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THE END OF HUMANITY: A TELEOLOGICAL ETHIC  
FOR COGNITIVE ENHANCEMENT TECHNOLOGY

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A Dissertation  
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the Faculty of  
The Southern Baptist Theological Seminary

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by  
Richard William Reichert

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THE END OF HUMANITY: A TELEOLOGICAL ETHIC  
FOR COGNITIVE ENHANCEMENT TECHNOLOGY

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For the glory of God

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## PREFACE

I am immensely grateful to the Southern Baptist Theological Seminary for allowing me to learn more about God that I may grow closer to God. I am especially indebted to Dr. Ken Magnuson for his gracious and generous guidance. Finally, because every author needs a muse (and a proof-reader), I am blessed by Jill, my wife of thirty-one years, for her encouragement, support, and love.

Rick Reichert

Lake City, Florida

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## CHAPTER 1

### INTRODUCTION

Perhaps humanity’s first attempt at cognitive enhancement occurred when Adam and Eve exchanged walking with God for the knowledge to “be like God” (Gen 3:5).<sup>1</sup> Since the fall, human rebellion against cognitive limits has remained a central feature of culture and lore. In Greek mythology, Prometheus risked eternal punishment to steal the forbidden knowledge of fire from the gods. In the classic German legend, Dr. Faust sells his soul to Satan in exchange for divine knowledge.<sup>2</sup> In the short story *Flowers for Algernon*, technology transforms mentally disabled Charlie Gordon into a virtual genius, at the cost of a premature death.<sup>3</sup>

With the arrival of the modern age, such cognitive ambitions stepped from stage to laboratory, and the fabled quest for divine knowledge embraced the promises of science, and science has delivered.<sup>4</sup> Recombinant DNA research has developed synthetic human growth hormone to make one taller than innate genetics could ever deliver. Novel surgical techniques can change one’s skin color, racial features, or even sexual appearance.

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<sup>1</sup> All Scripture references are from the New American Standard Bible, unless otherwise indicated.

<sup>2</sup> The opening lines spoken by Faust disclose his insatiable desire for knowledge: “Alas, I have studied philosophy, the law as well as medicine, and to my sorrow, theology; studied them well with ardent zeal, yet here I am, a wretched fool, no wiser than I was before.” Johan Wolfgang von Goethe, *Faust: A Tragedy*, trans. Walter Arndt (New York: W. W. Norton, 2001), 12.

<sup>3</sup> Daniel Keyes, *Flowers for Algernon* (New York: Mariner Books, 2005).

<sup>4</sup> Tracing the history of the “cognitive revolution” of modern man, Israeli historian Yuval Harari notes, “An increasing minority of scientists and thinkers consequently speak more openly these days, and state that the flagship enterprise of modern science is to defeat death and grant humans eternal youth.” Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (New York: HarperCollins, 2017), 24.

Nootropic drugs claim to boost memory, concentration, and cognition better than any library or classroom. Every day ordinary people are offered new human enhancement technologies that promise to “make us more of everything we want to be.”<sup>5</sup>

### **Human Enhancement Defined**

Human enhancement broadly refers to any intervention designed to improve human performance, appearance, or capability. Yet, as bioethicist Maxwell Mehlman adds, “If only it were that simple.”<sup>6</sup> Under this broad definition, human enhancement might include everything from eyeglasses and calculators to gene therapy and cybernetic implants. Such an overly broad definition of human enhancement obscures important distinctions between technologies that restore healthy human functioning and technologies that extend human functioning far beyond normal limitations. Every proffered definition of enhancement only seems to raise more questions. Do immunizations and antibiotics qualify as enhancements? If enhancement is an improvement, then where is the normal baseline being improved upon? Are the goals of enhancement objective (an IQ of 100) or subjective (whatever makes me feel happy)? Is the goal of enhancement an instrumental good (a higher SAT) or an intrinsic good-in-itself (like the pursuit of truth)? Can one enhance humans beyond human nature to achieve a whole new species, a post-human?

For the purposes of this dissertation, human enhancement is more narrowly defined as invasive technology that directly alters biomedical physiology to achieve supernormal performance. *Supernormal performance* is determined according to an individual-phenotype-functioning model that compares the individual’s non-enhanced

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<sup>5</sup> John Harris, *Enhancing Evolution: The Case for Making Better People* (Princeton, NJ: Princeton University Press, 2007), 2.

<sup>6</sup> Maxwell J. Mehlman, *The Price of Perfection* (Baltimore: Johns Hopkins University Press, 2009), 6.

performance against the same individual's enhanced performance.<sup>7</sup> Technologies employed to treat diseases or disabilities are considered *therapeutic* because they aim to restore normal function, not exceed normal performance. Therapeutic applications of technology are considered herein as *prima facie* moral, so they are not addressed in this dissertation. For instance, 20/20 is considered the normal healthy visual acuity for humans. A higher acuity of 20/15 is genetically achievable for a small minority of humans. Vision better than 20/15 is not anatomically possible based on the diameter of human foveal cone photoreceptors. Therefore, technology which restores vision to 20/20 or 20/15 is not delivering supernormal vision; technology that delivered greater than 20/15 vision would be producing supernormal performance.

To summarize, for the purposes of this dissertation, human enhancement technologies are defined as technologies that are (1) anatomically invasive, (2) physiology altering, and (3) produce supernormal performance. Eyeglasses are not invasive, do not alter human physiology, and cannot produce vision better than 20/15. Binoculars deliver enhanced vision, but they are not invasive and do not alter human physiology. Intraocular implants following cataract surgery are invasive but do not alter physiology or produce better than 20/20 vision. In contrast, miniature telescope implants are invasive, alter ocular physiology, and result in supernormal visual magnification.<sup>8</sup> For this dissertation, only technology that meets all three criteria qualifies as human enhancing.

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<sup>7</sup> In general, there are two broad ways of defining “normal function” so as to identify “supernormal function”: species-typical-functioning and individual-genetic-potential. Species-typical-functioning compares the individual's morphology (i.e., height) or performance (i.e., memory) against the normal distribution of such traits in a representative population. Individual-genetic-potential compares the individual's morphology or performance against that predicted by the individual's genetic endowment. There are difficulties with both views. Species-typical-functioning tends to pathologize the lowest quartile of the normal distribution of healthy humans. Individual-genetic-potential lacks a dependable methodology to predict the expected phenotype from the individual's genotype. For this diss., technology that delivers a performance superior to the individual's best non-enhanced performance qualifies as “supernormal.” It might be called an individual-phenotype-functioning model, a method that compares the individual's non-enhanced phenotype against the same individual's enhanced phenotype to determine “supernormal” enhancement.

<sup>8</sup> In 2010, the first implantable miniature telescope (IMT) was approved by the FDA for the treatment of age-related macular degeneration in patients over age 75. In 2014, this age requirement was

To further narrow the scope of the subject, this dissertation concentrates on one particular category of enhancement: *cognitive* enhancement. Cognitive enhancement aims to boost the memory, concentration, and cognition of healthy persons beyond their normal baseline.<sup>9</sup> Under the narrow definition for enhancement technology as invasive, physiology-altering technology that delivers supernormal performance, the only currently available technology is nootropic medication.<sup>10</sup> Other technologies promise cognitive enhancement, but in their current state of development they remain unreliable or unavailable. For instance, the application of *in vitro* fertilization to generate cognitively enhanced offspring through the selection of particular sperm or egg donors for their perceived higher intelligence remains unreliable.<sup>11</sup> Similarly, gene therapy shows some progress for treating genetic diseases such as hemophilia and retinitis pigmentosa, but gene therapy cannot yet alter the genes for intelligence. There are even implantable

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reduced to 65. “Off-label” (non-FDA approved) uses of IMT technology for healthy persons is not prohibited and is not required to be reported to the FDA. It is unknown how many healthy persons have received telescopic vision enhancement. Telescopic enhancement is not without the tradeoff of producing a constricted visual field. Andrzej Grzybowski et al., “Intraocular Lenses in Age-related Macular Degeneration,” *Graefes Archives of Clinical and Experimental Ophthalmology* 255, no. 9 (July 2017): 1687-96, accessed January 21, 2019, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5554271/>.

<sup>9</sup> Cornelius E. Giurgea is credited with creating the word *nootropic* in 1972, from νοῦς, or “mind,” and τρέπειν, meaning “to bend or turn,” literally “mind bending” drugs.

<sup>10</sup> Currently available nootropic medications qualify as a *technology* since these compounds are artificially manufactured or their extraction from natural sources requires technology. These medications are also anatomically invasive since they must be ingested or injected into the body to exert their effects upon human physiology.

<sup>11</sup> One of the most ambitious gene selection projects was Robert Graham’s Repository for Germinal Choice, known popularly as the “Nobel Prize Sperm Bank.” While many of the resulting children demonstrated higher intelligence, at least one child manifested a significant cognitive disability. David Plotz, “The ‘Genius Babies’ Grow Up: What Happened to 15 Children from the Nobel Prize Sperm Bank?” *Slate*, May 30, 2001, 1. Genetic selection technologies also raise moral issues not pertinent to cognitive medications. Egg or sperm donor selection in the absence of infertility appears to violate the one-man/one-woman mandate for marriage and children by bringing a third party (the donor) into the marriage relationship (Gen 2:24; Matt 19:5; Mark 10:7; Eph 5:31). The morality of donor egg or sperm for infertility is more difficult to adjudicate when the donor is a blood relation given certain interpretations of the levirate passages (Deut 25:5-10). Egg or sperm donation in conjunction with *in vitro* fertilization usually involves selective abortion of excess or unwanted embryos, a violation of the commandments not to murder (Gen 9:5-6; Exod 20:13; Rom 13:9).

computer microchips that can already deliver medications, store medical information, and provide GPS tracking, but microchips providing internal memory expansion, internal calculators, or internet uplinks are currently confined to science fiction.<sup>12</sup> One day, these technologies may provide cognitive enhancement, but the only cognitively enhancing technologies available today are nootropic medications.

