr was a great blessing in whatever arena he served. While honored by Christian organizations such as CBHD and CMDA, he was also singled out by the American Medical Association with an award for being an exceptional physician. However, he found his joy not only in medicine and medical ethics, but also in church and family. He always spoke so glowingly of his wife Joyce. And his love for God was palpable. As he concluded the Preface to his case study book, "Most important of all, I hope the reader will come to a greater reliance on the leading of the Divine...God bless." God bless you too, dear friend. ●●●

04

Should Christians Select Their Children?

Calum MacKellar, PhD | CBHD Fellow

Editor's Note: The article before you is the third in a response series across Dignitas issues. Mackellar's first piece, "Gene Editing and the New Eugenics," was published in Spring 2018. Russel DiSilvestro reacts to Mackellar's arguments in his article entitled "Gene Editing, Potential Persons, and Eugenic Concerns" which was first published in our Fall/Winter 2019 edition.

Should Christians be able to decide between having a very disabled or non-disabled child if no embryos are destroyed in the process? This is a question which will soon be facing many parents! And it is difficult to see whether any appropriate arguments exist to prevent them making such a choice. As a result, the Christian church may well accept a number of child-selective procedures such as heritable genome editing (changing the entire genetic heritage of a person). In so doing, however, it would also be in line with a precedent from the last century when Christians, especially in the Protestant communities around the world, supported some forms of eugenic ideology.

It is in this context of questioning that I very much welcome Russell DiSilvestro's proposal to develop and further clarify a Christian perspective concerning heritable genome editing, in a responsible, balanced and careful manner, in his 2019 *Dignitas* article entitled "Gene Editing, Potential Persons, and Eugenic Concerns."¹ This is especially relevant since the concepts being discussed are both complex and very important.² However, in his piece in *Dignitas*, he indicates that some of the arguments I presented in a previous 2018 article in the same journal may need further clarification.³ These relate, first of all, to the manner in which I view the *effects* of different genome editing procedures. Secondly, he questions why I view "an ethically problematic eugenic element tracking the *effects* of certain procedures more closely than the *intent* of those procedures."⁴

In this regard, I recognise that some of the arguments I presented in my last article should have been further clarified, and I do actually do this in the book entitled *Christianity and the New Eugenics* published in 2020.⁵ But I would still like to further

develop these arguments in the following sections.

The Effects of Some Gene Editing Sub-Types

In considering the challenge of distinguishing between different kinds of genome editing procedures, DiSilvestro is right to question whether a difference exists between undertaking a genome editing procedure on (1) the egg and sperm cells before conception and (2) on the resulting embryo after conception. This is because, it could be suggested, that whether the procedure happened before or after conception, it still eventually benefits the resulting person because it leaves him or her better off than he or she would have been without it.⁶

Origin Essentialism

However, to understand why an important difference does exist between pre-conceptive and post-conceptive genome editing, it is necessary to first consider the concept of Origin Essentialism as it relates to whole biological persons. This indicates that the origins of living persons are essential to their existence, personal identity, and who they are, since a particular individual can only be

Calum MacKellar, "Should Christians Select Their Children?" *Dignitas* 28, no. 1–2 (2021): 4–7.

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brought into existence from a very specific set of creative conditions.⁷ In other words, Origin Essentialism states that the different elements of a given individual's origin are crucial to the very beginning of the individual's life trajectory. These elements include (1) the material substance, (2) the form of the individual, (3) the instant in time, and (4) the place (in the three dimensions of space) in which the individual is brought into existence.⁸ This means that when a new individual is brought into existence with a specific life trajectory, all the original physical variables mentioned previously should be taken into account all at once. Origin Essentialism then indicates that only one specific life trajectory will ever exist for one individual through time and space, which begins and ends at a particular three-dimensional place and at a certain time. Of course, an individual's life trajectory can change direction over time because of different variables, such as an illness, but it remains the same trajectory and the same individual continues his or her existence.⁹

Origin Essentialism, as it relates to persons, thus indicates that the beginning of a life trajectory is especially important for the rest of this trajectory because:

- Only one whole person can exist in space and time with a specific substance and form.¹⁰
- People look to their origins to help build their personal identity.¹¹

Thus, Origin Existentialism means that if a particular egg was fertilised by a particular sperm cell at a particular time and place then a specific embryonic individual would come into existence. However, if the original sperm or egg cell (or both) was genetically modified (either substantially or only slightly) then a different embryonic individual would come into existence who would be completely different to the one who would,

otherwise, have existed. And, in this regard, what matters is that a difference in the origins exists, not the extent of the difference.¹²

Of course, challenges to Origin Existentialism exist and it may be the case that more reflection is necessary to better understand and explain the concept.¹³ For example, it may be useful if Origin Essentialism was further developed in the context of (1) human persons who are brought into existence in a creative instant (by God) and (2) how persons consider their origins to form an important part of their personal identity.¹⁴

The Non-Identity Dilemma

The next concept which needs considering before the consequences of genome editing are considered is the non-identity dilemma described by the British philosopher Derek Parfit (1942–2017), which only arises if Origin Essentialism of persons is accepted.¹⁵ In this regard, DiSilvestro explains the non-identity dilemma in the following manner:

Imagine parents contemplating germline engineering as a way of benefitting their first child, who they plan to name Carson. They say:

“If we do not use this technology, Carson will be born with this genetic disease. But if we do use this technology, Carson will be born *without* this genetic disease. Whatever else may be true, we are *benefitting* Carson by using this technology.” Their doctor, who believes in genetic essentialism, will explain to these parents their mistake. “If you do not use this technology, Carson will be born with this genetic disease. But if you do use this technology, a child different from Carson will be born *without* this genetic disease—‘Donald,’ let’s say. Whatever else

may be true, you are *not* benefitting Carson by using this technology.”

So, then, the surprising result is that, far from making a particular child's life better than it would have been otherwise, germline engineering actually blots out a child's life before it even begins.¹⁶

This means that the parents have made a choice between two completely different possible children because of the non-identity dilemma.¹⁷ The first child would have been born with a disorder and the second, whose life would have been entirely different from the first, would have been born without a disorder. But, in both cases, the disabled and non-disabled children would come into existence with their own specific bodies, which are intrinsically part of who they are in reflecting their particular identities. In philosophy, this means that they are numerically different. In the previous case, for example, it is possible to characterise both children by a different number. In other words, numerical identity examines the number of persons who exist and whether they are distinct, which would enable them to be numbered. If a creative procedure results in numerical identity changes, then a new individual is brought into existence who would not otherwise have existed. This is in contrast to qualitative changes which may take place on an individual though the person remains the same person. For example, a qualitative change takes place when a person recovers from a sickness, but the person remains the same person (the numerical identity remains the same).¹⁸

Thus, the non-identity dilemma is a philosophical puzzle which recognizes that, had the child not been born with the disability, he or she would not have existed. Instead, a very different child, with a different identity and life trajectory to the one affected by the



disability, would have been born. It would have been a different child with another life and existence.

Intentional Genomic Changes Before the Creation of a Future Embryonic Person

This all means that if any physical variables are intentionally changed (such as in the genes of sperm and egg cells) in the bringing into existence of a future child, then a completely different person is brought into existence from the one who would have existed had no deliberate changes occurred. In other words, it would mean that a form of selection had occurred.

But, from a Christian perspective, the value and worth of the disabled and non-disabled possible future child are completely the same. This is because, in Christianity, every individual reflects the same image of God, meaning that they should be valued in exactly the same way as any other individual. Indeed, their value and worth does not depend on whether they are affected by a disorder and how much pleasure or suffering they will experience throughout their lives. Thus, there is no reason to make a eugenic selection between a disabled and a non-disabled possible future child.¹⁹

However, in my previous *Dignitas* article, I should maybe have emphasised that selection procedures may not always be eugenic if extenuating circumstances exist. For example, some parents may be prepared to welcome *any* child into existence (without preferences) but may decide to avoid having a child with certain characteristics because of a lack of societal support in caring for such a child. In other words, when parents select against a child with certain characteristics (such as disabilities), the reason may simply be a recognition, or belief, that they themselves lack the financial, physical, psychological or the social resources and support necessary to look after such a child. That is to say, they may be recognizing their *own* limitations or that of society, rather than regarding the child as unwanted, substandard, or as unworthy of life.²⁰

But if intentional selection did occur based solely on genetic factors, this would be incompatible with the absolute equality in value and worth of all human beings, which is the very basis of a civilised and genuinely inclusive society. Accordingly, if all persons, including all possible future persons with

or without a disability, are fundamentally equal in value (which is God's perspective), then there is no reason or basis for any selection to ever take place between these future persons through heritable genome editing, unless real welfare challenges remain for the parents themselves and for society.²¹ Indeed, if no extenuating circumstance exist, then:

1. Choosing between possible future persons is an outward expression (revelation) of an often concealed discriminatory value system of a person or a whole society already in the real existing world. Such a system accepts an inequality in the inherent value and worth of existing persons with, for example, a disability (otherwise, there would be no rational reason for the choice);
2. Such a choice may give a real negative message to persons with a condition, such as a disability, who already exist, that they should not have existed.

As a result, it is difficult to see how heritable genome editing can ever be seen as ethically acceptable by a pro-equality and appropriately inclusive society. This is because such a civilized society will always seek to consider all individuals with or without heritable biological disabilities or differences—variations which will never disappear—as inherently equal in value and in worth. Such a society will always seek to do more in order to provide the social resources and support necessary to parents to enable them to welcome into existence even the most different and most challenging of children. Thus, just as it would be unacceptable to simply provide sex-selective reproductive procedures to parents or a society who do not make any effort to uphold the equality of sexes, it is unacceptable to provide ability-selective reproductive procedures to non-inclusive parents or society who do not make any effort to accept all children as being equally valued.²²

Somatic Genome Editing

As already noted in my original article in *Dignitas*, if the genetic editing does not take place before or during conception but, instead, on a mature embryo, fetus, child, or adult with the aim of addressing a genetic disorder, this could be considered in a similar manner to already existing somatic gene therapy. Moreover, this would not generally (or intentionally) affect descendants and

has generally been accepted by society. This form of therapy would then correspond to the aims of classical medicine in the restoration of health to the patient. Such applications of gene editing for therapeutic purposes, therefore, would not raise many new ethical problems, apart from safety and efficacy. The numerical identity would remain the same though the qualitative identity would change.

This also means that in the previous scenario of the couple choosing between possible future children, their dilemma is entirely different from deciding whether to treat a disorder in an already existing child (including an embryonic child)—something they should always be prepared to do. There is thus an important difference between preventing a possible future person with a disability from existing and seeking to treat a person who already exists with the same disability.

Differences Between the *Effects* of Some Sub-Types of Gene Editing and Their *Intent*

Regarding DiSilvestro's second point that there is a morally relevant difference between *intending* to create a new individual (through eugenic selection) and *effectively* doing so (unintentionally), I must agree. There is, indeed, a moral difference between an action occurring with a specific intention and the same action occurring as a result of a misunderstanding of what is actually happening. But this means that it is all the more important for Christian prospective parents to carefully think through what they are actually doing in the field of procreation with heritable genome editing. I also agree with DiSilvestro when he argues that:

While it is easy enough to excuse the good intentions of prospective parents who use germline engineering—after all, they have never given any thought to this argument in their lives—it is also not hard to see that their position has changed once they are made aware of this [non-identity] argument.²³

However, most parents do not give much thought to (1) why they may actually want a child, (2) why they may want a child “of their own” (in all the different ways this expression may be understood), and (3) why they may only want a non-disabled child. Thus, it is very unlikely that the arguments

presented in this paper will have much influence on modern society and most prospective Christian parents. Between the option of bringing into existence a very sick child and one who is healthy or even enhanced, most prospective parents will not hesitate for the second. But if they are encouraged to reflect on their decision and seek to see things from God's perspective (and not their own), then any choice between the possible future children is meaningless if no extenuating circumstances exist. Indeed, God

considers every existing and possible future child as being absolutely equal in value and in worth from the very origin of his or her existence right through their lives—each with a specific life trajectory—because they are all created by him in exactly the same way with his same image.

Finally, I am grateful to DiSilvestro for introducing his article with the very relevant quote from C.S. Lewis when he said: "If any age really attains, by eugenics and scientific education, the power to make its

descendants what it pleases, all men who live after it are the patients of their power."²⁴ In this regard, it may also be possible to further develop this quote by indicating that "power" over others can also be expressed as an ability to "control" others, including their possible future genome and physical characteristics. But this kind of "control" is usually incompatible with unconditional acceptance of the other which is an expression of agape-love. 🌱