### **Cognitive Enhancing Nootropics**

The most widely used substance in the world for increasing mental alertness is caffeine. Caffeine is a plant alkaloid that directly inhibits adenosine receptors and phosphodiesterase enzymes thereby increasing lipolysis for increased cellular energy.<sup>13</sup> Unlike food, caffeine contains no nutrients itself, but caffeine makes the nutrients from food more easily available for cells. Despite its centuries-long history of use, its extensive scientific investigation, and its well-established safety record, might caffeine still qualify as a nootropic medication under the definition adopted by this dissertation? Indeed, caffeine is invasive (consumed and metabolized) and affects human physiology (alters the body's biochemistry). Yet, caffeine does not purport to improve cognition or performance for an individual *beyond his or her well-rested baseline*. Caffeine only temporarily forestalls normal expected mental and physical fatigue. In contrast, true nootropic medications intend to produce supernormal cognitive abilities that exceed a well-rested individual's best unenhanced performance.

Over one hundred nootropic medications promise supernormal cognition. Many nootropics are government-regulated medications produced by a one-billion-dollar

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<sup>12</sup> Adam E. M. Eltorai et al., "Microchips in Medicine: Current and Future Applications," *BioMed Research International* (June 2016): 1-7.

<sup>13</sup> Institute of Medicine United States Committee on Military Nutrition Research, *Caffeine for the Sustainment of Mental Task Performance: Formulations for Military Operations* (Washington, DC: National Academies Press, 2001), accessed November 15, 2018, <https://www.ncbi.nlm.nih.gov/books/NBK223808/>.

pharmaceutical industry to specifically address the increasing demand for cognitive enhancement.<sup>14</sup> The most effective nootropic medications are central nervous system stimulants, like amphetamine. Additionally, some dietary supplements are touted as conveying nootropic properties, like ginkgo biloba.<sup>15</sup> A newer group of nootropics are racetams, medications of unknown mechanism, prohibited for sale in the United States.<sup>16</sup> The most widely prescribed nootropic medication in the US is the neurostimulant, best known by the brand name Adderall.<sup>17</sup>

Adderall is mixture of generic d-amphetamine and l-amphetamine salts. The neologism Adderall was coined by pharmaceutical executive Roger Griggs: *ADD* (Attention Deficit Disorder) *for All*, shorted to Adderall. Adderall received Federal Drug Administration (FDA) approval for the treatment of attention-deficit hyperactivity disorder (ADHD) and narcolepsy in February of 1996. It is also prescribed “off label” (legal but non-FDA approved) for short-term treatment of exogenous obesity. The use of Adderall for other purposes, including cognitive enhancement by healthy persons, is prohibited in the United States.

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<sup>14</sup> Krishna Chinthapalli, “The Billion Dollar Business of Being Smart,” *British Medical Journal* 351 (September 14, 2015): 4829, accessed November 14, 2018, <https://www.bmj.com/content/351/bmj.h4829.full>.

<sup>15</sup> Empirical studies continue to demonstrate that “ginkgo provides no measurable benefit in memory or related cognitive function to adults with healthy cognitive function.” Paul R. Solomon et al., “Ginkgo for Memory Enhancement: A Randomized Controlled Trial,” *Journal of the American Medical Association* 288, no. 7 (August 2002): 835-40.

<sup>16</sup> Alex Haahr Gouliaeva and Alexander Senning, “Piracetam and Other Structurally Related Nootropics,” *Brain Research Reviews* 19, no. 2 (May 1994): 180-222. Racetams are not approved by the US Food and Drug Administration for any medical application, and racetams are not permitted to be sold as a dietary supplement. Therefore, this class of potential nootropics remain available outside Europe, Asia, and South America.

<sup>17</sup> Alan DeSantis and Audrey Curtis Hane, “‘Adderall Is Definitely Not a Drug’: Justifications for the Illegal Use of ADHD Stimulants,” *Substance Use & Misuse* 45 (2010): 31-46.

The biochemical mechanism of action for cognitive nootropics like Adderall is fairly well established. Amphetamines elevate extracellular dopamine in the brain.<sup>18</sup> Although dopamine is a neurotransmitter found throughout the human nervous system, its effects in the brain specifically provoke “motivational salience” to environmental stimuli by producing feelings of pleasure to motivate particularly advantageous behaviors, like eating and sex.<sup>19</sup> When dopamine is stimulated by medications, the advantageous behavior that becomes motivated is obtaining more of the stimulating medication.<sup>20</sup> Hence, the well-established addictive properties of amphetamines.

In contrast, the cognitive enhancing mechanism of stimulants like Adderall are not clearly understood. For ADHD patients, Adderall improves objective cognitive performance, but for healthy students the results are mixed: some studies indicate a mild increase in cognitive function, other studies were “not able to provide sufficient evidence of positive effects in healthy individuals from objective tests.”<sup>21</sup> One study even concluded that Adderall “impaired performance on tasks that require adaptation, flexibility and planning.”<sup>22</sup> If there is little empirical evidence that Adderall actually boosts cognitive

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<sup>18</sup> Dopamine increase is accomplished by three synergetic mechanisms: (1) inhibiting dopamine re-uptake, thereby allowing dopamine to remain in the extracellular space for a longer duration, (2) facilitating movement of dopamine from the vesicles to the cytoplasm, and (3) directly stimulating release of dopamine at the synaptic cleft independent of action-potential inducement. Erin S. Calipari and Mark J. Ferris, “Amphetamine Mechanisms and Actions at the Dopamine Terminal Revisited,” *Journal of Neuroscience* 33, no. 21 (May 2013): 88923-25.

<sup>19</sup> Jennifer M. Wenzel et al., “A Role for Phasic Dopamine Release within the Nucleus Accumbens in Encoding Aversion: A Review of the Neurochemical Literature,” *Neuroscience* 6, no. 1 (2015): 16-26.

<sup>20</sup> The dependency produced through dopamine stimulation is the same mechanism shared by many addictive drugs, including cocaine. J. H. Baik, “Dopamine Signaling in Reward-Related Behaviors,” *Frontiers in Neural Circuits* 7 (October 2013): 152.

<sup>21</sup> D. Repantis et al., “Modafinil and Methylphenidate for Neuroenhancement in Healthy Individuals: A Systematic Review,” *Pharmacological Research* 62, no. 3 (September 2010): 187-206.

<sup>22</sup> Claire Advokat, “What Are the Cognitive Effects of Stimulant Medication? Emphasis on Adults with Attention-Deficit/Hyperactivity Disorder,” *Neuroscience and Biobehavioral Reviews* 34 (July 2010): 1256-66.

functioning in healthy persons, why do so many users consistently report better concentration, motivation, and focus for studying?

In a survey of 1,811 college undergraduates, 72 percent of students reported that their primary reason for using Adderall was “to stay awake to study longer.”<sup>23</sup> One student shared, “This stuff is like an academic anabolic steroid.”<sup>24</sup> There appears to be a vast chasm between the lack of objective empirical benefits of Adderall and the subjective experiential benefits reported by students.

Studies by the University of Pennsylvania observed that medication such as Adderall “improved mood, energy, goal-directed activity, and motivation—in short, emotional rather than cognitive [effects].”<sup>25</sup> A similar study concluded that “user’s emotions and feelings are an important contributor to user’s perceptions of improved academic performance.”<sup>26</sup> These studies suggest that Adderall’s stimulation of dopamine during academic labor causes the subject to associate studying with pleasure. Perhaps academic performance improves simply because students begin to enjoy learning, albeit by artificial biochemical stimulation of the brain’s opioid system.<sup>27</sup> As one student

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<sup>23</sup> Alan D. DeSantis, Elizabeth M. Webb, and Seth M. Noar, “Illicit Use of Prescription ADHD Medications on a College Campus: A Multimethodological Approach,” *Journal of American College Health* 57, no. 3 (November/December 2008): 315-23.

<sup>24</sup> DeSantis, Webb, and Noar, “Illicit Use of Prescription ADHD,” 319.

<sup>25</sup> Irena Llieva and Martha J. Farah, “Cognitive Enhancement with Amphetamine: History Repeats Itself,” *AJOB Neuroscience* 4, no. 1 (January/March 2013): 24-25.

<sup>26</sup> Scott Vrecko, “Just How Cognitive Is ‘Cognitive Enhancement’? On the Significance of Emotions in University Students’ Experiences with Study Drugs,” *AJOB Neuroscience* 4, no. 1 (January-March 2013): 4-12.

<sup>27</sup> Joar Guterstam et al., “Effects of Amphetamine on the Human Brain Opioid System—A Positron Emission Tomography Study,” *International Journal of Neuropsychopharmacology* 16, no. 4 (May 2013): 763-69.



confessed, “The main benefit, really, is that on it [Adderall], I don’t mind doing work.”<sup>28</sup> Cognitive enhancement might really be emotional enhancement.

### **The Magnitude of the Problem**

Adderall can only be legally prescribed for patients suffering a narrow group of mental disorders, but the illicit use of Adderall by healthy persons has become a growing epidemic.<sup>29</sup> The use of these “steroids for the brain” by healthy persons continues to grow in schools, colleges, and workplaces.<sup>30</sup> Over one third of all high school and college students now illicitly use these drugs to cram for exams.<sup>31</sup> This growth represents a 300 percent increase between 1996 and 2006. Even 1 in 5 medical students has used illegal nootropic medications.<sup>32</sup> This is alarming because these medications are amphetamine derivatives, powerful nervous system stimulants that are regulated by the United States Drug Enforcement Agency (DEA) as a schedule II controlled substance due to their risks for dependency and serious side effects.

A multivariate regression analysis of college students using Adderall for academic performance indicated that this cohort was disproportionately white, male,

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<sup>28</sup> Vrecko, “Just How Cognitive Is ‘Cognitive Enhancement’?,” 10.

<sup>29</sup> Center for Behavioral Health Statistics and Quality, *2014 National Survey on Drug Use and Health: Detailed Tables* (Rockville, MD: Substance Abuse and Mental Health Services Administration, 2015).

<sup>30</sup> Alan Schwartz, *ADHD Nation* (New York: Scribner, 2016), 4. Schwartz refers to Adderall as “steroids for the brain” by drawing the analogy between the illicit use of anabolic steroids within competitive sports, with the illicit use of cognitive enhancing medications in competitive intellectual events such as the SAT and college exams.