- 1 Russell DiSilvestro, "Gene Editing, Potential Persons, and Eugenic Concerns," *Dignitas* 26, no. 3–4 (2019): 16–21.
- 2 DiSilvestro has already enumerated a number of arguments that, he suggests, are questionable in another article on the topic. See Russell DiSilvestro, "Three Christian Arguments Against Germline Engineering," *Christian Bioethics* 18, no. 2 (2012), 201–18.
- 3 Calum MacKellar, "Gene Editing and the New Eugenics," *Dignitas* 15, no. 1 (2018): 3–9.
- 4 DiSilvestro, "Gene Editing, Potential Persons, and Eugenic Concerns," 23 (italics in original).
- 5 Calum MacKellar, *Christianity and the New Eugenics* (London: IVP, 2020).
- 6 DiSilvestro, "Gene Editing, Potential Persons, and Eugenic Concerns," 23.
- 7 For a further presentation of Origin Essentialism, see Chad Vance, "Origin Essentialism: What Could Have Been Different about You?" 1,000-Word Philosophy, April 28, 2014, <https://1000wordphilosophy.com/2014/04/28/origin-essentialism/>; Russell DiSilvestro, "Disability, Origin Essentialism, and the Problem of Differently Constituted Precursors," *Journal of the Christian Institute on Disability* 6, no. 1–2 (2017): 88.
- 8 See also: DiSilvestro, "Disability, Origin Essentialism, and the Problem of Differently Constituted Precursors;" Calum MacKellar, "Genome Modifying Reproductive Procedures and their Effects on Numerical Identity," *The New Bioethics* 25, no. 2 (2019): 121–36.
- 9 MacKellar, "Genome Modifying Reproductive Procedures and their Effects on Numerical Identity."
- 10 It may be possible for two individuals to have the same form (such as identical twins) and it may even (theoretically) be possible for two individuals to be composed of the same physical matter at two different instants in time, but it is impossible for two different living individuals to be composed of the same physical matters, have the same form, and exist in the same three-dimensional place in space at the same time.
- 11 As social anthropologists Marit Melhuus and Signe Howell explain: "To know your biological origin is tantamount to knowing who you are." Marit Melhuus and Signe Howell, "Adoption and Assisted Conception: One Universe of Unnatural Procreation: An Examination of Norwegian Legislation," in *European Kinship in the Age of Biotechnology*, ed. Jeannette Edwards and Carles Salazar (Oxford: Berghahn Books, 2009), 146. For example, Origin Essentialism (as it relates to persons) is important to the way many people, or even society, consider elements, such as nationality, date of birth, country, name, sex, specific bodies, race, titles of nobility, right to become head of state in monarchies, etc. It is even important when a person is recreated by God and "born again" to become one of his children through baptism with a new identity in Christ.
- 12 This also means that even though the numerical identity of egg and sperm cells may remain the same while their qualitative identity may change, in the instant when they are used to create a new embryonic individual a particular new person with a particular life trajectory is brought into existence. This is similar to the reality that a father and mother remain the same individuals with only qualitative changes taking place throughout time to their bodies though they procreate numerically different children. Thus, if a prospective father and mother had eaten different foods at certain times in their lives resulting in different compositions of the egg and sperm cells used to give rise to a child, then this child would be different from the one who would otherwise have been born.
- 13 See for example: DiSilvestro, "Disability, Origin Essentialism, and the Problem of Differently Constituted Precursors;" Tim Lewens, "The Fragility of Origin Essentialism: Where Mitochondrial 'Replacement' Meets the Non-Identity Problem," *Bioethics* 35, no. 7 (2021): 615–22.
- 14 Thus, in many ways, the creation by God of a whole human person is both fascinating and wonderful since before a specific instant no person exists, and after this instant a whole living human being created in the image of God exists (since no living person ever exists with only a partial image of God). And, a new trajectory is

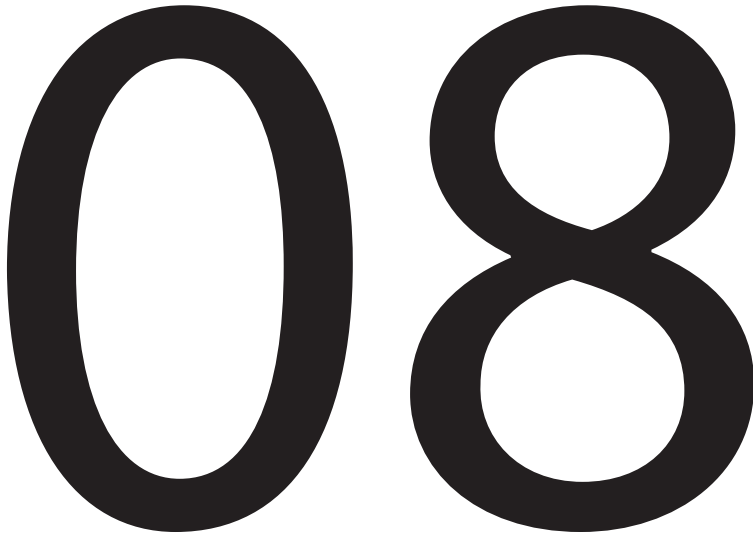
always created through the fertilisation of an egg by a sperm cell in contrast to derivation as may happen in the twinning of embryos, though even in this last situation, there is always an instant between the non-existence and the existence of a second twin. In this respect, living human persons with an identity are different from wooden tables or ships that can, for example, be gradually brought into existence from other older tables and ships.

A Christian understanding of God's creation of a person is also important for the theological doctrine of Creationism which states that God creates a living whole person at the same instant in time as a new human being is brought into existence. In the same way as the embodied life of Adam was directly created by God when he breathed life into the earth which became his body, the life of a human embryo is also created by God at the same instant as he creates its living body. Parents do not create a living child; they only procreate the child in that they participate in God's creative act.

Creationism is thus opposed to both the idea of a pre-existence of the soul and the theory of Traducianism whereby all persons are, somehow, created entirely and uniquely by God in one single act "at the beginning." In Traducianism children are simply being propagated like the branches of a tree down the generations which can only be considered as mistaken since any participation by the human procreators in God's creation is sadly impossible. St. Jerome (ca. 347–420) and John Calvin (1509–1564) were opposed to Traducianism indicating that Creationism was the set opinion of the Church, though Martin Luther (1483–1546) and St. Augustine (354–430) were undecided. Amongst the Scholastics of the Middle Ages there were generally no defenders of Traducianism, with St. Thomas Aquinas (1225–1274) indicating: "It is heretical to say that the intellectual soul is transmitted by process of generation." Charles Dubray, "Traducianism," in *The Catholic Encyclopaedia*, vol. 15 (New York: Robert Appleton, 1972), <http://www.newadvent.org/cathen/15014a.htm>.

See also David Albert Jones, *The Soul of the Embryo* (London: Continuum, 2004), 102–8.

- 15 See: Derek Parfit, "Rights, Interests and Possible People," in *Moral Problems in Medicine*, ed. Samuel Gorovitz et al. (Englewood Cliffs, NJ: Prentice Hall, 1976) 369–75.
- 16 Russell DiSilvestro, "Three Christian Arguments Against Germline Engineering," 212 (italics in original). Moreover, it should be noted that before conception and the original instant of conception an individual does not exist, thus cannot experience any benefit in any way. Indeed, it is difficult to understand how it is possible to compare existence to non-existence (of anything or anyone).
- 17 For a further presentation of the non-identity problem, see Duncan Purves, "The Non-Identity Problem," 1,000-Word Philosophy, February 27, 2014, <https://1000wordphilosophy.com/2014/02/27/non-identity-problem/>.
- 18 *Qualitative identity* examines similarities between the same individual in different settings or between distinct individuals. If a procedure results in *qualitative identity changes*, then the original individual continues to exist.
- See MacKellar, "Genome Modifying Reproductive Procedures and their Effects on Numerical Identity."
- 19 MacKellar, *Christianity and the New Eugenics*, 66.
- 20 Calum MacKellar, "Why Human Germline Genome Editing Is Incompatible with Equality in an Inclusive Society," *The New Bioethics* 27, no. 1 (2021): 19–29.
- 21 For a development of this argument, see MacKellar "Why Human Germline Genome Editing Is Incompatible with Equality in an Inclusive Society."
- 22 In the same way it would be unacceptable to provide race-selective reproductive procedures to non-inclusive parents or societies who do not make an effort to address racism.
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A Theology of Addiction and the Opioid Epidemic

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Introduction

In 2017, the United States Department of Health and Human Services (HHS) declared opioid overdose a national emergency.¹ The situation leading to this official declaration, and the developments since, have been bleak. Statistics from The Centers for Disease Control and Prevention (CDC) indicate that opioid overdoses have increased 70% in the Midwest alone from July 2016 through September 2017.² In 2018, 2 million Americans regularly abused prescription opioids, and 128 people died from overdoses each day. Another CDC report in 2016 described a 200% jump in opioid painkiller and heroin overdose deaths since 2000.³ Although these statistics do not begin to capture the magnitude of opioid abuse in the U.S., the implications are clear: opioid

abuse is a public health crisis.

Addiction to opioids and other substances have been viewed under a litany of models. However, two of the most prominent have been the disease and moral, or choice, models. Although the disease model of addiction has largely replaced the moral model of addiction in the literature, reducing addiction to merely a medical phenomenon neglects significant principles of sin and guilt found in addiction.⁴ While no model can perfectly describe addiction, an understanding of addictive behavior as an idolatrous orientation away from God must be held in tension with the biological realities of addiction. Models emphasizing the moral aspects of addiction while ignoring addiction's physiological effects risk an overly simplistic view of addicts' ability to extricate themselves from their addiction.⁵ On the other hand, recognizing the biological issues without acknowledging the moral issues risks minimizing the theological impetus to avoid addictive behaviors.⁶

In this paper, I will argue that a theology of addiction, especially addiction involving substance abuse, understands that the agency of the user is compromised while recognizing that the user retains moral culpability. A theology of addiction should recognize the multidimensional aspect of addiction as it pertains to the biopsychosocial nature of the addiction, rather than merely the spiritual. This tension is necessary to understand the overarching nature of addiction as sin while recognizing the challenging biological changes associated with substance abuse. This article will first examine opioids and the ongoing opioid crisis, also called the opioid epidemic, in the United States. Next, this article will analyze various models of addiction and the significance of models in one's response to addiction. Finally, this article will construct a theology of addiction through an examination of the Christian doctrine of sin. This theology of addiction can be utilized in reflections on how churches might engage those with addictions amidst the opioid epidemic. While the theological perspectives in this paper are presented primarily from the Reformed

tradition, this paper draws broadly from historic and contemporary Christian sources in an attempt to craft a broadly-applicable biblical response to the problems present in addiction.

I. The Ongoing Crisis

A. Opioids

Opioids are a class of drugs whose compounds bind to opioid receptors in the body.⁷ Opioids include natural drugs extracted from opium poppy seeds, such as morphine, and synthetic drugs, such as fentanyl.⁸ Opioids also include drugs such as heroin, oxycodone (OxyContin), Tramadol, codeine, and others.⁹ These drugs are used in cough suppressants and antidiarrheals as well as in regimens to treat chronic and acute pain and pain related to cancer or surgical operations. When opioids bind to receptors in the body, they act as a central nervous system depressant, causing analgesia, sedation, constipation, and respiratory depression. Accompanying these effects is a sense of euphoria, as opioids cause an increased release of dopamine within reward pathways.¹⁰ Opioid users can develop dependence as they continue to take opioids to replicate the euphoric effect. Tolerance can develop within days, with dependence following soon after, as the user transitions from taking opioids to achieve a high to taking opioids to avoid unpleasant withdrawal symptoms.¹¹ Opioid dependence and withdrawal symptoms have also been described in fetuses when a pregnant mother uses opioids.¹² It is important to note that opioid dependence, like many substance addictions, involves physiological changes in the user's brain as nerve connections adapt to the stimulation from the opioid, resetting the body's "normal" functioning to account for opioid use.¹³

Regarding the treatment of opioid users, naloxone is used to treat life-threatening nervous system and respiratory depression in opioid overdoses.¹⁴ For treatment of opioid use disorder, drugs such as methadone, buprenorphine, and naltrexone are used to avoid serious withdrawal symptoms while weaning a person off more potent opioids.¹⁵ Even with these drugs to aid in recovery from opioid addiction, researchers still find high rates of relapse in those recovering from opioid addiction.¹⁶

B. *The Opioid Epidemic in America*

Opioids have an extensive history with human society, but the precursor to the U.S. crisis is found in the early 1900s.¹⁷ At that time, opioid use, even medically, was socially and legally suppressed.¹⁸ Society viewed opioid addiction as a moral issue, rather than a medical one, and the medical use of opioids for pain treatment remained largely restricted, even as the moral view of addiction morphed into a disease model throughout the Vietnam War era.¹⁹ The restrictive use of opioids for pain changed in the 1970s as pain management became an established field.²⁰ The emphasis of practitioners on reversing undertreatment of chronic pain, accompanied by the American Pain Society's campaign advocating that "Pain is the Fifth Vital Sign," led to more widespread prescriptions of opioids for chronic pain.²¹ Simultaneously, opioid manufacturers propagated misleading and unfounded claims on the safety and non-addictiveness of opioids for chronic pain.²²

These calls for progress in pain management were readily taken up by government bodies and medical societies. Starting in the late 1990s and continuing to today, the effects have been dramatic. The early 2000s saw a massive increase in the use and abuse of prescription opioids.²³ Although the rate of opioid prescriptions began to taper off around 2010 in response to the public health crisis, people dependent on opioids had already begun to shift to heroin, which was cheaper and more readily accessible than prescription opioids.²⁴ Today, illicit drugs, such as heroin and fentanyl, remain the primary drivers of the opioid crisis.²⁵

II. Models of Addiction

Having discussed the current opioid crisis, this article will now address prominent models for understanding addiction. A medical definition of addiction describes it as a "chronic, relapsing disorder characterized by compulsive drug seeking, continued use despite harmful consequence, and long-lasting changes in the brain."²⁶ Addiction, however, is also used to describe behaviors other than substance abuse, so a more general definition could describe addiction as "behavior over which an individual has impaired control with harmful consequences."²⁷ Both these definitions frame addiction as an inherently negative

enterprise, and the second one highlights a deficiency in addicts' ability to control their behavior. As shall be seen, this concept of free choice in relation to culpability impacts the model and response one has towards addiction.

The first model of interest is the moral model, often framed in contemporary settings as the choice or volitional model.²⁸ This model emphasizes the moral weakness and personal responsibility of the addict engaging in an evil practice.²⁹ This model would challenge the notion in the second definition that addicts have an impaired ability to control their behavior, instead arguing that addiction entangles the addict only by virtue of the addict's choice to remain addicted.

The moral model has fallen out of favor, largely because of neurobiological evidence suggesting that addiction alters the decision-making capacity of the addict.³⁰ The now prominent disease model frames addiction as a neurological pathology. Addicts are not responsible for their addiction, though they maintain culpability for crimes resulting from the addiction, and the solution for the addiction is to receive treatment through medications and psychotherapy.³¹

While the disease model dominates the contemporary conversation on addiction, both models are recognized as being oversimplistic, and various nuances are applied to try to remedy their shortcomings. Some authors adopt the choice model of addiction without including an aspect of moral culpability,³² while other models emphasize learning and behavioral processes of addictions, rejecting both the moral and disease models as primary frameworks.³³ A plethora of models have reached publication.³⁴ However, it seems that the specific model of addiction etiology matters only to the extent that people use it to understand the addict's responsibility.³⁵ In other words, the exact etiology is not the crux of addiction model debates, as most can appreciate a multifactorial cause of the addiction experience. Rather, the primary concern is in connecting etiology and the responsibility of an addict to end the addiction.

III. A Theology of Addiction

A. *The Doctrine of Sin*

When examining the nature of sin and addiction, we must begin before the Fall



and entrance of sin into humanity. God created humanity no less than “very good” (Gen 1:31, ESV), the purpose of our creation being “to glorify God, and fully to enjoy him forever.”³⁶ Thus, humanity was created in a covenant relationship with God. However, humanity lives not only in relationship with God but also with fellow human beings. This is summed up in Jesus’ description of God’s law as the command to love God and love one’s neighbor (Matt 22:36–40). The fulfillment of humanity’s created purpose in accordance with God’s law is then the glorification and enjoyment of God alone through one’s relationship with Him and through relationship with other human beings.

While humanity was created perfect in pursuit of this good, the liberty endowed by God to Adam enabled him to violate God’s law, introducing original sin—corruption, guilt, and punishment—into humanity.³⁷ Wayne Grudem further defines sin as “any failure to conform to the moral law of God in act, attitude, or nature.”³⁸ Sin, thus conceived, is the shattering of the covenant between God and humanity, both the cause and the practice of humanity’s inability to fulfill its purpose in loving relationship with God and each other.³⁹ Humans, thoroughly affected by “culpable evil,”⁴⁰ are lawbreakers.

In describing human longing despite sin, Cornelius Plantinga synthesizes the writings of two major figures in church history.⁴¹ First, he describes St. Augustine’s concept of the *summum bonum*, the “supreme good” without which humanity cannot be fulfilled. Augustine describes this supreme good of

human fulfillment as fellowship with God, writing in his *Confessions*, “O Lord . . . Thou madest us for Thyself, and our heart is restless until it repose in Thee.”⁴² Writing further in *The City of God*, Augustine identifies the end of good, or “that for the sake of which other things are to be desired,” as eternal life, which is gained through “liv[ing] rightly...by faith.”⁴³ Thus, Augustine’s conception of an impetus for goodness is found in the innate longing of all people for eternal life and fellowship with God.

Second, Plantinga supports Augustine’s assertions of human longing for God with John Calvin’s concept of the *sensus divinitatis*, an “awareness of divinity,” that precludes ignorance of God’s law and instead feeds our longing for its fulfillment.⁴⁴ Calvin argues that these yearnings are inescapable, reflecting our created nature even when humans sin by substituting lesser goods in place of God. Writing in his *Institutes*, Calvin states that idolatry itself is evidence for the *sensus divinitatis*:

We know how man does not willingly humble himself so as to place other creatures over himself. Since, then, he prefers to worship wood and stone rather than to be thought of as having no God, clearly this is a most vivid impression of a divine being. So impossible is it to blot this from man’s mind that natural disposition would be more easily altered.⁴⁵

Calvin demonstrates a critical connection between humanity’s longing for God and idolatry and sin. Humanity possesses

a recognition of the divine, but when God is rejected as the sole object of worship, the sense of the divine does not disappear. It is instead misplaced towards other objects or practices.

Scriptural evidence for a misplaced *sensus divinitatis* is found in Paul’s epistle to the Romans, where Paul writes in chapter 1:18–32 that God’s “invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made,” but that sinful humans “did not honor him as God or give thanks to him, but . . . exchanged the glory of the immortal God for images resembling mortal man and birds and animals and creeping things” (Rom 1:18–32). Alec Lucas comments on this passage, noting that it “establishes human culpability for suppressing the knowledge of God, a knowledge manifestly discernible in the works of creation.”⁴⁶ This culpability matters in describing a theological framework of sin because a misoriented *sensus divinitatis* is implicated as the driving force behind idolatry when it is pursued apart from God.

B. Sin, Addiction, and Sanctification

Within this framework of sin, addiction, in its entanglement of the addict toward worldly goods and away from God, should be understood as a practice of sin, an undeniably immoral enterprise. Christopher Cook redirects the conversation of sin and addiction away from choice, the emphasis of most debates regarding addiction, and to its orientation away from God.⁴⁷ Against the claims

of the moral model of addiction, Cook argues that the moral model fails to account for psychological, social, and biological factors that affect addiction, but he emphasizes that theological engagement does not necessitate a return to the moral model.⁴⁸ Rather, theological engagement in addiction provides the groundwork for a sympathetic and explanatory stance towards those struggling with addictions. Drawing from Augustine's *Confessions* and Paul's description of sin and desire in Romans 7:14–25, Cook applies the universal human experience of fleshly struggles against sin to the challenge that the addict faces in seeking freedom.⁴⁹ To be sure, not all those who struggle with sin (all people) are addicted, but Cook argues that “the subjective experience of division of will and self is universal and is experienced in different ways by different people.”⁵⁰ Although recognized as a struggle against sinful practice, addiction is not simply a question of free choice, as it also incorporates the universal struggle of all human beings against the corruption wrought by original sin. For Cook, the pursuit of God's grace as a goal transcending the addiction represents Augustine's description of humanity's pursuit of the supreme good that is found only in God.⁵¹

Kent Dunnington offers a Thomistic view of addiction as a habit to describe the behavior of addicts in continuing a practice known to be harmful to oneself.⁵² Just as Aquinas, following Aristotle, promoted virtuous habits, or reasoned dispositions, as critical to developing ethical behavior, addiction as a reasoned habit, and not merely a passion, holds explanatory power for the long-term sway that addiction holds on a person, especially when describing relapsing addicts.⁵³ Like Cook, Dunnington both recognizes a role for theological analysis in addiction and applies the doctrine of sin to this engagement. As was argued previously, sin extends beyond bad choices to encompass states and situations that humans find themselves in.⁵⁴ Deeper than individual sinful actions, humanity, through original corruption, finds itself battling a predisposition to rebellion against God.⁵⁵

L. Madison Perry expands upon Dunnington's argument of addiction-as-habit through an analysis of Calvin's writings on the person.⁵⁶ Perry makes a direct link between humanity's *sensus*

divinitatis and the misguided worship that defines addiction, arguing that the original corruption affecting all humans does not eliminate this *sensus divinitatis*. Rather, the *sensus divinitatis* becomes misoriented in the rebellion of humanity from the worship of God.⁵⁷ By characterizing addiction as an extreme habit, Dunnington and Perry establish a tension between the addict's physically affected agency and cognitive culpability. This recognized tension drives a theological perspective to recognize the complicated nature of addiction as it affects the reasoning and biology of the addict, while still acknowledging the state of addiction as a struggle against sin. This multidimensional perspective understands God's grace through salvation, humanity's redemption to its *summum bonum*, as the only real solution to addiction. However, in contrast to a moral model's emphasis on choice as the exit from addiction, the multidimensional understanding of addiction presents biology, psychology, and sociology as being of issue, though not fundamentally so. Daniel Mallinson argues that a church's response to addiction must recognize social and biological dimensions but stresses that a spiritual foundation, salvation and subsequent sanctification, is the only fulfilling answer to addiction.⁵⁸ While spiritual regeneration remains the crux of addiction, models espoused by Mallinson, Cook, Dunnington, and Perry recognize the critical importance of care for the biological and communal aspects of the person, especially as the person will never be fully rid of sin and sinful tendencies in this life.⁵⁹

Some commentators disagree with the characterization of addiction as sin. Janet Warren admits that addiction “can be considered a sin,” but does not allow them to be equated, pointing out superficial differences (e.g., that all people have sin, but not all people have an addiction).⁶⁰ Interestingly, Warren states that both sin and addiction are rooted in an “avoidance/alleviation of angst through any manner other than trust in the triune God.”⁶¹ While addiction so described ought to be considered a sin with regards to a misplaced *sensus divinitatis* and *summum bonum*, it is unclear how Warren differentiates addiction from sin. Similarly, Hans Madueme argues that addiction may involve no sin, such as in the case of a baby affected by prenatal drug addiction.⁶² While such a baby is not responsible for the onset

of a cocaine addiction, the situation of a continued cocaine dependence would be sin in its wrongful orientation from God. The baby, through no choice of itself, is indeed caught up in sin and requiring of salvation to escape this entrapment.⁶³ Like all people, this child is called to struggle against a sinful tendency that it did not choose to begin. Moral responsibility in addiction relies on the divorcing of sin from choice, and this distinction is seen both in the universal presence of corruption in humanity's daily struggle against sinful desire and in specific instances of an addict's struggle with an addiction. Recalling Grudem's definition of sin, sin includes corruption in our attitude and nature.⁶⁴ Sin and addiction reach deeper than a series of bad choices. As Theodore Turnau describes, sin is radical idolatry and rebellion and can be healed only through the transforming grace of God.⁶⁵

C. The Church and the Opioid Epidemic

The reformed doctrine of total depravity views sin as permeating every aspect of humanity and creation.⁶⁶ Yet there is an aspect about creation that remains good because God created it, and what he makes is good.⁶⁷ This tension of a created good yet totally depraved humanity is particularly helpful in the analysis of the opioid epidemic. A natural flower, the opium poppy, was investigated for a good and proper intention, to relieve physical pain. Yet a combination of social factors (organized campaigns and reckless pharmaceutical advertising) and biological factors (the effects of powerful opioids like heroin on the body) led to one of the greatest public health crises in United States' history. These factors certainly do not define the whole of addiction, as many people recover from addictions without medical treatment, and addiction is seen as theologically rooted in a misplaced pursuit of the supreme good.⁶⁸ However, these considerations reorient our analysis to understand that addiction is more complex than an addict's ability to “just say no.” Thus, while theology is the fundamental issue, other factors cannot be ignored in the understanding of addiction, especially when it occurs on the scale of the opioid epidemic.

A theologically minded approach to understanding addictions leaves Christians with a great burden. Addiction as misoriented idolatry in tension with affected agency behooves Christians to seek the healing of

those afflicted. Christian engagement with cultural phenomena will differ based on the community within which the engagement occurs.⁶⁹ Talking of God in churches looks different than talking of God in the legislature. But, for the Christian, all engagement must proceed from God and His word (whether explicitly or implicitly), for he is the supreme good of humankind. Thus, Christian engagement, both influencing and creating aspects of culture, proceeds from faithfulness towards God's command to love him and one's neighbor.

In understanding Christian faithfulness as a love for God and neighbor, churches must not only call addicts to repentance but must themselves identify and mend failures to show Christian love towards those with addictions. From the multifaceted model described above, Christians may exercise loving kindness towards persons with addictions in many domains. (This should occur with humility, for the sin of idolatry is universal and affects even Christians.) Christianity, with its inherent pursuit of the transcendent and its comprehensive understanding of human sinfulness and sanctification, is uniquely equipped to address the spiritual aspects of addiction. Although Cook's Augustinian philosophical foundation differs from the Thomistic perspective of Dunnington, both identify the fundamental cause and solution of addiction in the pursuit of a transcendent ideal.⁷⁰

Particularly in the culture of modernity and postmodernity that denies the presence of transcendent purpose, addiction appears to "[offer] the most powerful available response to this peculiarly modern lack."⁷¹ In contrast to the lure of addiction as an answer to a culture devoid of transcendent purpose, Christian theology identifies humanity's pursuit of the transcendent God as the only fulfilling response to the longing that addiction attempts to satisfy. Understanding that sanctification is a lifelong process and that even Christians continue to sin in this life, churches should aid, rather than alienate, Christians who relapse into addictions. Likewise, the broader social domain of addiction should spur churches to provide community for struggling addicts, not just in Narcotics Anonymous meetings, but within the body of the church.⁷² Importantly, this theological perspective does not preclude recovery from addiction where the addict remains a non-Christian. Churches may see many addicts recover who are not Christians. Although God's common grace has allowed them to escape this slavery, Christians recognize that those people are still in bondage to sin without Christ, and their lack of addiction remains an unsolved spiritual problem as long as their *sumum bonum* is directed away from God.

Practically, churches can seek training to use life-saving naloxone for opioid overdoses. HHS has developed a practical toolkit that

outlines these and other action steps that churches can take to address opioid abuse in their communities.⁷³ In counseling, church leaders should also consider how to guide members who are considering using opioids for pain relief. Although engaging a community trapped in addiction is no easy task, the message of Christianity and the work of churches has and can continue to have a life-saving impact on the lives of addicts.⁷⁴

Conclusion: Not Against Flesh and Blood

Addiction is a complicated phenomenon but fundamentally describes a habit of pursuing a created thing rather than God, the Creator. However, Christians must recognize the tension between the sinful aspect of addiction and the physiological realities of substance dependence. Churches occupy a unique position to serve those with addictions by addressing the fundamental need for God that addictions seek to fill while also aiding in the social restoration of persons with addictions. As addiction occurs on a spectrum—different addictions have varying levels of severity, and the basic root of addictions is the sin of idolatry that all people face—Christians must act in humility, knowing that medical and social support is necessary for addiction treatment, but that only the grace of God can solve the fundamental problems in addictive behaviors. ●●●

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Forming the Church and the Cultural Imagination with a Theology of Embodiment

Bethany Peck, BA | Guest Contributor

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The swearing-in of Amy Coney Barrett, the newest and the youngest associate justice on the U.S. Supreme Court, brought forth the prospect that a significant shift in the law regarding abortion could occur in the future, with the possibility of the 1973 *Roe v. Wade* decision being overturned. Abortion defenders fear not only that *Roe v. Wade* may fall, but that the newly revised court could go further by recognizing fetal personhood.¹ On the other hand, this would be a great victory for abortion opponents as this would effectively form a constitutional right to life for the preborn child. Over the past few years,² states have taken action to codify various provisions either protecting abortion rights, or banning abortion, should the U.S. Supreme Court come to the point of overturning *Roe*.³ And in fact, after months of deferring the question, in May of 2021 the

U.S. Supreme Court agreed to hear a significant abortion case in its upcoming term—the Court's decision on the Mississippi law that bans most abortions after 15 weeks (or more than three months of pregnancy) could pose a significant challenge to *Roe v. Wade*.

If *Roe* is to be diminished, a distinct though not guaranteed possibility with the Mississippi case, abortion access in the U.S. would be impacted, falling to determination by state legislatures. “In the future, women may experience multiple limitations on accessing services,” especially impacting “disadvantaged individuals, including women of color and women with lower incomes, less education, or rural residence.”⁴ Thus we can infer that more women who otherwise may have sought abortion as an option to an unplanned pregnancy will instead carry the pregnancy to full-term. The Guttmacher Institute also notes in this scenario the rising need and public cost for

prenatal care, delivery services and welfare.⁵ That is, more women will be seeking public or private assistance for the costs associated with raising a child.