<sup>31</sup> Amelia M. Arria et al., “Dispelling the Myth of ‘Smart Drugs’: Cannabis and Alcohol Use Problems Predict Nonmedical Use of Prescription Stimulants for Studying,” *Addictive Behaviors* 38, no. 3 (March 2013): 1643-50.

<sup>32</sup> Robyn M. Emanuel et al., “Cognitive Enhancement Drug Use among Future Physicians: Findings from a Multi-Institutional Census of Medical Students,” *Journal of General Internal Medicine* 28, no. 8 (August 2013): 1028-34.

fraternity/sorority members in colleges with more competitive admission standards.<sup>33</sup> Paradoxically, Adderall use by students was only weakly correlated with academic misconduct, such as plagiarism or cheating on exams.<sup>34</sup> This correlation is explained by the fact that many users do not believe that using Adderall during study is cheating.<sup>35</sup>

Unfortunately, college students using Adderall were also more likely to use alcohol, cigarettes, marijuana, ecstasy, or cocaine.<sup>36</sup> Misuse of medications such as Adderall is also associated with higher frequencies of addiction, psychosis, myocardial infarction, and sudden death.<sup>37</sup> By 2011, emergency room visits for complications from nonmedical use of Adderall had increased 156 percent.<sup>38</sup> Despite these risks, most Adderall users remain willfully ignorant of the medical, legal, or moral risks of using illicit nootropic medications. Researcher Alan DeSantis concludes, “A popular, socially constructed storyline has been created and internalized by many of these at-risk students . . . that is collectively crafted and shared on a campus where illegal stimulant use is often discussed as a stigma-free part of the culture.”<sup>39</sup>

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<sup>33</sup> Sean Esteban McCabe et al., “Non-Medical Use of Prescription Stimulants among US College Students: Prevalence and Correlates from a National Survey,” *Addiction* 99 (2005): 96-106.

<sup>34</sup> Veljko Dubljevic, Sabastian Sattler, and Eric Racine, “Cognitive Enhancement and Academic Misconduct: A Study Exploring Their Frequency and Relationship,” *Ethics & Behavior* 25, no. 5 (2014): 408-20.

<sup>35</sup> Alexandra Sifferlin, “Many Ivy League Kids Don’t Think Taking ADHD Drugs Is Cheating,” *Time*, May 3, 2014, 1.

<sup>36</sup> McCabe et al., “Non-Medical Use of Prescription Stimulants,” 96.

<sup>37</sup> Shaheen E. Lakhan and Annette Kirchgessner, “Prescription Stimulants in Individuals with and without Attention Deficit Hyperactivity Disorder: Misuse, Cognitive Impact, and Adverse Effects,” *Brain and Behavior* 2, no. 5 (September 2012): 661-77.

<sup>38</sup> Lian-Yu Chen et al., “Prescriptions, Nonmedical Use, and Emergency Department Visits Involving Prescription Stimulants,” *The Journal of Clinical Psychiatry* 77, no. 3 (March 2016): 297-304.

<sup>39</sup> DeSantis categorizes student rationalization for illicit Adderall use into useful categories: I/m-doing-it-for-the-right-reasons (study), It-is-an-accepted-medical-treatment (ADHD), There’s-no-high (non-recreational), No-physical-side-effects (safety), No-social-side-effects (everyone does it), and the Minimization argument (it’s like coffee). DeSantis and Hane, “Adderall Is Definitely Not a Drug,” 46.

The ethics concerning cognitive enhancement technology involves numerous issues: medical safety, public policy, distributive justice, competitive fairness, individual freedoms, and moral hazards, to name but a few. The contemporary controversy developing around the use of nootropic medications shares much in common with illicit anabolic steroid use: the clear health risks are frequently ignored by those seeking positional advantage, whether in the classroom or the locker room. Finally, the growing epidemic abuse of both drugs continues to flourish in the ethical shadows, largely escaping scholarly debate or public scrutiny.

### **The Contemporary Debate**

In 2003, Leon Kass, then chairman of the President's Council on Bioethics, concluded that nootropic medications were "the most neglected topic in public and professional bioethics."<sup>40</sup> More recently, there has been a renewed interest in the ethics of cognitive enhancing medications. In general, the conversation about cognitive enhancement has become the false dichotomy of an "all in/all out" debate, with little appreciation for the nuances of application to particular situations.

Supporters of cognitive enhancement usually argue along one of these grounds: (1) the advantages of self-directed evolution, (2) the inviolate autonomy for individuals to self-improve, or (3) the egalitarian demands of social justice for those less cognitively endowed. These advocates admit that unrestricted access to nootropic medications may entail unintended consequences, such as unfair positional advantage in the classroom, unfair economic disparity in the workplace, and the exacerbation of discrimination based upon intellectual performance. Yet, they argue that the greater personal utility of nootropics far outweighs these concerns. For instance, John Harris insists there is a "democratic

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<sup>40</sup> Leon R Kass, "Ageless Bodies, Happy Souls: Biotechnology and the Pursuit of Perfection," *New Atlantis*, no. 1 (Spring 2003): 10.

presumption . . . that citizens should be free to make their own choices in the light of their own values, whether or not these choices and values are acceptable to the majority.”<sup>41</sup>

In contrast, some ethicists argue for caution concerning policies that would allow unrestricted access to cognitive enhancing biotechnology. They cite concerns about (1) commodifying human dignity, (2) the slippery slope toward a “new eugenics,” or (3) the risks of transcending human nature itself. Yet, according to Kass, their “precautionary principle” is being pushed aside by “the temptation to ‘hyper-agency,’ a Promethean aspiration to remake nature, including human nature, to serve our purposes and to satisfy our desires.”<sup>42</sup>

Within this larger debate about human enhancement there are a few Christian voices, but they are largely employing philosophical arguments rather than theological arguments. Ronald Cole-Turner agrees: “What may be surprising, however, is that relatively few religious scholars and leaders have joined in [the enhancement debate], despite the fact that religious themes are often apparent at the very surface of these debates.”<sup>43</sup> One important perspective that appears to be lacking is an explicitly Christological examination of the ethics for cognitive enhancement. How many Bible college and seminary students use or abuse cognitive enhancement medications is not known, but certainly Christian students and educators ought to be seeking God’s ethical direction in this matter.

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<sup>41</sup> Harris, *Enhancing Evolution*, 6. James Watson, co-discoverer of DNA, bluntly states, “If we could make better human beings by knowing how to add genes, why shouldn’t we?” President’s Council on Bioethics (US), *Beyond Therapy: Biotechnology and the Pursuit of Happiness* (New York: HarperCollins, 2003), 7.

<sup>42</sup> The President’s Council on Bioethics, Leon R. Kass, Chairman, *Beyond Therapy: Biotechnology and the Pursuit of Happiness* (New York: Harper Perennial, 2003), 288.

<sup>43</sup> Ronald Cole-Turner, ed., *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement* (Washington, DC: Georgetown University Press, 2011), 2.

## Thesis

The pursuit of “human enhancement” implies that something about humans is currently deficient or incomplete, that features of our nature need to be improved upon. These features might include biological limitations, such as morbidity and mortality, or cognitive limitations, which many believe are constrained by the corporeality of neurochemistry. People struggle against these constraints, whether genetically determined or divinely designed. Frequently, each person views his finitude as an obstacle to aspirations, an obstacle that biotechnology now promises to remove. But are human limitations of corporeality and cognition truly an obstacle to aspirations? That would appear to depend upon the goals to which each person aspires.

The thesis of this dissertation is that one essential guide for a Christian ethic for human enhancement is God’s will for humans as *imago Dei*. The argument is primarily teleological—one that examines Christ as the archetype of the *imago Dei* to identify God’s purposes for human cognition. Put simply, the uses of nootropics that enhance humans toward the *imago Dei* exemplified by Christ are moral, while those that conflict with the *imago Dei* are immoral.

This thesis is developed in five stages. It will present an argument that (1) corporeal limitations are a divine good created by God as the foundation for human freedom, dignity, and authenticity; (2) the purpose of human enhancement ought to be fulfilling the *imago Dei*; (3) the *imago Dei* is exemplified by Christ, the divine archetype for humanity; (4) the *imago Dei* within Christ is not defined by Jesus’ human hypostatic attributes, but by Jesus’ kenotic attitudes of humility, compassion, and reverence; and (5) from these three attitudes five criteria for determining the moral use of cognitive enhancement medications by healthy persons are derived: just cause, transparency, temporality, proportionality, and reverence. Finally, examples of applying these criteria to hypothetical situations are explored. It is my hope that this dissertation will provide a biblical Christocentric starting point for constructing an ethic for human enhancement to guide Christians in this biotechnical age.

## **Methodology**

Since the scholarship concerning human enhancement is vast, my introduction organizes and condenses this extensive corpus into a taxonomy according to their differing presuppositions about the nature of man. This taxonomy is accomplished by examining the primary sources for each author's position. The dissertation then narrows its examination to the Christian ontology of humanity as *imago Dei* utilizing primary sources of both ancient and contemporary Christian theologians. Particular passages of supporting Scripture will be exegeted from the original Hebrew and Greek. Special attention will be given to Philippians 2:1-8. The Hebrew text will be *Biblia Hebraica Stuttgartensia*; the Greek text will be the *Novum Testamentum Graece* Nestle-Aland (NA<sup>27</sup>).

## CHAPTER 2

### SURVEY OF POSITIONS

From the very beginning, humans have been dissatisfied with their condition. Not content to be images of God, Adam and Eve longed to be like God. In the Greek myth, Icarus resists man's terrestrial bounds and longs to fly like a bird. Today, researchers are exploring ways to place chlorophyll in skin so humans can photosynthesize like plants.<sup>1</sup> Human history testifies to our perineal dissatisfaction. The very term *human enhancement* presupposes that some aspects of being human are currently defective or incomplete; otherwise, there would be nothing about being human that needed enhancing. This chapter surveys the many different positions for and against human enhancement, but underlying each view is the presupposition that humans need improvement.