What does it mean for the Christian to engage this issue from a biblically informed theological worldview? First, it will be argued that we need a sound theology of embodiment. With that foundation, we then must consider the best way to engage the culture from a Christian perspective. A theology of embodiment that draws on the doctrines of creation, the *imago Dei*, and the incarnation to form a Christian practice of relational life lived out in the body can transform the Church to serve pregnant women and the preborn child, thus providing a welcoming place for women considering abortion, whether they have the legal option or not. This theology of embodiment can also transform our culture, shining a beacon of light in a dark world filled with broken bodies and ruptured relations.

Abortion and Disembodiment

Before constructing a theology of embodiment, it is helpful to first consider what disembodied living might be. Many approaches to abortion involve a disconnection to the woman's body, from both the pro-abortion and anti-abortion sides. A familiar pro-abortion feminist slogan is "my body, my choice," meant to imply that it is a woman's choice to end a pregnancy. She can terminate the nascent human life within her, denying the physiological process happening to her and the unborn child, in order to continue her current life situation. This perspective claims that a natural, embodied experience for a female is a barrier to the emancipation and autonomy of women.⁶

However, the aforementioned soundbite also acknowledges that it is a woman's *body* that carries a pregnancy. It is the woman's body that nourishes and grows a preborn baby, first as an embryo and then as a fetus. And while rhetoric tries to obscure this truth, it is scientific fact that from the moment of conception, when egg and sperm come together, the zygote that is formed is a separate organism.⁷ Dependent upon the woman's body, yes, but a unique human. Furthermore, for the mother during pregnancy, "dramatic anatomical, physiological and biochemical changes occur in every organ of a woman's body."⁸ To interrupt that process can lead to health risks for the mother.⁹ Abortion then, is disembodiment in a grave and destructive way for both the preborn child and the mother. This discussion will be further unpacked in the section, *The Female Body*.

Gnosticism

Disembodied thinking and living represents a dualism that can be traced back to Greco-Roman culture. Platonic philosophy emphasized the spiritual life over the material, physical life, which gave rise to Gnosticism.¹⁰ This thinking has pervaded Western culture in various forms over the centuries, with its central premise being "a radical dualism of spirit and matter, soul and body."¹¹ One of Gnosticism's most egregious manifestations currently is that of transgenderism. Author Abigail Shirer details the impact this post-modern Gnostic movement is having on teenage girls in her book *Irreversible Damage: The Transgender Craze Seducing our Daughters*. She reports that young girls, influenced by social media messages, are suffering from gender dysphoria and looking for a quick fix to escape the pressures of female adolescence and puberty by undergoing gender surgeries at alarming rates.¹² This transgender craze is seducing many with the falsehood that one's body, their biological sex, is separate from their personhood. As philosopher Robert George notes, "Changing sexes is a metaphysical impossibility because it is a biological impossibility."¹³

Gnostic heresy threatened the early church in the second and third centuries by taking away from the power of Christ, essentially denying the incarnation. In turn, "for the gnostic, the resurrection of the body was an absurdity, at most a mere metaphor for the ascent of the soul to its true home in heaven."¹⁴ Irenaeus of Lyons was one of the first great opponents of Gnosticism and

defender of orthodoxy. In *Against Heresies*, he exposed the heretical teaching that Jesus possessed a mythical, rather than human, body.¹⁵ While Irenaeus presented a trichotomist rather than dualist view of the human person, his perspective of the indivisibility of the human person is helpful. He wrote of the body:

For that flesh which has been moulded is not a perfect man in itself, but the body of a man, and part of a man. Neither is the soul itself, considered apart by itself, the man; but it is the soul of a man, and part of a man. Neither is the spirit a man, for it is called the spirit, and not a man; but the commingling and union of all these constitutes the perfect man.¹⁶

Irenaeus developed a strong doctrine of creation that is a "free act of an omnipotent God, but also that its materiality is a good product of an omnibenevolent God."¹⁷ His doctrine also takes into account Christology and soteriology: since God became man, no created material can be considered unreal or intrinsically evil, and that "creation as a whole is the object of God's redemption—its destiny, like that of human beings is maturation and perfection."¹⁸

Virtually all of the early defenders of the Christian faith "were adamant about defending the intrinsic goodness of the body as created by God against the anticorporeal doctrines of Gnosticism."¹⁹ In *Theology of the Body*, Jean-Claude Larchet emphasizes how we see in the biblical account of creation the body being created first, "out of dust,"



and then the soul when God breathes life into Adam.²⁰ “Here, Scripture contradicts in advance those philosophical or religious schools of thought—such as Platonism, Gnosticism, Neoplatonism, or Origenism—that see the body as a secondary, subsequent entity, associated with a degradation of reality.”²¹

A Theology of Embodiment

Creation, the Body, and the Imago Dei

Embodiment is life lived out in our bodies, both on this earth and in the new earth after the resurrection of the body.²² Our embodiment is even essential to human development, knowledge, and culture. In *Theology in the Flesh*, John Sanders describes the critical role that embodiment plays in cognitive learning, including how we think about God and Christian living.²³ He describes how we can only learn and understand what we perceive from our embodied experience, which could lead us to postulate that “human cognition is dependent upon our bodies.”²⁴ Similarly, in discussing the views of both Augustine and Aquinas on the human as both a soul and a body, theologian Beth Felker Jones writes that “because we are body-soul unities, we have no direct access to knowledge, including knowledge of God, outside of our senses, outside of our embodied lives.”²⁵ Sanders rejects Gnostic thinking: “Human understanding of our world is from a human perspective, which is an embodied perspective, rather than from a mind that exists independent of the body. For instance, we talk about a book being ‘in front of,’ ‘behind,’ or ‘to the side of’ a person because we have the sorts of bodies that enable us to cognize this way.”²⁶ Our embodiment precedes language and is the foundation of our conceptual systems.²⁷ In countless ways through Scripture, analogies of the body are utilized. God works through our embodiment to reveal himself through Scripture and the natural world.²⁸

A theology of embodiment thus must start with the body, and we can look to the beginning, the book of Genesis, for wisdom. The doctrine of creation shows us that there is a “psychosomatic unity,” in that there is no superiority of one substance, the soul, over the body.²⁹ “God formed us from the ground and enlivened us with his breath. We are not mere souls, but embodied beings.”³⁰ The first book of the Bible gives the account of God

creating the world, with man as his penultimate creation: “So God created mankind in his own image, in the image of God he created them; male and female he created them” (Gen 1:27, NIV). There is much that is unique about man and woman; *basar* is the Hebrew word used for “living beings and their bodily existence,” and it is solely used for physical beings (human persons and animals) and not of God.³¹ Furthermore, mankind is uniquely created in the image of God; however, there are many interpretations of the *imago Dei*, of what it means to be made in the image of God. These views can be categorized as substantive, functional, or relational. The substantive view emphasizes the mental and spiritual qualities of humans, while the functional sees man and woman as a royal representative of God on earth to exercise dominion.³² The relational view, developed by Karl Barth, posits that image and likeness are about an “analogy of relation”: the relationship between male and female is in some way analogous to the relationship among the persons of the Trinity.³³

Catherine McDowell discusses the prevailing views of the *imago Dei* in “In the Image of God he Created Them,” writing that “the dominant view through the history of interpretation has been that these terms refer to a spiritual or mental similarity to God with which humans were endowed at creation.”³⁴ She argues, however, that this dominant



view is not the only view, citing various Scripture that would indicate that “God’s spiritual nature does not preclude divine self-revelation in other forms,” with the incarnation being a prime example.³⁵ She interprets the relational view on the basis that image and likeness are kinship terms—that to be made in the image of God is about status, or belonging, in the family of God; we are created as “sons” of God.³⁶ She writes of the gleaning laws of the Torah in ancient Israel. Boaz is the most famous practitioner of these commands, providing for his future wife Ruth, who becomes part of the genealogy of Jesus.³⁷ Boaz, Ruth’s kinsman redeemer, fulfills God’s intent for creation by living out the proper understanding of his identity as the *imago*. This is what every “son of God” is created to do, demonstrating “in every sphere of life God’s original creational intent, his redemptive plan and his eschatological goal for humanity. This was Israel’s mission, and it is ours, for the sake of the world.”³⁸

As a picture of the *imago Dei* becomes more clear, so too does our embodiment. I would argue that the relational view is the best interpretation for the *imago Dei* and that it fully supports our embodiment. In *Dignity and Destiny*, theologian John Kilner warns that we miss the significance of the *imago Dei* when it is conflated with an exact representation of humanity.³⁹ And more grievously, this misinterpretation has fueled much discrimination over time, as it is easy to target populations that don’t reflect the ideal human, such as those with disabilities, women who were thought to lack the intellectual capacities of men, or the preborn child. Kilner argues that the *imago Dei* is about humanity’s connection with God and reflection of Christ: “The wonder of being in God’s image is about people’s special connection with God and how that will enable all who wish, to be a reflection of God in Christ.”⁴⁰

The rationality test is also rejected by Carter Snead in *What It Means to Be Human*, as what bestows human dignity and defines the *imago Dei* is that we are all created, embodied, unique, and dependent on one another.⁴¹ It is connection to God—our kinship with him as described by McDowell—and how this is reflected in the world that best describes the *imago Dei*. Every human arrives in the world with connections, first

and foremost with the mother that births a child. In *Neither Beast nor God: The Dignity of the Human Person*, Gilbert Meilaender writes: “How we come into being and how we go out of being are of central importance for any sense of what it means to respect (or undermine) human dignity. But human dignity also involves more than how we are born and how we die. To be born of human parents is to be connected in particular ways.”⁴² We are dependent upon one another, in different ways at different times in our life cycle. As Snead writes, “An exorable reality of embodied human life is *dependence*. Most obviously, given the way human beings come into the world, from the very beginning they depend on the beneficence and support of others for their very lives.”⁴³ That is, every human starts his or her journey as dependent, in relationship with other humans.

As we begin to understand our relationships as part of our embodiment, we must further consider the relationship between God and humanity set in motion at Creation. In *Church Dogmatics*, Karl Barth writes of the significance of humans being created male and female in the image of God.

The relationship between the summoning I in God’s being and the summoned divine Thou is reflected both in the relationship of God to the man whom He has created, and also in the relationship between the I and the Thou, between male and female, in human existence itself. There can be no question of anything more than an analogy.⁴⁴

It is an analogy that recognizes that both the Trinitarian Creator God and the created creature have their existence in relationship.⁴⁵ There is a unique relationship between man and woman that represents the I-thou-ness of God. “To be created in the divine image is to be so endowed that one lives one’s life in an ineluctable relationship with God and neighbor.”⁴⁶ The doctrines of Creation and the *imago Dei* are thus foundational to a theology of embodiment, in which every human is created with innate dignity that reflects the opportunity to be in relationship with God, and with one another, not just as souls or through our mental capacities, but in life lived out together, in the flesh, in community. Paul reflects this interdependence as he teaches

that the church is the body of Christ, urging believers to honor each member. We see how giving and receiving care through the challenges of life is an embodied experience. “The pastoral encounter itself is always necessarily and variously embodied: the touch, be it informal or as a ritual of anointing or healing; or the reassurance of eye contact, the one-to-one conversation.”⁴⁷

Thus, a theology of embodiment is the human body lived out in relationship, the truest reflection of the Creator’s image. “Such encounters at the bodily level are true I-thou encounters, for the I always meets the thou in the mutuality of a concrete, bodily existence.”⁴⁸ Embodiment is to live out “I-thou” encounters; connection, interdependence, and relationships are a necessity. It is to look into the eyes of the weeping woman considering abortion because she has just lost her job and does not know how she can afford to raise a child, and to lovingly say, “I will support you,” along with the church. “To be made in God’s image is purposeful. We are to be faithful images of the love of God, images who can be touched and seen.”⁴⁹

The Incarnation

The incarnation is a central doctrine to Christianity with the divine word of God becoming flesh in the human body of Jesus. “The New Testament depicts Jesus Christ as both the Word becoming flesh and a fully human being who communicates that Word in what he says and does.”⁵⁰ He was born of a woman, coming to this earth as an embryo, and brought forth through birth in Bethlehem. “At the heart of the Christian faith is the mystery of the incarnation: of God sharing human life in the form of the person of Jesus.”⁵¹

The incarnation sets Christianity apart from other religions. Furthermore, it is in the Last Supper and the Eucharist that Christ leads his followers to participate in communion with him. “In communicating with the body and blood of Christ, the believer also communicates with his soul and spirit—in short, with the entire person of Christ. Here, confirmed by Christ himself, can be seen on the one hand the essential link that unites body, soul, and spirit in the human being; and on the other the fact that the body involves the entire person.”⁵²

Lastly, it is the death and resurrection of Christ that accomplishes God’s plan for

redemption, forming the new covenant that man and woman might have new life, a promised future of hope of resurrection. It is through Christ’s body that he accomplishes salvation.⁵³ Because of the psychosomatic unity of the human, the resurrection of the body is necessary: “we must be freed from death in both soul and body.”⁵⁴ The unity of body and soul from the beginning at creation must be carried through into redemption.⁵⁵ The incarnation further shows the importance of the body in that God chose to redeem creation through his body. He sent his Son in bodily form to this earth; his broken body accomplished salvation so that all who believe may live again. Furthermore, his death and resurrection foretell the bodily resurrection of believers—we will not just live on as souls, but as unified persons with body and soul. Writes Joshua Farris in *An Introduction to Theological Anthropology*, “The significance of human embodiment is reflected in our generative relationships. The incarnation and resurrection . . . also point to the significance to human life.”⁵⁶ We must encounter one another in the flesh relationally to affirm our dignity as endowed by God.

We see then how creation and the incarnation inform the believer’s life lived out in the body, caring for and connecting with the humans we come in contact with, in relationship and community. “Christians acknowledge the reality of God’s self-revelation in the form of a human life; but a practical theology that tells stories of embodiment can really examine what it might mean for God to be revealed in a human body, broken and suffering, whose resurrection proclaims that Love is stronger than death.”⁵⁷ Through his resurrection, Christ suffered bodily so that we might have new life. One’s identity cannot be understood outside of one’s body nor outside of their relationship with God and those around them.⁵⁸ We, too, can live out this story for the sake of others.

The Female Body

Pregnancy is an inextricable part of the female body. The “natural rhythms” of the female body and her procreative purpose tie her to the natural life cycles of all of creation.⁵⁹ Our embodiment reflects the image of God in many ways, and in pregnancy we see this uniquely. The pregnant woman is a reminder of the incarnation in that God became flesh in coming to his created

world born of a woman. Every pregnancy can remind us of this humble entry of Christ Jesus, the mysterious incarnation. The state of pregnancy reflects eschatological hope, as the expectant mother experiences the here-and-now discomforts of pregnancy and birthing pains as well as a longed-for future happening at once.⁶⁰ “Pregnancy is a poignant reality of the known and felt yet unseen dimension of the kingdom of God: a biological and human experience and expression of the ‘now’ and the ‘not-yet’ reality of the kingdom of God.”⁶¹ The pain of childbirth is part of the curse after the Fall, and a metaphor for the impact of the Fall—futility, suffering, corruption—on all of creation. “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 firstfruits of the Spirit, groan inwardly as we wait eagerly for our adoption to sonship, the redemption of our bodies. (Rom 8:22–23). This is our hope as believers—the bodily resurrection.

Likewise, caring for the pregnant woman, her body and soul, is an extension of our embodied existence. In “Embodiment versus Dualism: A Theology of Sexuality from a Holistic Perspective,” Leslie Kendrick Townsend writes:

In pregnancy, a woman experiences the conviction that “My life and another’s are one.” . . . Woman’s inner connection with her own embodiment during pregnancy serves to bond rather than separate her from others. Just as in the internally felt connections of pregnancy, self and other do not compete, but have value for each other and contribute to the completion of each other.⁶²

In the symbiotic unity between mother and child during pregnancy, one body cannot be separate from the other without diminishing the other’s embodiment. Furthermore, abortion poses many health risks for the mother, which speaks to the unnaturalness of abortion, or rather, the consequences of disembodiment. Abortion is associated with numerous physical health risks for women, including breast cancer, placenta previa, pre-term birth, suicide, and maternal mortality.⁶³ In “Reviewing the Evidence, Breaking the Silence,” Dr. Elizabeth Shadigian notes that even the American College of Obstetricians and Gynecologists documents

that “long-term risks sometimes attributed to surgical abortion include potential effects on reproductive functions, cancer incidence, and psychological sequelae.”⁶⁴

Data in regards to abortion and mental health is also downplayed, as seen in the American Psychological Association’s 2008 report by its Task Force on Mental Health and Abortion. The APA’s press release on the report highlighted that women who choose abortion rather than carry a pregnancy to term were at no greater risk of mental health challenges.⁶⁵ Yet in their report they conclude, “It is clear that some women do experience sadness, grief, and feelings of loss following termination of a pregnancy, and some experience clinically significant disorders, including depression and anxiety.”⁶⁶ As researcher David Reardon points out, “In regard to the abortion, mental health controversy, studies by [abortion-mental health] minimalists tend to be written in a way that minimizes any disruption of the core pro-choice aspiration that abortion is a civil right that advances the welfare of women.”⁶⁷

Women also experience short-term and long-term emotional effects from abortion. Dr. Julius Fogel, a psychiatrist and OB-GYN, was a leader of abortion rights and performed tens of thousands of abortions. He defended the necessity of abortion, and yet even he testified to the profound emotional impact of abortion on a woman:

Every woman—whatever her age, background or sexuality—has a trauma at destroying a pregnancy. A level of humanness is touched. This is a part of her own life. When she destroys a pregnancy, she is destroying herself. There is no way it can be innocuous. One is dealing with the life force. It is totally beside the point whether or not you think a life is there. You cannot deny that something is being created and that this creation is physically happening.

Often the trauma may sink into the unconscious and never surface in the woman’s lifetime. But it is not as harmless and casual an event as many in the pro-abortion crowd insist. A psychological price is paid. It may be alienation; it may be a pushing away from human warmth, perhaps a hardening of the maternal instinct. Something

happens on the deeper levels of a woman’s consciousness when she destroys a pregnancy. I know that as a psychiatrist.⁶⁸

Though a difficult testimony to digest, this report from a doctor who supported abortion rights should be available as information to consider before a woman makes the decision to terminate a pregnancy. Furthermore, Dr. Priscilla Coleman has done extensive research on the emotional effects of abortion on women, and the often distressed path to which it leads.⁶⁹ In a qualitative synthesis on women who have suffered emotionally from abortion, Coleman found that “common negatives included feelings about termination of a life, regret, shame, guilt, depression, anxiety, compromised self-appraisals, and self-destructive behaviors.”⁷⁰ In “Learning from Bodies,” Nora Calhoun dismantles the idea of autonomy, of both the preborn child and the mother, which to accept would require a “willful blindness to the physical reality and lived experience of pregnancy and birth.”⁷¹ The human body, especially the pregnant female, speaks to us, and we gain wisdom in the experience of being with and caring for one another.

Christian Engagement in the Culture

Because the violence and mass scale of abortion is grievous, with over sixty million abortions occurring since 1973,⁷² anti-abortion, or pro-life, Christians have sought to end abortion since *Roe v. Wade*. Yet this effort to rescue babies from death is not just a modern phenomenon. The early Church condemned the common practice of infanticide and Christians rescued infant lives left out to exposure.⁷³ With the need to rescue vulnerable children from either infanticide during the time of the early church or the mass genocide of abortion in modern times, the woman’s body has often been lost as the focus for the anti-abortion Christian. We can similarly be faulted for disembodiment by removing the woman’s body out of the conversation, or ignoring her in practicality and only focusing on the body of the pre-born child.

Christians can draw on a theology of embodiment in order to rescue preborn children from death *and* support the flourishing of women, and thereby families and communities. With this theology of embodiment, how can the church engage culture

on abortion? First, a clarification on culture. The simple yet understandable definition from Kevin Vanhoozer in *Everyday Theology* is helpful: “By culture we mean the distinctly human world that persons create by doing things not by reflex but freely as expressions of desire, duty, determination.”⁷⁴ Unfortunately, we live in a culture that pursues and celebrates abortion. Likewise, our society, made up of our social institutions, has been impacted by that culture, enshrining abortion into law. While there is a shifting legal landscape, our culture still fully embraces abortion as a human right.

As new laws and court cases threaten to restrict abortion access, culture has dug in its heels to promote abortion as sacrosanct. While in prior decades even pro-choice advocates and political leaders expressed the desire that abortion should be a rare occurrence, in the past ten years proponents have explicitly dropped the qualifier of “rare” from the mantra of “safe, legal, and rare.” Abortion has become not just a right, but something to be celebrated and encouraged, and dissenters are considered anti-woman. Women are encouraged to celebrate abortion with the #ShoutYourAbortion campaign.⁷⁵ This ethical egoism denies the possibilities of mental and physical health risks as the primacy of abortion is so sacrosanct to women that any negativity is overlooked. For example, doctors who attempt to present the medical case for the abortion and breast cancer link have faced professional repercussions.⁷⁶ This perspective is so hardwired in society that scholarly and social skepticism about the aforementioned short-term and long-term negative impact of abortion on women’s physical, mental, and emotional health get downplayed or ignored, doing a grave disservice to women and their pursuit of health and well-being.

This current reality should come as no surprise, as it is reflective of both the Gnosticism and the individualism of our age. Snead refers to this as “expressive individualism” and considers it to be what drives the faulty anthropology that undergirds American public bioethics and thus abortion jurisprudence. It is based on the premise that “the fundamental unit of human reality is the individual person, considered as a separate and distinct manner in which he is or is not embedded in a web of social relations.”⁷⁷ The highest good for the human individual is to define the self in accordance with one’s mental desires, outside of the bounds of the body.⁷⁸ A preborn child that may thwart career plans is thus just a lump of cells to be discarded to continue to preserve the woman’s self. Similarly, as previously mentioned as another example of modern Gnosticism that also fits Snead’s definition of expressive individualism, should a teenage girl feel unhappiness and mental stress from the pressures of puberty and the online world she lives in, she can simply escape her bodily life and try to become a male.

But this expressive individualism does and will continue to fail as it does not consider the realities of the body and the human person; it does not embrace the truth of human embodiment. Our embedded human connections across generations and throughout our communities also reflect this. Human dignity is embodied. This dependence should not be seen as a detriment but something that fosters gratitude, solidarity, and community; while each is unique, we are the same in our need for others. Snead expounds upon this dependence:

Gratitude for the gifts of others’ support and life itself is also fertile ground for the cultivation of the sense of

solidarity—extending one’s field of concert to encompass those beyond his immediate circle of family, friends, and community, to encompass the wider circle of humanity. It grows from the recognition that dependence on the generosity and uncalculated giving of others is a universal condition of human beings, owing to their embodied existence.⁷⁹

We need each other to survive and flourish, starting from the beginning of our lives as an embryo on the womb dependent upon and in relationship with our mother. Our dependence and solidarity is not only needed for our survival, but our thriving, allowing our personhood to flourish in every stage of life.

As this paper looks at the ramifications of *Roe v. Wade* and its possible undoing, this includes the full spectrum of individuals threatened, impacted, or rescued from abortion: the pregnant woman uncertain how she will pay her bills and care for a child, the preborn child at risk of abortion, the birth mother heroically carrying her pregnancy to term, and the foster children languishing in the court system in need of a family. “Becoming a new creation in Christ gives us the ability to imagine a new way of relating to each other and to the goods of creation. More than this, the Spirit empowers this new world, this Christian imaginary, so that it can be embodied. New creation can be made visible in our culture. This Christian imaginary understands social relations not as power plays but as arenas of mutual service.”⁸⁰ Every believer should emulate Boaz in caring for the abortion-affected “Ruths” in our midst.

To do life like Boaz in our world of a shifting abortion dynamic, Christians must take a two-pronged approach. First, the gravity



of the issue and popular embrace of abortion calls for a transformation of culture. Just as the church in the first centuries opposed abortion and infanticide, so must the present-day Church be a beacon of light against the evil of abortion at a mass scale. Christians must shine the light of a theology of embodiment against the darkness of Gnosticism present in pro-abortion feminism. In many ways our modern culture has turned towards embodiment. Women are looking to products and programs that are “organic” and care for the body holistically. A theology of embodiment can help form the imagination of a new generation of women, especially those that have grown up with sonogram technology; 4D sonogram pictures makes it uncomfortable to deny the humanity of the preborn child in the womb. We must look at the ordinary and natural occurrences of everyday life, see the blessing of God in it, and in turn help others, the culture around us, see it too.⁸¹ Pregnancy and childbirth are as ordinary and extraordinary events as can be, and seen through the lens of embodiment, we see the beauty of creation and the incarnation—the Church must find creative ways to share this beautiful story with the world so as to not just warn away from the evil and disembodiment of abortion, but to draw people in to the goodness of God’s design and resurrection plan for the body.

Christians must turn inward, too. Abortion is not just something that happens outside the church. According to a study by Lifeway Research, “36% of women were attending a Christian church once a month or more at the time of their first abortion.”⁸² Women are simply not turning to the church for support or guidance with an unplanned pregnancy: “76% of women indicate local churches had no influence on their decision to terminate their pregnancy.”⁸³ The Lifeway Research is distressing. Not only are church-going women having abortions, but women who have abortions do not view the church as a haven of spiritual and material support during and

after an unplanned pregnancy. Churches must look to the ways they can open doors and lines of communication to be equipped to care for women seeking abortion.

Unfortunately, those lines of communication are often not open because of the great barrier of shame in our churches, especially when it comes to issues around sexuality, unplanned or out of wedlock pregnancies, and abortion. Shame has poisoned our world since man and woman first disobeyed God in the Garden of Eden, separating humans from the Creator, and man from woman. Psychiatrist and author Curt Thompson writes of the destructiveness of shame, drawing on neurobiology to describe how shame elicits a “felt” sense in the body: “shame is not simply acknowledgment of perceived facts but rather an emotionally expressed and experienced phenomenon.”⁸⁴ However, the transforming power of embodiment is able to overcome the disintegration caused by shame; our brains need connection which can literally reshape our neural networks.

Thompson draws on the relational view of the *imago Dei*, writing that God “desires us to join him in his trinitarian life of being known.”⁸⁵ Connections in which one is fully known and loved, with the church as a body caring for one another, repels shame. A theology of embodiment, backed up by neurobiology, opens the lines of communication, and the arms of one to another, so that we may receive each other with love. This is how it is supposed to be as “the Bible calls us to an alternate social world, a new city. The church is to function as a body, each member ministering the nourishment of Christ to others.”⁸⁶

Guided by a theology of embodiment, the vision of fostering a cultural imagination of embodiment theology, serving women and families struggling socio-economically, and revitalizing the church to support abortion-minded women is less daunting. Looking to small communities and creativity

will be the most effective path forward. In *Culture Making*, author Andy Crouch writes of the power of a small group of people, optimally the trinitarian number of three, to see cultural change.⁸⁷ Christians must first start with our families, raising up our children in the faith, formed by a theology of embodiment that rejects abortion and welcomes the pregnant single mother. A concentric circle of influence of 12 or 120 people can then represent our churches, looking for creative ways to practice embodiment theology. This might be small groups like Embrace Grace that support pregnant women through baby showers and other acts of service,⁸⁸ supporting local pregnancy centers, or establishing programs and outreach within the church and community to welcome women who might otherwise choose abortion.