#### **History of the Research**

The earliest attempts to boost innate human intelligence were essentially genetic—an application of animal husbandry to humans.<sup>2</sup> As early as 380 BC, Plato advocated a selective breeding program for his utopian *Republic*.<sup>3</sup> But once Darwin's

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<sup>1</sup> Christina M. Agapakis et al., "Towards a Synthetic Chloroplast," *PLoS ONE* 6, no. 4 (2011): 1-8.

<sup>2</sup> Intelligence is used herein as the aptitude or ability to acquire knowledge and skills; it concerns the capacity or quality, and not the content of thought. An imperfect analogy might image the mind as a bowl: intelligence represents the size of the bowl, learning is how the bowl is filled, and knowledge represents the contents of the bowl. Thus, intelligence represents the potential capacity for cognition, not the quantity or quality that is actually achieved. Wisdom is the appropriate application of knowledge.

<sup>3</sup> Even centuries before genetics was discovered to be the mechanism of heredity, people still understood that one's cognitive traits somehow derived from one's parents. Plato insisted that his selective breeding program "must be a secret only the rulers know . . . to avoid rebellion" by the populace. Plato, *Plato Complete Works*, trans. Benjamin Jowett (Lexington, KY: CreateSpace Independent, 2016), 135.

theory of natural selection was published, Social Darwinists applied a very unnatural selection to sterilize persons of lower intelligence.<sup>4</sup> A modern positive eugenics was later promoted by the “Nobel Laureate Sperm Bank” where women could select the cognitive traits they desired in their offspring.<sup>5</sup> Currently, selective abortion, *in vitro* fertilization, and somatic cell nuclear transfer have opened possibilities for genetic manipulation to directly “improve” the human genome for the cognitive enhancement of the species.

The main objection against genetic engineering for intelligence is that it is essentially irreversible—it carries the risk that any unforeseen deleterious consequences might be permanent, and that these undesired effects might be passed on through one’s offspring in perpetuity.<sup>6</sup> These significant concerns continue to dampen scientific enthusiasm for genetic manipulation for intelligence. In contrast, if cognitive enhancing medications produced unintended consequences, at least the drug could be discontinued. This advantage of pharmacologic cognitive enhancement has removed some of the ethical reservations harbored by many researchers and public policy officials.

Like genetic enhancement, pharmacologic enhancement has also been around for centuries. The benefits of caffeine on concentration have been known for nearly 3,000 years, but the first truly nootropic medication was amphetamine, whose cognitive effects remained unrecognized for nearly half a century after it was first synthesized in 1887.<sup>7</sup>

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<sup>4</sup> Margaret Sanger, founder of Planned Parenthood, declared that birth control is “nothing more or less than the facilitation and the process of weeding out the unfit.” Angela Franks, *Margaret Sanger’s Eugenic Legacy: The Control of Female Fertility* (Jefferson, NC: McFarland, 2005), 47.

<sup>5</sup> David Plotz, *The Genius Factory: The Curious History of the Nobel Prize Sperm Bank* (New York: Random House, 2005).

<sup>6</sup> For example, although sickle cell anemia is a life-threatening genetic disease, possessing the sickle cell trait conveys protection from malaria. The number of lives saved by eliminating sickle cell gene from the human population would be dwarfed by the subsequent lives lost to malaria. Eric Elguero et al., “Malaria Continues to Select for Sickle Cell Trait in Central Africa,” *Proceedings of the National Academy of Sciences* 112, no. 22 (June 2015): 7051-54.

<sup>7</sup> Amphetamine was first synthesized by Romanian chemist Lazăr Edeleanu in 1887, in Germany. In 1929, biochemist Gordon Alles discovered that amphetamine had excellent bronchodilation properties that could be useful for pulmonary disorders. Accordingly, the American pharmaceutical



Even when amphetamine's psychostimulant properties became apparent, the ethics of using such cognitive enhancement was confined only to the detrimental physical and psychological side effects of the drug; few questioned the morality of cognitive enhancement itself.<sup>8</sup>

In 2001, the increasing variety and availability of nootropic drugs, combined with the skyrocketing prevalence of their use by healthy persons, prompted the President's Council on Bioethics to examine the ethics of human enhancement.<sup>9</sup> Their report invoked the perennial debate between nature and nurture, determinism and freedom, and whether human nature is an unalterable essence or an infinitely malleable contingency. Ultimately, the ethics of human enhancement must wrestle with the boundaries of the human species and whether these boundaries ought to be extended or removed altogether.

Over the last decade there has been an explosion of authors and positions regarding human enhancement. To survey the current state of the debate, it becomes necessary to choose some method of organizing the field. Numerous taxonomies have been offered that include differentiating between means and goals,<sup>10</sup> natural and artificial

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company Smith, Kline, and French patented amphetamine in 1933, as an over-the-counter Benzedrine inhaler. However, its rampant use and abuse during World War II as a stimulant for pilots revealed the addictive properties of the compound. In 1971, the Controlled Substances Act classified amphetamines as a schedule II controlled substance, requiring prescribing physicians to possess a special Drug Enforcement Administration license.

<sup>8</sup> Nicolas Rasmussen, "America's First Amphetamine Epidemic 1929–1971," *American Journal of Public Health* 98, no. 6 (June 2008): 974-85.

<sup>9</sup> Leon Kass, former chairman of the President's Council on Bioethics, observed, "Despite the disquiet it arouses, the subject of using biomedical technologies for purposes "beyond therapy" has received remarkably little public attention." President's Council on Bioethics (US), Leon R. Kass, Chairman, *Beyond Therapy: Biotechnology and the Pursuit of Happiness* (New York: Harper, 2003), 7.

<sup>10</sup> Kass writes, "By structuring the inquiry around the desires and goals of human beings, we adopt the perspective of human experience and human aspiration, rather than the perspective of technique and power." President's Council, *Beyond Therapy*, 21.

means,<sup>11</sup> and therapeutic and non-therapeutic goals,<sup>12</sup> to mention only a few.<sup>13</sup> This dissertation argues that taxonomies of means and ends are superficial to deeper presuppositions about the nature of humanity itself. Consequently, the ethics of human enhancement cannot be adequately explored by employing mere science and medicine, but by applying philosophy and theology. Accordingly, this dissertation organizes the corpus of arguments for and against human cognitive enhancement according to their implicit presuppositions concerning human nature.<sup>14</sup> The categories chosen are naturalism, egalitarianism, substance dualism, and property dualism. Finally, a brief overview of specific Christian arguments for and against human enhancement is provided.

### Naturalism

Philosophical naturalism defines the universe as a closed physical system, where humans are presupposed to be a randomly evolving collection of matter governed by

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<sup>11</sup> Ryuichi Ida defines “natural improvement” as intrinsic methods, such as physical exercise and academic learning, which realize given capacities. In contrast, “artificial improvements” are extrinsic methods, such as biotechnology, which treat the human body instrumentally revealing a materialistic attitude. Ryuichi Ida, “Should We Improve Human Nature?,” in *Human Enhancement*, ed. Julian Savulescu and Nick Bostrom (Oxford: Oxford University Press, 2009), 61-64.

<sup>12</sup> Norman Daniels states, “Treating illness and enhancing human capabilities may both be desirable social goals, but they should not be confused with one another.” James Sabin and Norman Daniels, “Determining ‘Medical Necessity’ in Mental Health Practice,” *Hastings Center Report* 24, no. 6 (1994): 10.

<sup>13</sup> Some taxonomies become quite complex. Allen Buchanan organizes his schema according to eight criteria: character, human nature, moral status, unintended consequences, justice, research, and the risk of “new eugenics.” Allen Buchanan, *Beyond Humanity? The Ethics of Biomedical Enhancement* (Oxford: Oxford Press, 2011), 21. See also Kasper Raus et al., “On Defining Moral Enhancement: A Clarification Taxonomy,” *Neuroethics* 7 (2014): 263-73.

<sup>14</sup> Some of the authors included here have the particular issue of genetic manipulation in view, rather than cognitively enhancing medications. However, their arguments are still applicable to the ethics of nootropic medications with two exceptions: arguments concerning agency and arguments concerning posterity. Concerning agency, genetic manipulation necessarily involves selecting enhancements for future children who have no agency in the selection of their own genes, whereas cognitive enhancing medications are usually the free choice of individual agents. Concerning posterity, genetic manipulation creates permanent changes in the human genome, which are passed onto countless future generations in perpetuity, whereas cognitive enhancing medications can be discontinued at any time and, presumably, do not effect as yet unborn generations in the same way as genetic manipulation.

inviolable natural laws.<sup>15</sup> These naturalist presuppositions generally define human enhancement as a more efficient cooperation with evolution whereby humans can now self-select loftier goals than mere reproductive success.<sup>16</sup> Some of these higher goals include improved reasoning, lower morbidity, or reduced mortality. Some naturalists even aim toward eventual omniscience and immortality.<sup>17</sup> For Naturalists, there is no fixed essence of humanity, only limitless self-creation.<sup>18</sup> Naturalists typically employ consequentialist arguments whereby the ends served by cognitive enhancement are so valuable that any means can be justified. These arguments usually appeal to either public health models or personal service models. Public health models aggregate costs and benefits across individuals, calculating whether the health benefits outweigh the medical

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<sup>15</sup> While there are important differences among the features of naturalism, physicalism, and materialism (as well as atomism, mechanism, and dynamism), such distinctions are not important here. Naturalism, as used in this dissertation, subsumes all the metaphysical and methodological views that deny the possibility of the supernatural. Naturalism therefore rejects that the universe could be open and purposeful, or that man has any non-physical components, such as a soul.

<sup>16</sup> Fredric Kurzweil, inventor of the flat-bed scanner and the first text-to-speech synthesizer, argues, "What we see in evolution is increasingly accelerating intelligence, beauty. We find evolving organisms, like humans that are capable of higher emotions like love . . . so part of the evolutionary process—and this has continued with our technological growth of human cultural and technological history—is an increase of those higher emotional, intelligent functions. (Fredric Kurzweil, quoted in Joel Garreau, *Radical Evolution: The Promise and Peril of Enhancing our Minds, Our Bodies—and What It Means to Be Human* [New York: Broadway, 2005], 93.)

<sup>17</sup> Fredric Kurzweil prophesies that human enhancing technologies will bring about a heaven-on-earth, "a near future that to some seems indistinguishable from the Christian version of paradise." Garreau, *Radical Evolution*, 90. Philosopher Philippe Verdoux believes that "progress in philosophy has been impeded, in part, by two specific constraints imposed on us by the natural architecture of our cognitive systems. Both of these constraints, though, could in principle be overcome by certain cognitive technologies currently being researched." Philippe Verdoux, "Emerging Technologies and the Future of Philosophy," *Metaphilosophy* 42, no. 5 (October 2011): 682-707.

<sup>18</sup> Robert Proctor insists, "If evolution has taught us anything, it is that there is no essence of humanity, no fixed and final form." Robert N. Proctor, "Humanity Regency and Race," in *Is Human Nature Obsolete? Genetics, Bioengineering, and the Future of the Human Condition*, ed. Harold W. Baillie and Timothy K. Casey (Cambridge, MA: MIT Press, 2005), 249.

risks.<sup>19</sup> Personal service models equate enhancements to consumer goods which ought to remain available to all autonomous agents.

### **Naturalistic Proponents of Enhancement**

The public health model attempts to calculate risks and benefits. Under this model, human enhancement is usually placed upon the medical treatment continuum. If the medical risks of enhancement are outweighed by its medical benefits, then the technology ought to remain available to all. For instance, John Harris equates cognitive enhancement with “better health” by arguing that since eyeglasses are morally acceptable enhancements, it follows that even more advanced technology, such as neural implants, ought to be pursued as a “positive moral duty.”<sup>20</sup>

In contrast, personal service models attempt to position enhancement technology outside the public domain by defining it as an instrument for self-fulfillment by the personal choice of autonomous individuals. Therefore, if human enhancement fulfills personal desires for happiness and flourishing, it is deemed inherently moral. Philosopher Jonathan Glover defends enhancement arguing that removing any “non-medical impediments to flourishing” is inherently moral.<sup>21</sup> Oxford philosopher Nick Bostrom goes even further, arguing that the autonomous choice of enhancement serves to elevate human dignity and protect human rights.<sup>22</sup>

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<sup>19</sup> Allen Buchanan et al., *From Chance to Choice: Genetics and Justice* (Cambridge: Cambridge Press, 2000), 11.

<sup>20</sup> John Harris, *Enhancing Evolution: The Case for Making Better People* (Princeton, NJ: Princeton University Press, 2007), 2-3.

<sup>21</sup> Jonathan Glover, *Choosing Children: Genes, Disability, and Design* (Oxford: Clarendon Press, 2006), 75.

<sup>22</sup> Nick Bostrom, “Dignity and Enhancement,” in *Human Dignity and Bioethics: Essays Commissioned by the President’s Council on Bioethics* (Washington, DC: US Independent Agencies and Commissions, 2008), 173-76.

## Naturalistic Opponents of Enhancement

Many naturalist opponents of human enhancement similarly employ the public health model, but they argue from the “precautionary principle” by pointing to the risks of the unintended consequences that may result from imprudent enhancements.<sup>23</sup> Law expert Henry Greeley warns, “The first concern is safety. Cognitive enhancements affect the most complex and important human organ, and the risk of unintended side effects is therefore both high and consequential.”<sup>24</sup> Another unintended consequence might be that without concurrent moral development, cognitive enhancement might encourage immoral behavior. Julian Savulescu worries that nootropic medications might allow criminals or terrorists to more effectively execute their crimes and escape detection.<sup>25</sup> And finally, there are those who suspect that cognition is a zero-sum game, whereby enhancements of human reasoning might come at the cost of other attributes, such as creativity or compassion.<sup>26</sup>

The private service model can also be employed to urge caution concerning human enhancement. If enhancement is viewed as a personal choice for self-fulfillment, then identity becomes viewed as malleable and manufactured, rather than given and discovered. This redefines authenticity from “being who I am” into “being whoever I want to be.” Carl Elliott warns,

Substitute self-fulfillment for happiness and you get something of the ethic that motivates the desire for enhancement technologies. Once self-fulfillment is hitched

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<sup>23</sup> Although many of these ethicists are indeed theists, their arguments are naturalistic and non-theological, without reference to God, transcendence duties, or divine virtues.

<sup>24</sup> Henry Greeley et al., “Towards Responsible Use of Cognitive-enhancing Drugs by the Healthy,” *Nature* 456 (December 2008): 703.

<sup>25</sup> Ingmar Persson and Julian Savulescu, “The Perils of Cognitive Enhancement and the Urgent Imperative to Enhance the Moral Character of Humanity,” *Journal of Applied Philosophy* 25, no. 3 (2008): 162-77.

<sup>26</sup> Martha J. Farah et al., “When We Enhance Cognition with Adderall, Do We Sacrifice Creativity? A Preliminary Study,” *Psychopharmacology* 202 (2009): 541-47.

to the success of a human life, it comes perilously close to an obligation- not an obligation to God, country, or family, but an obligation to the self.<sup>27</sup>

### **Egalitarianism**

Egalitarianism describes a distinct group of enhancement arguments forwarded by social justice scholars who place the interests of the collective over the interests of the individual; they value the obligations between humans over the autonomy of individuals. Concerning human enhancement, the social justice arguments of egalitarianism emphasize the utility of enhancement to address social ills. Social justice arguments generally fall into two opposing positions: proponents who view enhancement as a method to “level the playing field” for those who came up short in the “genetic lottery” of life, and opponents who see enhancement as another opportunity for wealthy and powerful to perpetuate their positional advantage over others.

### **Proponents of Enhancement for Social Justice**

These authors view enhancement as a method to address the inequalities of opportunity suffered by persons of lower cognitive endowment. Allen Buchanan states, “We argue that some versions of the level playing field conception extend to requirements of equal opportunity, at least in principle, to interventions to counteract natural inequities that do not constitute disease.”<sup>28</sup> Norman Daniels observes, “None of us deserves the advantages conferred by accidents of birth,” so he proposes that enhancement should be restricted to “a specific class of obvious disadvantages and try to eliminate them.”<sup>29</sup> Barbro Fröding argues that cognitive inequities are the major source of suffering in the

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<sup>27</sup> Carl Elliott, *Better than Well: American Medicine Meets the American Dream* (New York: W. W. Norton & Company, 2003), 303.

<sup>28</sup> Although Buchanan is specifically addressing genetic manipulations, his argument extends to all enhancing technologies. Buchanan et al., *From Chance to Choice*, 17.

<sup>29</sup> Norman Daniels, “Justice and Health Care,” in *Health Care Ethics: An Introduction*, ed. Donald Van DeVeer and Tom Regan (Philadelphia: Temple University Press, 1987), 312.

world today. She concludes, “Our failure to lead the happy life can be explained in terms of lacking cognitive capacities . . . so enhancements are likely to increase the level of well-being and cut down on unnecessary suffering in the world today.”<sup>30</sup> Generally, these arguments advocate for a state-regulated distribution of cognitive enhancing technology aimed to reduce inequalities of opportunity and income.

### **Opponents of Enhancement for Social Justice**

Arguments promoting cognitive enhancing to solve social inequalities have drawn numerous critics who assert that enhancement will unintentionally worsen socioeconomic inequity. Although many of these critics might support some forms of enhancement using naturalistic, dualistic, or theistic arguments, they refute that social justice would be served by enhancement technology. For example, Mark Regnerus worries that enhancement is “the ground zero of future inequalities,” whose fallout will inevitably reintroduce eugenics.<sup>31</sup> Francis Fukuyama erects a wall between therapeutic nootropics and cognitive enhancement technologies because he believes redefining human nature will lead to social inequities, which risks a “full-scale class war.”<sup>32</sup> Anita Silvers argues that any standards developed for the moral use of enhancement technology will ultimately become a “facilitator of disadvantage” for many.<sup>33</sup> Leon Kass predicts that unequal access to new biotechnologies will ultimately make cognitive enhancement an “agent of social

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<sup>30</sup> Barbro Fröding, *Virtue Ethics and Human Enhancement* (New York: Springer, 2013), 23, 29.

<sup>31</sup> Mark Regnerus, “Minecraft over Marriage,” *First Things*, accessed April 4, 2017, <https://www.firstthings.com/web-exclusives/2015/04/minecraft-over-marriage>.

<sup>32</sup> Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York: Picador, 2002), 16.

<sup>33</sup> Anita Silvers, “A Fatal Attraction to Normalizing,” in *Enhancing Human Traits: Ethical and Social Implications*, ed. Erik Parens (Washington, DC: Georgetown University Press, 1998), 117.

control.”<sup>34</sup> Generally, these arguments advocate for a state-regulated universal ban on cognitive enhancing technologies to prevent inequalities of opportunity and income.

### Substance Dualism

Whereas naturalist arguments treat humans as individual animals composed solely of matter, and social justice arguments see humans as a collective of animals, substance dualist<sup>35</sup> arguments generally view humans as a composite of separate material and immaterial substances.<sup>36</sup> Personhood is located in the immaterial component as the spirit, soul, mind, or self.<sup>37</sup> For these dualists, enhancement biotechnology affects only the material body. If humans truly are “ghosts in a machine,” then cognitive enhancements merely boost corporeal mental horsepower without altering the nature of the driver.<sup>38</sup> Alternatively, to use a more modern metaphor, enhancements add internal memory and

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<sup>34</sup> Leon Kass, “Ageless Bodies, Happy Souls: Biotechnology and the Pursuit of Happiness,” *The New Atlantis*, no. 1 (Spring 2003): 9.

<sup>35</sup> Dualism here refers to mind-body dualism, and not to ontological dualism, moral dualism, theistic dualism, or any other of the myriad of binary concepts. Mind-body dualism further divides into substance dualism and property dualism, among others. In general, substance dualists see mind and body as separable components, i.e., a soul contained within a body. In contrast, property dualists generally see the mind, its thoughts, and memories, as an inseparable and emergent principle of the body. For substance dualism, the immaterial part of the human is the *person* who possesses these non-extended properties.