The Transformative Power of Embodiment Theology

The doctrines of creation and the incarnation form a theology of embodiment in which life lived out in the body is of extreme importance to reflect the image of God and to accomplish God’s salvific plan for creation. The life we live in our body tells the story of our creation, of our salvation, and our future resurrection. We were created with dignity and purpose: to reflect our Maker and live out his redemptive purpose for our bodies, through our bodies, in relationship with one another. As the supply and demand for abortion shifts in coming years, Christians must be prepared to practice a theology of embodiment. Drawing on the doctrines of creation, the *imago Dei*, and the incarnation, a theology of embodiment that forms Christians to live a relational life lived out in our bodies can revitalize the Church to serve women and children, especially those at risk for abortion. If we want to see an end to abortion, we must start with the woman’s body—we must consider the body upon which the preborn body is dependent, her mother. 🍌🍌🍌

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Artificial Wombs: A Theological-Ethical Analysis about Partial Ectogenesis

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Introduction

Ectogenesis or the use of artificial womb technologies (AWT) is defined by Webster's as "development of a mammalian embryo in an artificial environment."¹ In 2019, a team of researchers claimed that their prototype *ex-vivo* uterine environment therapy, designed to reduce the risk of morbidity and mortality for extremely preterm infants born at the border of viability, represents a feasible therapy in late preterm human babies.² Neonatal technology defines complete ectogenesis as the creation of a human child without any period of gestation in a woman's body.³ Full ectogenesis requires *in vitro* techniques and the resulting embryo must be placed in an artificial uterus.⁴ Partial ectogenesis would mean some part of the gestational period is spent outside the maternal womb.⁵ Such a womb could serve

as incubator for preterm babies, specifically those who are delivered before approximately 24 weeks of gestation, the minimum for viability with current incubators.⁶

AWT are designed to replicate the conditions and function of the human uterus so that the developing human person is able to continue to gestate. The emerging technologies related to AWT require that the fetus be submerged in artificial amniotic fluid in a sealed plastic bag. In an artificial uterus, circulation is maintained by the newborn's own heartbeat assisted by an oxygenator and catheters imitating umbilical cord access. In other words, AWT assists the human fetus with the bodily functions necessary for survival in the external environment. AWT attempts to continue the process of gestation *ex utero*.⁷ Scientists predict that safe, reliable, and even complete ectogenesis will be available within thirty years.⁸

Under special circumstances, such as when abortion might be suggested to save the life

of the mother, *partial* ectogenesis might represent a viable solution to save the baby's and mother's lives by transferring the fetus to an artificial womb.⁹ The emerging reproductive technologies raise a host of moral and theological questions. Such questions have been highlighted through a call for papers in the academic journal, *Christian Bioethics*: "How should AWT be used (if at all)?" "How should we understand human subjects in artificial wombs?" "How should they be regarded?" "In what way, if any, should we regard them differently from how we regard fetuses in utero, and why?" "What are some moral issues associated with complete ectogenesis and partial ectogenesis?"¹⁰

In this essay, I argue that partial ectogenesis to allow a woman who might otherwise have to continue a pregnancy¹¹ experiencing imminent gestational risks or considering a conventional abortion, should be morally permissible from a Christian perspective. AWT could represent a powerful choice for some women experiencing dangerous yet wanted pregnancies. Artificial wombs could be useful when women are unable to carry the babies safely.¹² To that end, I will first

discuss the personal status of the ectogenetic preborn child. In this section I compare two opposing views related to the moral status of the unborn. The secular view is represented by the utilitarian theory as presented in the writings of Peter Singer and Joseph Fletcher. Then, I will present a biblical view of the embryo/fetus by arguing that every human being is created in the image of God and that there is a continuity from before to after birth. This second part will construct a brief theological-ethical framework concerning partial ectogenesis. This section will thus put into perspective the issues related to the artificial womb by appealing to the sovereignty of God. Furthermore, some benefits and challenges are discussed that might be implied in the *ex utero* reproductive technology.

The Personal Status of the Ectogenetic Preborn Child

The morality of partial ectogenesis concerns the personhood of the preborn child. If the child is safely extracted from the mother, would he be considered a person or a mere human being with potential to become a person? The modern view, argues Megan Best, is that the status of personhood is not automatically given to any human being, but only to those who can perform certain functions.¹³

The Secular View

One of the most accepted ethical theories concerning the personhood of a fetus regards the concept of utilitarianism. The utilitarian mantra is the greatest good for the greatest number and the good is calculated not on the basis of a moral virtue but on the basis of the nonmoral good of happiness or pleasure.¹⁴ The hedonistic utilitarian calculus is that human pleasure in any given set of circumstances may be quantified and calculated by summing up the pleasure to be realized by each in any proposed action.¹⁵

One of the proponents of this utilitarian view is Peter Singer. A controversial thinker,

Singer made his philosophical reputation by defending the well-being of animals. Moreover, his interest concerns not only animal liberation, but moral issues related to human conception, birth, life, and death.¹⁶ For Singer, moral beliefs have an evolutionary explanation; thus, he concludes that any moral beliefs are unjustified.¹⁷ Singer also appears to reject the sanctity of human life “as [a] prejudiced, invidious claim to human specialness” based on ridiculous (in Singer’s view) Christian theological ideas.¹⁸

A similar position is held by Joseph Fletcher. He argues that a fetus is an object, not a subject: a nonpersonal organism. The personhood of a fetus is a matter of religious or metaphysical belief, without any possibility to scientifically prove it or show it. The fetus is not a patient, because a patient must be a person.¹⁹ Thus, as John Mahoney puts it, the destruction of such biologically human “nodes” such as an embryo does not entail the destruction of a human person.²⁰

However, there are problems with such an understanding of a human being. For example, Peter Colosi argues that Singer cannot discover within persons any intrinsic values that are capable of grounding the equality of worth attributed to persons in ethical discourse except those intrinsic sources that are both communicable and alienable such as intelligence or musical ability.²¹ Ethicist Janet Smith correctly observes that Peter Singer’s promotion of infanticide can be traced to the legalization of abortion. Singer defends the legalization of abortion on the basis of non-personhood of the fetus and uses that Archimedean point to argue that fetuses should have no greater rights than other entities, such as animals, that we kill so freely.²²

Furthermore, the current utilitarian age adopted by Peter Singer and Joseph Fletcher evaluates both things and actions in respect to their usefulness for achieving goals determined by interest or preferences.²³ Consequently, Best considers that Fletcher’s

view of fetal life is driven less by scientific discovery and more by the political debate around abortion. As a result, if the embryo was not a fully human person, then abortion would be much easier to justify.²⁴

These secular views, as observed by Nigel Cameron, reflect the growing tendency to abandon the central conviction of our medical tradition as seen in the Hippocratic Oath. This central conviction is that there is such a thing as “human life” with dignity which is intrinsic and, therefore, with an inalienable moral standing.²⁵ Albert Johnsen observes that the Oath is a striking example of deontology where the doctor is summoned to use his knowledge to help the sick and never to misuse the medical skills as accomplices of murder.²⁶ Therefore, the personhood theory as proposed by Singer and Fletcher appears to be a threat to the Hippocratic Oath. The Oath has been used throughout the ages as a guide to moral medical conduct in order to protect health and preserve life. Based on a utilitarian calculus as proposed by Singer and Fletcher, an ectogenetic preborn child could be aborted without any regard for the fundamental goals of medicine, namely protecting health and preserving life, as described by the Oath.

A Biblical View

The Bible presupposes that the unborn baby is fully human with full personhood from the moment of conception. Psalm 51:5 clearly argues that a sinful nature and guilt are part of the human being at the moment of conception and birth.²⁷ The Bible’s teaching is that every human being is made in the image of God, and this is the basis on which we are all to be treated equally and with dignity.²⁸ The dignity of human beings is derived from God himself. In fact, theologian Carl Henry argues that man’s created dignity consists in knowledgeable and responsible relationships to the supernatural world and to fellow humans. Therefore, human life was intended to consist of intelligible and dutiful devotion to God.²⁹





Moreover, Psalm 139:13–16 teaches that the unborn is formed by God. The psalmist invokes the idea that God was involved in the shaping of the person. These verses provide a vivid image for the process of creation. God made the heart, or literally the kidneys, alluding to the physical insides of the person, rather than to the emotions or will.³⁰ The Psalmist acknowledges that human creation, from its beginning, is a mystery and a wonder known only to God.³¹

Not only does the image of God include both “male and female” according to Genesis 1:27, but it is also a scientific fact that maleness or femaleness is determined at the moment of conception.³² Modern genetics demonstrates that the DNA formed at conception is the bedrock of biological identity.³³ The embryonic life is a human life that has all the potential, all the unique DNA it needs, for its natural development.³⁴ There is extrabiblical evidence that genetic data determines later physical development. This evidence concerns some critical events, such as giving the new life a complete set of 46 chromosomes; determination of chromosomal sex; the establishment of genetic variability; and the initiation of cleavage, the cell division of the baby.³⁵ The embryonic stem cells developed in the course of the first five days of life represent the source of all the tissues in the body, and through the process of development they organize themselves to take the form of the body.³⁶

Consequently, Genesis 1 emphasizes that sexual identity and function are part of God’s will for his image-bearers. As a result, sexuality is not an accident of evolution or a mere social construction. Scripture reasons that gender is a very good thing to be embraced (Gen 1:31). Gender differentiation is also not something arbitrary and self-defined but a characteristic with corresponding roles (Gen 2:18, Ps 30:10) for each biological sex.³⁷ Based on God’s creative

work in Genesis 1 and 2, it seems evident that human beings are capable of receiving and carrying out commands from God in relation to creation. Thus, the act of procreation appears to be a biological precondition for ruling the earth existent in the preborn baby.³⁸ Male and female human members are image-bearers of God who are both responsible for governing the world. Being human means being a sexual person clearly defined in God’s creative act. Therefore, there is no place in God’s good order for unisexuality or for any diminishing or confusion of sexual identity.³⁹ The image of God is a fundamental feature of humanity according to Genesis 1. Humans are like other living things in being created by God, but also unlike them in being made in God’s image and owing him obedience.⁴⁰

Second, the Bible argues for continuity from before to after birth. The continuity of a child’s life can be seen, for instance, in Exodus 21:22–25, where the Bible makes an unambiguous claim that the harmed unborn child is to be punished in the same manner as a born human. The difficult phrase “her children come out” (Ex 21:22) speaks about the child; whether miscarried or merely born prematurely, the law of retaliation goes into effect.⁴¹ The wording there establishes a general principle for dealing with various permanent injury for the unborn or for the pregnant woman.⁴² As a result, whether in the womb, in an artificial uterus, or outside of the womb, it seems fair to argue that there is the same person who needs to be protected by law. Furthermore, from Matthew 1:20–21, it is implied that the same person who is in Mary’s womb is going to be the child who will be born. While in the womb, the unborn child will have a very special role once born; a task concerning the salvation of God’s people.⁴³ The unborn child is the same agent of salvation who later will make an atonement for the sins of God’s elect.⁴⁴

Thus, the Bible presupposes that the unborn baby Jesus present in Mary’s womb is the same Jesus once born. Likewise, Job 10:8–12 teaches that God knows the unborn person, thus implying a continuity before and after birth. Every human is molded by God and every human returns to dust.⁴⁵ After God has breathed the breath of life into each person, he guards and protects that life by his providence, which means God directs the course of events that befall a person.⁴⁶

The embryonic phase is a stage in the development of a determinate and enduring human entity who deserves full moral respect. Robert George and Christopher Tollefsen argue that human embryos are, from the very beginning, human beings, sharing an identity with, though younger than, the older human beings they will grow up to become. A human embryo comes into existence as a single-celled organism and develops into adulthood many years later.⁴⁷ Similarly, Owen Strachan argues that “a baby growing in the womb is not refuse to be cast off, but a child to be warmly welcomed into life.”⁴⁸ Even more, Gareth Jones considers that “fetuses throughout development are important, and it is fitting that we who are able to ascribe significance and dignity to fetuses” and “an unborn human has the potential to become a fully developed, mature human being, and therefore we ought to treat all fetuses with seriousness and concern.”⁴⁹

Based on this cursory glance at the above biblical texts, it can be argued that the ectogenetic preborn has the same moral status as a fully human adult since human life and human personhood begin at fertilization. No matter where the gestational phase takes place, whether in a woman’s or in an artificial uterus, the preborn is worthy of full moral respect. In other words, the ectogenetic preborn is not just a potential person, but rather a person with potentials.

A Theological-Ethical Framework Concerning Partial Ectogenesis

In what follows, an arguably feasible theological-ethical framework is presented based on the aforementioned biblical view about the humanness and personhood of the ectogenetic baby. Reproductive technologies present some of the most difficult ethical dilemmas facing today's society. The world of biomedical technologies can be seen in general as part of God's provision to human beings in enabling them to exercise dominion over creation more effectively, particularly when it comes to confronting the effects of the Fall.⁵⁰

Divine Sovereignty

According to a biblical worldview, God is sovereign, implying that God is the giver and sustainer of life as he pleases. Psalm 139:13–14 emphasizes that no amount of biotechnology can produce life because that belongs to God alone to give. Children are a gift from God, not a laboratory-designed creation.⁵¹ For example, Revelation 4:11 teaches that God not only brought all things into existence, but he keeps them in existence. The Bible declares that God is in complete control of everything that happens in the whole course of history.⁵² God's plan is all-inclusive, argues Millard Erickson. That is to say that God is now at work carrying out his plan, which is from all eternity and includes everything that occurs.⁵³ Consequently, it appears that everything that there is, including a living being in an artificial uterus, derives his existence from God. Moreover, Christian faith points humans toward a God who is beyond this world and a promise of eschatological hope that lies beyond the power of human science and technology.⁵⁴

Part of God's sovereignty over human life is his decree giving humanity the tasks of dominion over and stewardship of creation. God sustains the life of all creation and has the ultimate authority in every matter. Nevertheless, God gave dominion to humankind, which implies that people have the duty to encourage ethical scientific enterprise, including medical care, research, and the development of medical technology. Medical technology is one of the means of God's common grace to human beings. Medical technology also implies capabilities that are meant to be developed and utilized

as part of God's command for humanity to exercise dominion over the created world. People have the possibility to shape their conduct in this world, but must do so under definite constraints that God imposed through creation. Thus, there are limits beyond which people are not to go.⁵⁵ As Robert Orr observes, stewardship implies that people are responsible and accountable for how they use their knowledge and technology. In other words, people have liberty, but within the moral boundaries established by the Divine.⁵⁶

The whole human being belongs to God, whom believers must learn to love even more than they love father or mother. Every person is made for God, and thus people are more themselves when they seek not to direct and control their destiny but when they realize and admit that their lives are grounded in and sustained by God.⁵⁷ Trusting in God's sovereignty is a source of comfort and contentment for the believer. Reproductive technologies such as AWT can be seen as part of God's eternal plan to provide for human beings to enable them to more effectively exercise dominion over creation, particularly when confronting the effect of the entrance of sin into the world.⁵⁸

Benefits

One of the most obvious benefits of partial ectogenesis would be the ability to save the lives of unborn children at extremely early gestational stages. People, as God's image-bearers, are expected to willfully protect life. The biblical-theological background for protecting human life at the earliest developmental stages concerns the fact that God is the Lord of life and the one who offers life. John Frame states that, since the Bible basically says that life and death are God's business based on the sixth commandment, people must respect life because it is in the image of God and that image grounds the first prohibition of bloodshed in Scripture.⁵⁹

Furthermore, David Reiber reasons that since modern neonatal life-support technology is considered morally good when used in a proportionate manner, it should be reasonable to conclude that AWT, when used in such a way, would not be morally problematic. Since one of the purposes of partial ectogenesis is to improve the survival of prematurely delivered infants, the technology itself would not be considered intrinsically

unethical. In fact, it would be morally licit and commendable, so that the technology is worthy of serious efforts toward realization.⁶⁰

A second benefit would be the deliberate transfer of a healthy baby from its mother's womb to an artificial womb in case of serious medical risks. Both lives, the mother's and baby's, are valuable because they are made in the image of God, for the glory of God.⁶¹ Thus, by opting for partial ectogenesis, there might be a viable option for keeping both the mother and the baby alive. Artificial wombs would be helpful especially to those women who have suffered multiple miscarriages due to problems with embryo implantation, or women who have had hysterectomies due to uterine cancer. There is also the possibility for women with multiple pregnancies, that artificial wombs could provide temporary quarters for one or two fetuses toward the end of gestation, when a woman's womb becomes more crowded and the risks of complication to herself and her children are greater.⁶²

Third, AWT might help prevent unwanted pregnancies from being aborted. On this point we can agree with Peter Singer and Deane Wells who maintain that pro-lifers could welcome the development of ectogenesis, at least in so far as it can be developed without deliberately risking the lives of embryos in experimental work. Singer and Wells also claim that pro-choice advocates "should welcome it for the simple reason that it promises to defuse the whole abortion issue."⁶³

Challenges

In spite of the benefits provided by the AWT, there are some challenges that the new reproductive technologies may bring about in terms of potential abuses against the unborn. First, the availability of a morally unrestrained ectogenesis could offer the potential for keeping alive unborn babies to serve as "donor" body parts.⁶⁴ Since the basic problem of a transplant surgeon is not having enough corpses, AWT could provide the solution to organ donations and transplantation. Corpses are currently the only source for lungs, hearts and livers, and for all but 8% of kidneys.⁶⁵ Singer and Wells mention the idea that embryos and fetuses could be used as a means of growing organs as spare parts. They admit that,

especially for someone who holds that from the moment of conception a human being exists with the same right to life as any other human being, farming human beings is the most grotesque violation of human rights imaginable. Moreover, it would represent a form of slavery in which even the life of a slave is not spared. Therefore, it would be the deliberate and institutionalized violation of the most fundamental of all human rights.⁶⁶ Furthermore, donating embryos for use in destructive research will be an unethical choice for biblically minded Christians. As Best emphasizes, all human beings are made in God's image and should be treated with respect, and thus it is wrong to kill innocent people.⁶⁷

We can also infer from the above explication that zygotes, embryos, fetuses, and for that matter children, are not commodities to be bought and sold—they are God's precious gifts, to be accepted, protected, and cared for without discrimination on the basis of sex or size, or developmental phase.⁶⁸ The technology to produce stem cells taken from the inner cell mass of a human blastocyst already exists. However, with the potential aid of AWT to make embryos and fetuses more accessible and with the promises of cures for vicious disease, expanded life spans, and even the improvement of the human species, the new biotechnologies have the potential to capture the imagination of many who have not looked closely enough at what these procedures entail. George and Tollefsen likewise note that it is utterly immoral to treat the youngest and most vulnerable members of the human family as disposable objects to be produced and destroyed to benefit others.⁶⁹

Secondly, AWT may offer an attractive opportunity for direct nontherapeutic research into the embryo's developmental processes, a research invariably resulting in their death. The reasoning behind nontherapeutic research is based on the claim that since artificial wombs gives the fetus a measure of life that it would not otherwise have, the fetus is no worse off when it is sacrificed in the experiment.⁷⁰ George and Tollefsen argue that it is morally wrong and unjust to kill an embryo, even if the goal of the embryo killing is the advancement of science or the development of therapeutic products or treatments.⁷¹ Prenatal life is valuable and needs to be protected. Against George and Tollefsen's view stands the evolutionary perspective for which nontherapeutic research makes perfect sense. An embryo, while still at an incipient stage prior to individuation, and *a fortiori* to hominization, may be considered as at the service of human life itself and of his biological amelioration in fully formed individuals of the species.⁷² Nevertheless, an embryo—whether *ex vivo* or *in vivo*—is of equal moral status to any other human being. Therefore, stem cell harvesting from a blastocyst is akin to abortion. The reason is that the intrinsic value of a blastocyst is that of a living human person; thus, its destruction in scientific experimentation constitutes murder.⁷³

Thirdly, artificial wombs may be used by women who wish to have a baby but without the natural burdens of a pregnancy. In fact, a well-known feminist Shulamith Firestone considers pregnancy as barbaric.⁷⁴ However, it is also worth mentioning that not all feminist share Firestone's view that the new reproductive technologies would be a means

of liberating women or barbaric. For example, Robin Rowland affirms that

For the history of "mankind" women have been seen in terms of their value as child-bearers. We have to ask, if that last power is taken and controlled by men, what role is envisaged for women in the new world? Will women become obsolete? Will we be fighting to retain or reclaim the right to bear children—has patriarchy conned us once again? I urge you sisters to be vigilant.⁷⁵

Childbirth and pregnancy have long been considered a limited state: a space and time in which the woman is making a transition to her status as a mother. As Dena Davis notes, everyone changes status with the birth of a baby. A first child changes the family most dramatically.⁷⁶ Furthermore, by dissociating pregnancy from being an essential part of womanhood, AWT could imply a biased attitude against women. For instance, Diane Moriarty, citing *The Guardian's* Eleanor Robertson, notes that artificial wombs would very likely serve trans women and male same-sex couples instead of women.⁷⁷ Moreover, women could be forced to use AWT by their employers to avoid lost time at work. In addition, insurance companies could exert coercive power against women by mandating AWT over pregnancy if it is found to result in fewer health problems such as high blood pressure, gestational diabetes, or automobile accidents.⁷⁸ According to the Bible, God in his sovereignty decided that motherhood is part of God's image in women. The pain or hard labor in childbearing is the penalty for sin, according to Genesis 3:16. Nevertheless,



a Christian perspective about the burdens of pregnancy emphasizes that the vehicle of Eve's vindication (painful childbirth) supersedes her need for the deliverance she bears. Thus, bearing children signals hope and also serves as a perpetual reminder of sin and the woman's part in it.⁷⁹

Furthermore, God set the framework for true sexual morality at creation. God transcends the space-time-material universe, and the standards he sets for the role of sexes in family are transcendent as well. Therefore, God defines true sexual morality, and people have no say in what his standards should be. Daniel Heimbach argues that "as far as God is concerned, we have only two choices: obey, or face the consequences."⁸⁰ One of the purposes of marriage regards bearing children. The standard for the family to procreate resides in God's standards established at creation. There is nothing more natural for a Christian view of sexuality than for women to bear children. Not only that, but sexuality according to the Bible is always linked to the development of a relationship between two people.⁸¹

Lastly, the use of artificial wombs risks undermining the understanding of motherhood and, by extension, parenthood, warns Christopher White.⁸² White argues that the natural maternal-child bonding is affirmed by medical experts as essential to promoting the health of mother and child. The maternal bond is permanent and is felt in both the mother and child for the rest of their lives. As a result, White believes that the use of artificial wombs would sever this bond and the consequences of such a radical activity

would be impossible to foretell. Ectogenesis would aid in the social quest to reduce the importance of the two-parent, mother-and-father tie to their child and in some cases could introduce multiple parties into the parenting process. The natural consequence is that ectogenesis risks rendering biological ties unnecessary.⁸³ Thus, the womb may be rendered as nonessential to nurturing gestational life. Pregnancy might become unnecessary when technologically possible. As a result, biological motherhood would become technically obsolete, argues Debra Evans.⁸⁴ In the same line, by undermining the biblical understandings of marriage and family, AWT could ease the access of homosexual couples to adoption. The Bible sees marriage as a covenant created by God with boundaries, structure, obligations, and rights established by him.⁸⁵ A child can be deprived during his/her formative years of the opposite sex parent, i.e., of a mother or a father figure. Moreover, the adopted child can grow with the wrong norm of human sexuality. Children reared in same-sex unions can suffer deprivations of security and love.⁸⁶ Thus, the use of AWT as an external gestational carrier might sever the connection between the pregnant woman and the baby she is carrying and reduces the importance of a distinctly Christian understanding of marriage and family.⁸⁷

Conclusion

The essay attempts to show that the use of some artificial womb technology, especially in the form of partial ectogenesis to allow a woman who might otherwise have to continue a pregnancy experiencing imminent

gestational risks or considering a conventional abortion, should be morally permissible from the Christian perspective. AWT would not be intrinsically evil and could have limited ethical applications despite its vast potential for abuse and misuse.⁸⁸ Partial ectogenesis could also have benefits in certain situations such as risky medical conditions both for the mother and the baby and also, when abortive actions are considered. However, medical research is not value-free. It must always be conducted within the bounds of reason and objective moral truth informed by the Bible.⁸⁹

Nevertheless, Scott Rae advises us to tread carefully against the attitude that suggests that a technology must be used simply because it can be used. The advancement of biomedical sciences does not imply that society is obligated to make every new technology available.⁹⁰ As Ben Mitchell observes in discussing the Human Genome Project, "We are realistic in our view of the propensity of human beings to use good things for bad purposes (evangelical Christians call this propensity the sin nature)."⁹¹ Thus, if biomedical technology is used for therapeutic/good purposes either for the unborn baby or for the pregnant woman, then each specific technology should be carefully weighed and used as possible treatment for patients when technologically feasible. Further research is needed to establish definitively the morality of AWT use concerning partial ectogenesis. Until such evidence is available, AWT represents a form of medical reproductive technology that might be used only in clearly defined circumstances. ●●●

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TOP BIOETHICS NEWS STORIES: DECEMBER 2020 - MAY 2021

Heather Zeiger, MS, MA | CBHD Research Analyst

“Little Is Known About the Effects of Puberty Blockers” *The Economist*, February 18, 2021

All drugs offer a mix of harms and benefits. But despite their popularity, the effects of puberty blockers remain unclear. Because they are not licensed for gender medicine, drug firms have done no trials. Record-keeping in many clinics is poor. (<https://tinyurl.com/bdhe2vj9>)

Prescribing puberty blockers for gender dysphoria is an off-label use of the drug. Although requests for puberty blockers for gender dysphoria have increased substantially in the past ten years, there have been no large clinical trials to determine the potentially deleterious effects to children who take puberty blockers. The studies that have been done are small and non-representative or are flawed. Several people who have taken puberty blockers for the prescribed use, such as precocious puberty, have sued the pharmaceutical companies for harmful side effects including cognitive defects, brittle bones, chronic pain, sterility, and the onset of artificial menopause. Further complicating matters, because of push-back from interest groups, research on puberty blockers and other forms of “gender affirmation” therapies often does not get funding or is shut down.

“First Independent Report into Xinjiang Genocide Allegations Claims Evidence of Beijing’s ‘Intent to Destroy’ Uyghur People” by Ben Westcott and Rebecca Wright, *CNN*, March 9, 2021

The Chinese government’s alleged actions in Xinjiang have violated every single provision in the United Nations’ Genocide Convention, according to an independent report by more than 50 global experts in international law, genocide and the China region. The report, released Tuesday by the Newlines Institute for Strategy and Policy think tank in Washington DC, claimed the Chinese government “bears state responsibility for an ongoing genocide against the Uyghur in breach of the (UN) Genocide Convention.” (<https://tinyurl.com/4899dh75>)

Human Rights Watch World Report for 2020, published in January 2021, noted that the Chinese government continues to surveil and detain Uyghur people and other minorities in the Xinjiang Autonomous Region and that human rights in China is at its worst since the Tiananmen Square massacre in 1989.¹ Detainees are forced to work in factories or cotton fields, and there are reports of torture and forced sterilizations. The Newlines Institute for Strategy and Policy report demonstrates the Chinese government’s responsibility for violating UN Genocide Convention of 1948. While normally an international declaration of genocide would be determined in a UN International Tribunal, because China is a UN member with veto power, the determination of genocide was conducted by a multi-national independent group. Several countries have formally accused China of genocide, and several organizations are calling for participating countries to boycott the 2022 Beijing Olympics.

“Scientists Plan to Drop the 14-Day Embryo Rule, a Key Limit on Stem Cell Research” by Antonio Regalado, *MIT Technology Review*, March 16, 2021

For the last 40 years, this voluntary guideline has served as an important stop sign for embryonic research. It has provided a clear signal to the public that scientists wouldn’t grow babies in labs. To researchers, it gave clarity about what research they could pursue. Now, however, a key scientific body is ready to do away with the 14-day limit. (<https://tinyurl.com/29yya36x>)

“The Foundations of AI Are Riddled with Errors” by Will Knight, *Wired*, March 31, 2021

The current boom in artificial intelligence can be traced back to 2012 and a breakthrough during a competition built around ImageNet, a set of 14 million labeled images. In the competition, a method called deep learning, which involves feeding examples to a giant simulated neural network, proved dramatically better at identifying objects in images than other approaches. That kick-started interest in using AI to solve different problems. But research revealed this week shows that ImageNet and nine other key AI data sets contain many errors. (<https://tinyurl.com/2p99wu9e>)

“New Models Could Help Scientists Study the Earliest Stages of Embryonic Development” by Andrew Joseph, *STAT News*, March 17, 2021

A pair of research teams unveiled two new ways to replicate a key structure from the earliest days of embryonic development—an advance that could provide important new insight into human development and pregnancy loss, but which also raise thorny questions about research with embryo-like models. The models described in the two papers, both published Wednesday in the journal *Nature*, are meant to mimic human blastocysts. (<https://tinyurl.com/y972bs5x>)

Since the birth of the first baby produced through in vitro fertilization, the 14-day rule has been a hard-and-fast international guideline for researchers. The rule has largely gone uncontested because the science has not been able to keep embryos alive for more than 14 days. (Note: this is different from frozen embryos, which are essentially in suspended animation.) But research with synthetic blastocysts, or “blastoids,” as well as recent studies with human-animal chimeras and genetically modified embryos, have prompted scientists with the International Society for Stem Cell Research to publish guidelines calling for a change in 14-day rule. The new guidelines were published in May 2021.²

“Europe’s Proposed Limits on AI Would Have Global Consequences” by Will Knight, *Wired*, April 21, 2021

The European Union proposed rules that would restrict or ban some uses of artificial intelligence within its borders, including by tech giants based in the US and China. The rules are the most significant international effort to regulate AI to date, covering facial recognition, autonomous driving, and the algorithms that drive online advertising, automated hiring, and credit scoring. The proposed rules could help shape global norms and regulations around a promising but contentious technology. (<https://tinyurl.com/3nmvyfnt>)

When an algorithm identifies a person’s face from thousands of hours of video, it does so by “learning” from labeled data input in the system. But the algorithm is only as good as the data fed into it. If the data is mislabeled or if it is biased, such as labeling women who work in hospitals as nurses, then that bias is perpetuated in healthcare settings, police systems, and hiring practices. In December, one of Google’s AI ethicists was fired for co-authoring a relatively unremarkable research paper describing the limitations of AI to generate text. Several articles during the first half of 2021 point to ethical issues popping up in machine-learning systems, and the EU has proposed strict boundaries on the use of AI.