<sup>36</sup> Of course, there is considerable overlap between these categories. Not all social justice scholars are naturalists who disavow the soul, many are theists motivated by Christian themes, but their arguments concerning human enhancement are primarily grounded by social justice theories instead of scripture. For example, Catholic ethicist Lisa Sowle Cahill objects to enhancement technology, not principally upon biblical or theological grounds, but on “overcoming colonialism and dependency, and prevent them from dominating the organization of biotechnology.” Lisa Sowle Cahill, “Cloning and Sin,” in *Beyond Cloning: Religion and the Remaking of Humanity*, ed. Ronald Cole-Turner (Harrisburg, PA: Trinity Press International, 1980), 108.

<sup>37</sup> “Spirit” appears to be the favored term used by many dualists to avoid overt theological terms such as “soul.” Others favor the psychological term “mind” for the non-extended immaterial component of the person, or the term “self” to designate the self-reflective component of the mind that possesses these non-extended properties. Disambiguation of these terms remains challenging.

<sup>38</sup> “Ghost in a machine” was coined by the Oxford philosopher Gilbert Ryle to describe Cartesian dualism. Gilbert Ryle and Daniel C. Dennett, *The Concept of Mind* (Chicago: University of Chicago Press, 2000), 22.



upgrade the processor chip without changing the operating system.<sup>39</sup> As such, the cognitive effects of nootropics on the brain are only contingent instrumental changes, unable to alter one's essential human nature, soul, or self. There are generally two groups of dualists: those that believe enhancement upon the material body are instrumentally beneficial for the immaterial self, and those who believe enhancements can be detrimental to the self.

### **Substance Dualist Proponents of Enhancement**

For substance dualist proponents of human enhancement, physical enhancements offer instrumental benefits to the mind, the locus of the self. René Descartes believed that improving the body would improve wisdom and happiness by removing the limitations of the corporeal means that the soul must use to pursue its cognitive ends.<sup>40</sup> In other words, the finitude of the material body is an undesirable constraint upon the aspirations and freedom of the immaterial mind. As the limitations of the body are overcome by enhancement, the mind will achieve greater freedom and power. These bodily enhancements might even incorporate animal or machine components. Julian Savulescu advocates the incorporation of elephant genes into humans because it will improve memory and rationality, making humans even more human.<sup>41</sup> Andy Clark predicted that human-machine cyborgs would “liberate the human agent” from the limits and distractions of the body.<sup>42</sup> Substance dualism, taken to extremes, advocates the

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<sup>39</sup> Ari N. Schulman, “Why Minds Are Not Like Computers,” *The New Atlantis*, no. 23 (Winter 2009): 46-68.

<sup>40</sup> René Descartes, *Discourse on Method*, in *The Philosophical Works of Descartes*, trans. Elizabeth S. Haldane and G. R. T. Ross (New York: Cambridge University Press, 1970), 119-20.

<sup>41</sup> Savulescu considers rationality as the “central expression of humanity.” The body and its brain are merely the constraining shell of the mind, which is the person. Julian Savulescu, “Human-Animal Transgenesis and Chimeras Might Be an Expression of Our Humanity,” *The American Journal of Bioethics* 3, no. 3 (Summer 2003): 22-25.

<sup>42</sup> The implication is that machines are more reliable (less morbidity) and more durable (lacking mortality) than human bodies, freeing humans from the distraction of maintenance (eating, sleeping, and

complete separation of the mind from the body—either by completely transferring the mind to a machine or ultimately transcending the need for a corporeal existence at all.<sup>43</sup> Futurist Ray Kurzweil predicts and welcomes the complete upload of an individual’s brain into a computer, which acts as the mind’s “virtual body.”<sup>44</sup> For these proponents, cognitive enhancement is simply an attractive waypoint toward the goal of a disembodied existence.<sup>45</sup>

### **Substance Dualist Opponents of Enhancement**

For substance dualist opponents of enhancement, physical enhancements place too much emphasis on the body and not enough on the immaterial person, or worse, bodily enhancement corrupts the spirit. Plato forbid the Guardians of his *Republic* to be distracted by the gymnasium since “excessive care of the body . . . is more inimical to the practice of virtue.”<sup>46</sup> Augustine explained that the bodily appetites, especially lust, corrupted the soul “to forsake the better and the higher.”<sup>47</sup> Moses Maimonides believed that attention

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healthcare). Andy Clark, *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence* (Oxford: Oxford University Press, 2003), 32.

<sup>43</sup> Robert M. Geraci, “The Popular Appeal of Apocalyptic Ai,” *Zygon* 45, no. 4 (December 2010): 1003-20.

<sup>44</sup> Ray Kurzweil, *The Singularity Is Near: When Humans Transcend Biology* (New York: Penguin, 2006), 199. Kurzweil is a body-mind dualist who remains agnostic about the existence of the soul. When asked about God, Kurzweil responded, “Does God exist? I would say, ‘Not yet,’” alluding to humanity’s future god-like transcendence via technology.

<sup>45</sup> The modern transhumanist movement promotes any biotechnology that will allow the mind to escape its bodily prison. Article 8 of the Transhumanist Declaration states, “We favour allowing individuals wide personal choice over how they enable their lives. This includes use of techniques that may be developed to assist memory, concentration, and mental energy; life extension therapies; reproductive choice technologies; cryonics procedures; and many other possible human modification and enhancement technologies. (Transhumanist Declaration, accessed June 2, 2017, <http://humanityplus.org/philosophy/transhumanist-declaration/>)”

<sup>46</sup> Plato, *Plato Complete Works*, 130-31.

<sup>47</sup> Augustine rejected the simplistic Neoplatonic dualism that held that the perfect soul is entrapped within an imperfect body. For Augustine, the source of moral evil lies within the will of man, yet

devoted to the body distracted from the proper goal of pursuing the knowledge of God.<sup>48</sup> Orthodox theologian Demetri Demopoulos warns, “We need to take great care to ensure that we do not do irreparable harm to our souls as we attempt to heal our bodies.”<sup>49</sup> Gerald McKenny sees the spirit’s traditional struggle against the limitations of the body (diet, exercise, and the demands of sleep) as a positive force that cultivates virtues of moderation and temperance. Yet, he warns that biotechnology threatens to bypass the self and turn the process into a product.<sup>50</sup> For these dualists, bodily enhancement threatens to corrupt what really matters: spiritual enhancement.

### **Property Dualism**

Like substance dualists, property dualists also view humans as material and immaterial, but they contend that these are not separate substances but inseparable properties. In Aristotelian hylomorphism, a human is a material body that demonstrates the immaterial property of rational functioning.<sup>51</sup> The soul is simply an animating principle of matter without subsistence.<sup>52</sup> For Aquinas, “The soul is defined as the first principle of

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the sensuous demands of the body remain a corrupting influence upon the soul. Augustine, *Confessions*, trans. Edward B. Pusey (New Kensington: Whitaker House, 1996), 36, 43.

<sup>48</sup> Moses Maimonides, *Ethical Writings of Maimonides*, ed. Raymond L. Weiss and Charles Butterworth (New York: Dover, 1975).

<sup>49</sup> Demetri Demopoulos, “A Parallel to the Care Given the Soul,” in Cole-Turner, *Beyond Cloning*, 136.

<sup>50</sup> Gerald P. McKenny, “Enhancements and the Ethical Significance of Vulnerability,” in Parens, *Enhancing Human Traits*, 227.

<sup>51</sup> In Aristotelian hylomorphism, humans demonstrate two different principles: primary matter, which is potential, and substantial form, which is actual. Concerning humans, Aristotle’s four causes essentially collapse into only two: humans are material cause (potential matter) actualized by final cause (a living being that reasons). What Aristotle calls the human “soul” is simply the property of humans fulfilling their final cause, namely rational thought. For Aristotle, the soul cannot exist without the body. “Suppose that the eye were an animal—sight would have been its soul.” Aristotle, *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 556.

<sup>52</sup> For Aristotle, the soul is simply an animating principle; it does not exist as a substance so it cannot persevere beyond the death of the organism, whether plant, animal, or man; “The soul is inseparable from the body.” Aristotle, *Basic Works*, 556. It is somewhat confusing that later Aristotle contends that

life in those things which live.”<sup>53</sup> One contemporary example of property dualism might include emergentism, where complex organisms are capable of generating wholly new properties, like consciousness and mind, which are neither reducible to their physical components, nor transplantable to machines. The common feature for most of these views is that enhancement of the physical body necessarily alters essential human nature, for good or bad.

### **Property Dualist Proponents of Enhancement**

For property dualist proponents of human enhancement, benefits to the body necessarily generate benefits to the self. For example, cosmetic surgery to make one appear younger or more attractive appears to benefit one’s self-image and personality.<sup>54</sup> Similarly, “cosmetic pharmacology” claims to transform the self by changing the body’s neurochemistry.<sup>55</sup> Enhancing the body might even enhance one’s moral character, truth-seeking orientations, and human dignity.<sup>56</sup> For these proponents, to restrict access to

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“when mind is set free from its present conditions it appears as just what it is and nothing more: this alone is immortal and eternal.” Aristotle, *Basic Works*, 592. Nevertheless, whatever distinctions Aristotle has in mind between the soul and the mind, the soul is an inseparable principle of the body.

<sup>53</sup> Peter Kreeft, ed., *Summa of the Summa* (San Francisco: Ignatius Press, 1990), 244. Yet, Aquinas differs from Aristotle in one important point. Although incorporeal, the “intellectual principle” of the soul is subsistent and independent of the body, so the soul is separable upon death. Kreeft, *Summa of the Summa*, 245.

<sup>54</sup> Tilmann von Soest et al., “Psychosocial Changes after Cosmetic Surgery: A 5-Year Follow-up Study,” *Plastic and Reconstructive Surgery* 128, no. 3 (September 2011): 765-72.

<sup>55</sup> In *Listening to Prozac*, Peter Kramer coined the term “cosmetic pharmacology” to describe the transformation produced by anti-depressants upon non-depressed patients, a transformation of shy or passive individuals into “optimistic, decisive, quick of thought, charismatic, energetic, and confident” persons. He concludes, “One pill at breakfast makes you a new person.” Peter Kramer, *Listening to Prozac* (New York: Penguin, 1997), xvi, 17-18.