“First Monkey-Human Embryos Reignite Debate Over Hybrid Animals” by Nidhi Subbaraman, *Nature*, April 15, 2021

Scientists have successfully grown monkey embryos containing human cells for the first time—the latest milestone in a rapidly advancing field that has drawn ethical questions. In the work, published on 15 April in *Cell*, the team injected monkey embryos with human stem cells and watched them develop. They observed human and monkey cells divide and grow together in a dish, with at least 3 embryos surviving to 19 days after fertilization. (<https://tinyurl.com/2p8a9emj>)

Scientists from universities in China and the U.S. injected cynomolgus monkey embryos with “human extended pluripotent stem cells,” or induced pluripotent stem cells that can make all cell types including those typically only seen in embryos.³ The U.S. does not permit federal funding for research of human-primate chimeras, so the research was done at a Chinese university and was funded by the Chinese government, a Spanish university, and a U.S. foundation. Critics of this research question why a human-monkey chimera is necessary since human-cow and human-pig chimeras are more useful and less ethically contentious. Additionally, the National Academies of Science, Engineering, and Medicine expressed concern over human nerve cells entering animals’ brains. Notably, the embryos were not allowed to grow long enough for the nervous system to develop; however, the researchers admitted they cannot control what cell types the pluripotent stem cells become.

1 Human Rights Watch, “China,” in *Human Rights Watch 2021 Annual Report: Events of 2020* (New York: Human Rights Watch, 2021), <https://www.hrw.org/world-report/2021/country-chapters/china-and-tibet>.

2 “The ISSCR Releases Updated Guidelines for Stem Cell Research and Clinical Translation,” ISSCR.org, May 26, 2021, <https://www.isscr.org/news-publication/isscr-news-articles/article-listing/2021/05/26/the-isscr-releases-updated-guidelines-for-stem-cell-research-and-clinical-translation>.

3 Yang et al., “Derivation of Pluripotent Stem Cells with In Vivo Embryonic and Extraembryonic Potency,” *Cell* 169, no. 2 (2017): 243–57.e25, <https://doi.org/10.1016/j.cell.2017.02.005>.

CORONAVIRUS TIMELINE: DECEMBER 2020—MAY 2021

Heather Zeiger, MS, MA | CBHD Research Analyst

DECEMBER 2020

December 2: “Covid-19: Pfizer/BioNTech Vaccine Judged Safe for Use in UK from Next Week” (*BBC*)

December 2: “Moderna Plans to Begin Testing Its Coronavirus Vaccine in Children” (*The New York Times*)

December 7: “Facebook Bans False Claims About COVID-19 Vaccines” (*Medscape*)

December 8: “CDC Urges Universal Mask Wearing for First Time” (*Medscape*)

December 9: “Canada Approves First COVID-19 Vaccine, Expects Inoculations Next Week” (*Reuters*)

December 10: “F.D.A. Advisory Panel Gives Green Light to Pfizer Vaccine” (*The New York Times*)

December 18: “Moderna COVID-19 Vaccine Wins Decisive Recommendation from FDA Panel” (*Medscape*)

December 21: “Chinese and Russian Vaccines Remain Unproven—But Desperate Countries Plan to Use Them Anyway” (*The Washington Post*)

December 30: “China Clamps Down in Hidden Hunt for Coronavirus Origins” (*Associated Press*)

December 31: “With Limited Surveillance of Covid-19 Variant, It’s Deja Vu All Over Again” (*STAT News*)

JANUARY 2021

January 6: “Blood Plasma Reduces Risk of Severe Covid-19 if Given Early” (*The New York Times*)

January 8: “Vaccine Rollout Hits Snag as Health Workers Balk at Shots” (*ABC News*)

January 18: “WHO: Just 25 Covid Vaccine Doses Administered in Low-Income Countries” (*The Guardian*)

January 20: “Covid Trials for Kids Get Started with First Results by Mid-2021” (*Bloomberg*)

January 21: “Lilly: Drug Can Prevent COVID-19 Illness in Nursing Homes” (*Associated Press*)

January 22: “CDC Reports Rare Allergic Reactions to Moderna’s Covid-19 Vaccine” (*STAT News*)

January 25: “Exclusive: AstraZeneca to Supply 31 Million COVID-19 Shots to EU in First Quarter, a 60% Cut—EU Source” (*Reuters*)

January 25: “In a Major Setback, Merk to Stop Developing Its Two Covid-19 Vaccines and Focus on Therapies” (*STAT News*)

January 28: “Virus Variant from South Africa Detected in US for 1st Time” (*Associated Press*)

January 29: “New COVID Cases Plunge 25% or More as Behavior Changes” (*Medscape*)

FEBRUARY 2021

February 2: “Covid Deaths Are Starting to Drop in Every Part of the U.S.” (*Bloomberg*)

February 5: “States Shift COVID Vaccine from Long-Term Care to General Public” (*Medscape*)

February 8: “New Variants Raise Worry About COVID-19 Virus Reinfections” (*Associated Press*)

February 9: “US FDA Gearing Up for Rapid Review of Potential COVID-19 Booster Shots” (*Reuters*)

February 11: “FDA Grants Emergency Use to Monoclonal Antibody Combo for COVID” (*Medscape*)

February 11: “COVID Deaths in Africa Jump 40% in One Month: WHO” (*Medical Xpress*)

February 15: “You Think the U.S. Has Vaccine Issues? 130 Countries Haven’t Even Started Vaccinating” (*NPR*)

February 16: “North Korea Accused of Hacking Pfizer for Covid-19 Vaccine Data” (*BBC*)

February 17: “Up to 90 Volunteers in UK to Take Part in Pioneering Covid Infection Trial” (*The Guardian*)

February 24: “Ghana 1st Nation to Receive Coronavirus Vaccines from COVAX” (*Associated Press*)

MARCH 2021

March 1: “States Easing Virus Restrictions Despite Experts’ Warnings” (*Associated Press*)

March 8: “Fully Vaccinated People Can Gather Without Masks, CDC Says” (*Associated Press*)

March 9: “FDA Warns Against Using Ivermectin to Treat COVID-19” (*Medscape*)

March 9: “CDC Data Strengthens Link Between Obesity and Severe COVID” (*Medscape*)

March 11: “Denmark, Norway and Iceland Suspend AstraZeneca COVID Shots After Blood Clot Reports” (*Reuters*)

March 15: “South Africa’s Drop in Covid-19 Cases Adds to Questions About Waves of Infections” (*Wall Street Journal*)

March 16: “Moderna Begins Testing Covid Vaccine in Babies and Children” (*The New York Times*)

March 19: “AstraZeneca’s Covid-19 Vaccine Cleared by EU After Blood-Clot Concerns” (*Wall Street Journal*)

March 24: “Variants of SARS-CoV-2 Variants Emerge in Brazil” (*Medscape*)

March 24: “Brighter Outlook for US as Vaccinations Rise and Deaths Fall” (*Associated Press*)

March 30: “The Fourth Surge Is Upon Us. This Time, It’s Different.” (*The Atlantic*)

APRIL 2021

April 2: “Ethical Questions Surround Plans for COVID Vaccine Passports” (*Medscape*)

April 6: “Covid-19’s Ground Zero Shifts to India” (*Wall Street Journal*)

April 7: “UK Variant of COVID-19 Is Now Most Common Strain in United States: CDC” (*Reuters*)

April 9: “Japanese Doctors Perform World’s First Living Donor Lung Transplant to a Covid-19 Patient” (*CNN*)

April 9: “No Region in the World Spared as Virus Cases, Deaths Surge” (*Associated Press*)

April 20: “EU Agency Links J&J Shot to Rare Clots, Says Odds Favor Use” (*Associated Press*)

April 22: “Do Kids Really Need to Be Vaccinated for Covid? Yes. No. Maybe.” (*Undark*)

April 29: “Pfizer and Moderna Vaccines Appear Safe, Effective During Pregnancy” (*Medscape*)

April 29: “Brazil Covid-19 Variant Tears Through South America in Warning to World” (*Wall Street Journal*)

MAY 2021

May 4: “The Era of Mass Vaccination Is Ending” (*The Atlantic*)

May 4: “Tokyo Games Need 500 Nurses; Nurses Say Needs Are Elsewhere” (*Associated Press*)

May 5: “Canada Becomes First Country to Approve Pfizer Vaccine for Children 12-15” (*The Guardian*)

May 11: “Pfizer-BioNTech Files for US Approval of COVID-19 Vaccine” (*Medscape*)

May 12: “CDC Director Says U.S. Is Planning for Covid Vaccine Booster Shots ‘Just in Case’” (*CNBC*)

May 12: “US Advisers Endorse Pfizer COVID Shot for Kids 12 and Up” (*Associated Press*)

May 18: “COVID-19 Vaccine Trial Underway for Kids 5 and Younger” (*NPR*)

May 25: “Coronavirus Cases and Deaths in the United States Drop to Lowest Levels in Nearly a Year.” (*New York Times*)

May 27: “Why a Grand Plan to Vaccinate the World against Covid Unraveled” (*Wall Street Journal*)

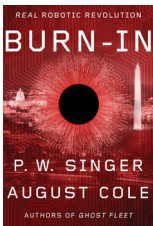
May 28: “Scientists Say They’ve Figured Out Why AstraZeneca and J&J’s Vaccines Can Cause Rare, Unusual Blood Clots” (*Business Insider*)

BIOENGAGEMENT

BIOFICTION



Kazuo Ishiguro, *Klara and the Sun* (Knopf, 2021).
Artificial Intelligence, Meaning of the Human Person, Neuroethics, Robotics.



P.W. Singer, *Burn-In: A Novel of the Real Robotic Revolution* (Mariner Books, 2020).
Technology and Society, Artificial Intelligence, Robotics.

Readers are cautioned that these resources represent a wide spectrum of genres and content, and may not be appropriate for all audiences. For more comprehensive databases of the various cultural media, please visit our website at cbhd.org/resources/reviews. If you have a suggestion for us to include in the future, send us a note at research@cbhd.org.

PRIMETIME BIOETHICS



Pandemic (Netflix, 2020).
Pandemics, Vaccine Ethics, Research Ethics.



Biohackers (Netflix, 2020).
Biotechnology, Gene Editing, Transhumanism.



Nine Perfect Strangers (Hulu, 2021).
Experimental Psychopharmacology, Informed Consent, Ethical Mental Health Treatment.

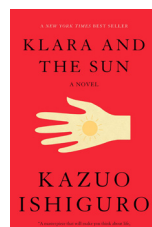
BIOETHICS AT THE BOX OFFICE



Old (Universal Pictures, 2021, Rated PG-13 for strong violence, disturbing images, suggestive content, partial nudity and brief strong language).
Aging, Medical Ethics, Research Ethics.



Annihilation (Paramount Pictures, 2018, Rated R for violence, bloody images, language and some sexuality).
Biological Mutation, Meaning of the Human Person, Self-Destruction.



Underdogs (Gravitas Ventures, 2021, Not Rated).
Degradation of Human Dignity, Loss of Autonomy, Technology and Society.

UPDATES & ACTIVITIES

CBHD's Academy of Fellows

- The CBHD Academy of Fellows met via Zoom on February 12–13. Among the topics discussed were the role of religion in clinical ethics consultations, radical life extension, moral injury in nursing during COVID-19, and more.

The Bioethics Podcast

- The 2021 season of The Bioethics Podcast launched on February 3 with an episode featuring Joseph Wiinikka-Lydon, PhD addressing moral injury in the time of COVID-19. The audio is from his lecture at our 2020 conference, *Bioethics in Real Life: Lessons We're Learning from Covid-19*.
- Other episodes in the 2021 season examined vaccine ethics, prenatal diagnosis, and the importance of theology when considering bioethical dilemmas.
- The Bioethics Podcast is available through Spotify, Apple Podcasts, Google Podcasts, Overcast, Pocket Casts, RadioPublic, Breaker, and other podcasting platforms.

Matthew Eppinette, MBA, PhD

- Thanks to Zoom, Matthew was able to speak at both Lakeview Presbyterian Church and Willow Crystal Lake on Sanctity of Life Sunday, which took place on January 24.

The Bioethics Colloquium

The Bioethics Colloquium speaking series at Trinity Graduate School this year featured the following lectures:

- “Machine Morality” by Michael J. Sleasman, PhD
- “Advising Ethics” by Courtney Thiele, JD, MA
- The John F. Kilner Bioethics Lectureship: “Natural Law, God, and Human Dignity” with Prof. Robert P. George

Theological Bioethics Roundtable

- During the Spring 2021 semester, CBHD continued our tradition of hosting theological bioethics roundtable book discussions. These sessions provide an opportunity for CBHD research staff to interact with graduate and doctoral students at Trinity Evangelical Divinity School so as to foster theological reflection and engagement in bioethics. The book for 2021 was O. Carter Snead, *What It Means To Be Human: The Case For The Body In Public Bioethics*. The discussion was facilitated by Wilson Jeremiah, ThM, Robert D. Orr Fellow and CBHD Research Analyst.



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The Center for Bioethics & Human Dignity (CBHD) is a Christian bioethics research center at Trinity International University that explores the nexus of biomedicine, biotechnology, and our common humanity.

Dignitas is the quarterly publication of the Center and is a vehicle for the scholarly discussion of bioethical issues from a Judeo-Christian Hippocratic worldview, updates in the fields of bioethics, medicine, and technology, and information regarding the Center's ongoing activities. ●●●