<sup>56</sup> Pertaining to moral character, John Harris explains, “The core moral dispositions . . . have a biological basis and, thus, in principle should be within the reach of biomedical and genetic treatment.” John Harris, “Moral Enhancement and Freedom,” *Bioethics* 25, no. 2 (2011): 103. For a synopsis of current biomedical enhancements that have proven successful for lowering impulsivity, aggression, and “immoral behavior,” see Farah Focquaert and Maartje Schermer, “Moral Enhancement: Do Means Matter Morally?” *Neuroethics* 8, no. 2 (August 2015): 139-51. Pertaining to truth-seeking orientations, philosopher Philippe

enhancement technology is to deprive persons of their right to “self-hood, authenticity, and the good life.”<sup>57</sup> In *The Ethics of Authenticity*, Charles Taylor explains, “Self-discovery requires *poiēsis*, making . . . creation and construction as well as discovery,” hence, “the notion of self-determining freedom pushed to its limit, doesn’t recognize any boundaries.”<sup>58</sup> For property dualist proponents, all human enhancement is an inviolable human right, even a moral duty.<sup>59</sup>

### **Property Dualist Opponents of Enhancement**

Property dualist opponents fear that enhancement technologies subvert the bodily means that provide character building and self-actualization. When memory pills replace the work of memorizing, enhancement is short-cutting the *process* of striving for excellence in order to obtain an excellent *product* without value. Eric Juengst asks, “To what extent can they take credit for their accomplishments if they do not achieve them through the socially valued practices that have traditionally produced them?”<sup>60</sup> Michael Sandel worries that “as the role of enhancement increases, our admiration for the achievement fades—or, rather, our admiration for the achievement shifts from the player

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Verdoux believes that any further progress toward humanity’s “ultimate goal” (i.e., “the truth”) cannot be achieved until humans receive cognitive enhancement. Verdoux, “Emerging Technologies and the Future of Philosophy,” 682-707. Pertaining to human dignity, Nick Bostrom equates the pursuit of bodily excellence with dignity. “The self-made man or woman might gain in Dignity as a Quality [*sic*] from being the author of his or her own character and situation.” Bostrom, “Dignity and Enhancement,” 185.

<sup>57</sup> In *Better than Well*, Carl Elliott explores “the paradoxical way in which a person can see an enhancement technology as a way to achieve a more authentic self, even as the technology dramatically alters his or her identity.” Carl Elliott, *Better than Well: American Medicine Meets the American Dream* (New York: W. W. Norton, 2003), xx-xxi.

<sup>58</sup> Charles Taylor, *The Ethics of Authenticity* (Cambridge, MA: Harvard University Press, 1991), 62, 68.

<sup>59</sup> Harris proclaims, “There is a positive moral duty to enhance.” Harris, *Enhancing Evolution*, 3.

<sup>60</sup> Eric T. Juengst, “What Does Enhancement Mean?,” in Parens, *Enhancing Human Traits*, 39.

to his pharmacist.”<sup>61</sup> Such pharmacologic shortcuts obviate the development of important virtues like perseverance, discipline, and courage. Thus, enhancement technologies actually rob the self because personal achievements are credited to medication rather than dedication.

Some have argued that such “biomedical shortcuts” are a useful means for achieving self-fulfillment, authenticity, and happiness.<sup>62</sup> In contrast, Erik Parens emphasizes the vital distinction between self-fulfillment and authenticity: choosing to use nootropic drugs to become smarter is motivated by self-fulfillment, but authenticity is choosing to live life as it is given, unenhanced by technology.<sup>63</sup> Kass argues one behavior of truly “happy souls” is “perfecting our natural gift through our own efforts.”<sup>64</sup>

### **Christian Arguments**

Many of the authors mentioned thus far are theists, even Christians, but their arguments are neither biblical nor theological. The minimum criteria for any argument to claim to be Christian is that the argument rest upon biblical or theological principles, where philosophical or logical principles are only employed for support. By this criteria, Christian arguments concerning human enhancement appear uncommon.<sup>65</sup>

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<sup>61</sup> Sandel explains, “The moral objection to enhancement lies less in the perfection it seeks than in the human disposition it expresses and promotes . . . hubris and the desire to master.” Michael Sandel, “The Case against Perfection: What’s Wrong with Designer Children, Bionic Athletes, and Genetic Engineering,” *The Atlantic Monthly* 293 (April 2004): 54.

<sup>62</sup> Birgit Beck and Barbara Stroop, “A Biomedical Shortcut to (Fraudulent) Happiness? An Analysis of the Notions of Well-Being and Authenticity Underlying Objections to Mood Enhancement,” in *Well-Being in Contemporary Society*, ed. Johnny H. Søraker et al. (Cham, Switzerland: Springer International, 2015), 115-34.

<sup>63</sup> Erik Parens, “Is Better Always Good? The Enhancement Project,” in Parens, *Enhancing Human Traits*, 22-23.

<sup>64</sup> Kass, “Ageless Bodies,” 21.

<sup>65</sup> Lisa Sowle Cahill notes, “The waning authority of religious voices has been attributed primarily to a growing reluctance of theologians to speak in a clearly religious voice.” Lisa Sowle Cahill, “Bioethics, Theology, and Social Change,” *Journal of Religious Ethics* 31, no. 3 (2003): 363-98.

## Early Christian Views of Enhancement

Many early Christian perspectives were originally optimistic that technology might play some role in God's salvific plan. Francis Bacon believed that science could mitigate the effects of the fall in this life.<sup>66</sup> Certainly, technological advancements in medicine, manufacturing, and agriculture have reduced human suffering from disease, injury, and famine. Russian Orthodox philosopher Nicolai Fedorov speculated that human technology might actually be God's means for bodily resurrection.<sup>67</sup> French Jesuit Pierre Teilhard de Chardin believed that technological human enhancement had a vital evolutionary role within God's plan for man. He believed that cognitive enhancement would lead to a consciousness network, the "noosphere," which would culminate in a collective reunification with the cosmic Christ.<sup>68</sup>

## Christian Proponents of Enhancement

Karl Rahner argued for a radical human freedom for self-enhancement, holding that God created man "to do what he wills with himself, freely able to align himself towards his own ultimate goal."<sup>69</sup> Rahner explained, "If the 'essence' of man is taken in a purely transcendental and theological sense . . . man's categorial self-manipulation would be unable to come into really serious conflict with his nature."<sup>70</sup> In other words, no

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<sup>66</sup> Francis Bacon, *The New Organon* (n.p.: CreateSpace Independent, 2017), 161.

<sup>67</sup> Michael Burdett, "Contextualizing a Christian Perspective on Transcendence and Human Enhancement," in *Transhumanism and Transcendence*, ed. Ronald Cole-Turner (Washington, DC: Georgetown University Press, 2011), 28.

<sup>68</sup> The obvious parallels between Chardin's "noosphere" and the internet are disturbing. Like many Christian advocates for biotechnology, Chardin appears to underestimate the power of sin to corrupt the ends of science. David Grumett, "Transformation and the End of Enhancement: Insights from Pierre Teilhard de Chardin," in Cole-Turner, *Transhumanism and Transcendence*, 39.

<sup>69</sup> Karl Rahner, "The Experiment with Man," in *Theological Investigations*, trans. Graham Harrison (New York: Herder and Herder, 1972), 9:212.

<sup>70</sup> As a Catholic theologian, Rahner would be expected to represent the property dualist perspective consistent with Thomism. But when Rahner remarks that enhancement of the body cannot affect the essence of the individual, he is implicitly separating the body from the person. Alternatively, Rahner is implying that enhancement produces only accidental changes, leaving human essence unchanged. However,

modification of the body can alter human nature, so there are no absolute ethical prohibitions against human enhancement.<sup>71</sup> Similarly, Christian deontologist John Frame argued, “There is no difference ethically between improving skills through schooling and improving them through genetic engineering.”<sup>72</sup> Despite these optimistic views of human enhancement, most Christian theologians remain more circumspect.

### **Christian Opponents of Enhancement**

In many ways, human enhancement technology serves man’s desire for self-creation and mastery over nature.<sup>73</sup> C. S. Lewis warned that the mastery of man over nature can only result in the mastery of some men over other men.<sup>74</sup> Paul Ramsey was even more alarmed. He predicted that the final end of human enhancement is nothing less than the “suicide of the species, in the expectation of godhood following.”<sup>75</sup> Ramsey doubts that humanity has “the wisdom to become his own creator, the unlimited lord of the future.”<sup>76</sup> He warns against the “groundlings—creatures of this world come of age—who do not have the moral courage or the ethical concepts, the religious daring or the theological

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this later interpretation seems unlikely given that the implicit ultimate end of the human enhancement project seeks to achieve transcendence from human corporeality, a corporeality, which is arguably an essential theological “essence” for humanity. Rahner, “Experiment with Man,” 9:215.

<sup>71</sup> For Rahner, the goals of human enhancement are not *prima facie* evil, yet the methods of enhancement still retain moral import. He warns, “For it is plain that not everything that can be done is morally justifiable.” Rahner, “Experiment with Man,” 9:229.

<sup>72</sup> Frame’s view confuses goals with methods. Ethical ends do not justify every means. John Frame, *The Doctrine of the Christian Life* (Phillipsburg, NJ: P & R, 2008), 791.

<sup>73</sup> Sandel eloquently describes human enhancement as “a Promethean aspiration to remake nature, including human nature, to serve our purposes and satisfy our desires.” Sandel, “The Case against Perfection,” 54.

<sup>74</sup> C. S. Lewis, *The Abolition of Man* (San Francisco: HarperOne, 2015), 56.

<sup>75</sup> While Ramsey was specifically addressing eugenic biotechnology, his arguments could apply to any enhancement biotechnology. Paul Ramsey, *Fabricated Man: The Ethics of Genetic Control* (New Haven, CT: Yale University Press, 1970), 160.

<sup>76</sup> Ramsey, *Fabricated Man*, 123.



concepts, with which to radically challenge the basic assumptions of a technological civilization.”<sup>77</sup> For Ramsey, modification of the body risks violating the created order as humans seek to transcend humanity to become “like God.”<sup>78</sup> Chicago Divinity School ethicist Jean Elshtain concludes, “Perfecting the human body has become a messianic project.”<sup>79</sup>

### **Freedom, Dignity, and Authenticity**

Finally, a number of insightful theologians have asked what humans might sacrifice by enhancing human nature beyond God’s design. They argue that human limitations of cognition provide the very foundations for human freedom, dignity, and authenticity. Clearly, human nature is defined by God-given limits: biological limits (corporality, morbidity, mortality), spiritual limits (corruption, fallibility, contingency), and cognitive limits (finite, incomplete, distorted).<sup>80</sup> These constraints provide the context for the life-choices each person must make. The shadow of death lends urgency to motivate important choices, even as the risk of failure weighs upon every endeavor. Each person’s desires and preferences help to form a unique identity and enables spiritual growth.<sup>81</sup>

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<sup>77</sup> Ramsey, *Fabricated Man*, 130-31.

<sup>78</sup> Ramsey draws clear references to Eden and humanity’s sin to desire to “be like God.” Ramsey, *Fabricated Man*, 94.

<sup>79</sup> Jean Bethke Elshtain, “The Body and the Quest for Control,” in *Is Human Nature Obsolete? Genetics, Bioengineering, and the Future of the Human Condition*, ed. Harold W. Baillie and Timothy K. Casey (Cambridge, MA: MIT Press, 2005), 155.

<sup>80</sup> Some of these limits are part of God’s original intent for humans; for instance, corporeality and finite knowledge. Other limits are the result of the Fall, such as morbidity, mortality, and spiritual corruption.

<sup>81</sup> From a philosophical perspective, human identity can be physical (the ship of Theseus), mental (emotional or autobiographical memory), or moral (essential-moral-self hypothesis). Empirical evidence argues that humans ground their own identity, and the identity of others, upon moral choices. Psychologists Strohminger and Nichols conclude, “Across five experiments, we find strong and unequivocal support for the essential moral self-hypothesis. Moral traits are considered more important to personal identity than any other part of the mind.” Nina Strohminger and Shaun Nichols, “The Essential Moral Self,” *Cognition* 131 (2014): 168.

Concerning freedom, Oliver O’Donovan writes, “To enjoy any freedom of spirit, to realize our possibilities for action of any kind, we must cherish nature in this place where we encounter it [our bodies].”<sup>82</sup> Finitude, morbidity, and mortality all provide the necessary context and urgency for the decisions that form the self. Philosopher Jeff Noonan explains, “Existential freedom, our (limited) capacity to shape our own future through our own efforts despite the fact that we confront the external limitations of natural and social environment and context, depends upon precisely the uncertainties and infirmities that keep the future open even for the one actively trying to shape it.”<sup>83</sup> This freedom to choose among life’s activities extends beyond the material world. As Gilbert Meilaender explains, human freedom means that through God people are free to transcend biological finitude, that “freedom from nature and history is, finally, our freedom for God.”<sup>84</sup> Without morbidity, everyone would miss the opportunity to be resurrected to perfection.

Human dignity for many non-Christians is proportional to certain qualities like rationality, sentience, or agency.<sup>85</sup> From this view, cognitive limitations reduce human dignity while enhancement boosts dignity. Yet, for Christians, human dignity is grounded

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<sup>82</sup> Oliver O’Donovan, *Begotten or Made?* (Oxford: Clarendon, 2002), 5.

<sup>83</sup> Jeff Noonan, “Finitude, Failure, and Human Freedom,” Distinguished Visitor Programme Public Lecture, University of Central Lancashire, October 16, 2013, accessed June 20, 2017, [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUK\\_Ewjyo9752ereAhVRvFkKHTsaAgEQFjAAegQICRAC&url=http%3A%2F%2Fwww.jeffnoonan.org%2Fessays%2Fuclan.pdf&usg=AOvVaw23sf\\_4EqvTPhDzpMpOi2A7](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUK_Ewjyo9752ereAhVRvFkKHTsaAgEQFjAAegQICRAC&url=http%3A%2F%2Fwww.jeffnoonan.org%2Fessays%2Fuclan.pdf&usg=AOvVaw23sf_4EqvTPhDzpMpOi2A7).

<sup>84</sup> Gilbert Meilaender, *Bioethics: A Primer for Christians* (Grand Rapids: Eerdmans, 2013), 4.

<sup>85</sup> Enlightenment figures like Kant grounded human dignity in the capacity for reason and moral agency, which excluded infants and mentally disabled humans (providing a foundation for abortion and euthanasia). Emmanuel Kant, *Groundwork of the Metaphysics of Morals*, trans. Thomas Kingsmill Abbott (n.p.: Digireads.com, 2017), 41. Animal rights advocates like Peter Singer grounded human dignity in the capacity for suffering (sentience), which lowered the dignity of humans to the level of animals. Peter Singer, *Animal Liberation* (New York: HarperCollins, 1975), 7-10. The major problem is that wherever human dignity is grounded upon a human attribute, there will be humans who are less endowed in that attribute, and therefore considered less human than others.

in their very essence as imagers of God.<sup>86</sup> This standard of the *imago Dei* remains undiminished regardless of one's varied failures to fulfill the standard, therefore dignity remains equal and undiminished regardless of one's cognitive limitations. John Kilner explains, "Humanity's status as created in God's image is rooted in the purpose and standard of human creation, not in what is descriptively true about people today."<sup>87</sup> In other words, human limitations provide the perspective necessary to recognize that true dignity actually proceeds from God, not from within one's own character.

Authenticity is the discovery and subsequent striving to fulfill one's greatest potential. Many persons insist that one's greatest potential must be subjective, self-defined, and artistically created. In *The Ethics of Authenticity*, Charles Taylor explains that, for these persons, making life choices free from external standards confers dignity.<sup>88</sup> For Christians, in contrast, making life choices in obedience to God's objective standards fulfills the dignity each person already possesses. True authenticity results from appreciating and utilizing one's own natural talents and spiritual gifts to their greatest potential for God. Choosing Botox, steroids, and Adderall are the opposite of authenticity; they attempt to create a Narcissistic facsimile of the self.

### **But Where Is Christ?**

While the majority of these Christian arguments are theological, few are explicitly biblical or Christological. The obvious question to ask is, "Where is Christ in

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<sup>86</sup> Gen 9:6 establishes the value of human life to their image of God. Pannenberg argues that Gregory of Nyssa, Ambrose, Leo the Great, Gregory the Great, Bonaventura, and Aquinas all linked the dignity of man to the *imago Dei*. Wolfhard Pannenberg, *Systematic Theology*, trans. Geoffrey Bromiley (Grand Rapids: Eerdmans, 1991), 176.

<sup>87</sup> John Kilner, *Dignity and Destiny: Humanity in the Image of God* (Grand Rapids: Eerdmans, 2015), 93. Kilner also warns that erroneously reducing the image of God to a mere attribute that humans possess, such as rational capacity, diminishes the dignity of those persons who have less cognitive ability to fulfill the *imago Dei*. Kilner, *Dignity*, 21.

<sup>88</sup> Taylor, *The Ethics of Authenticity*, 37.

this debate on human enhancement?” Ronald Cole-Turner points out the paradox of Christians seeking to transform into the “new self” by choosing to enhance the “old self.” He explains, “The new self is the gradual creation of the *persona* of Christ at the expense of the desires of the old self, which is diminished rather than enhanced.”<sup>89</sup> Christians are to “lay aside the old self . . . and put on the new self,” not enhance the old self with patches and embroidery (Eph 4:22-24).

Since Christians are commanded to be imitators of Christ, should each person not look to Jesus for insights into the ethics of human enhancement? (Phil 2:3-8; 1 John 2:6; 1 Cor 11:1; John 13:12-15, 34; 1 Pet 2:21). Clearly, the enhancement debate is too complex to posit an “all in/all out” Christian argument. What is needed is more nuanced ethic that can adjudicate between moral and immoral enhancement goals and enhancement methods. This dissertation offers an intentionally Christocentric starting point for constructing an ethic for human enhancement to guide Christians in this biotechnical age.

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<sup>89</sup> Ronald Cole-Turner, “Introduction: The Transhumanist Challenge,” in Cole-Turner, *Transhumanism and Transcendence*, 9.

CHAPTER 3  
FINITUDE AS DIVINE GOOD

**Introduction**

In chapter 2 I argued that advocates for human enhancement usually build their position upon the implicit presupposition that embodiment is a deficiency of the human condition that must be improved or escaped. The very term *human enhancement* presupposes that some aspects of being human are currently defective or incomplete, otherwise, there would be nothing about being human that needed enhancing. While there are many aspects to being human, including psychological, social, and spiritual dimensions, the body is usually the target for improvement. Certainly, the suffering of morbidity and fear of mortality are unwanted features of embodiment. Furthermore, since it is through the body that each person pursues his life's projects, any limitations of the body may be viewed as an obstacle to the personal freedom to pursue happiness. Limitations of the brain are especially significant since many consider rationality to be the essential distinction between humans and animals. Humans who have not yet reached cognition (unborn), and those who have lost cognition (brain dead) are frequently afforded less dignity. Finally, the unalterable aspects of embodiment may frustrate the modern quest to construct one's identity according to one's selected self-image.<sup>1</sup> In short, embodiment is frequently viewed as a threat to human freedom, dignity, and authenticity.

But is this true? Is embodiment a suffocating restraint upon life's projects?

This chapter challenges the argument that embodiment is a curse, arguing instead that

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<sup>1</sup> One conspicuous example of embodiment frustrating self-image is provided by gender dysphoria. A male identifying as a female cannot ontologically effect his desired transformation since every cell of a male will forever carry the male chromosome. Transsexual surgery merely creates a superficial physical facsimile of a female.

embodiment is a divine blessing that provides the very foundations for human freedom, dignity, and authenticity.

### **Embodiment as Finitude**

The term *finitude* subsumes all the limitations of human existence: biological limits (corporality, morbidity, mortality), spiritual limits (fallen, sinful, contingent), and cognitive limits (confined, incomplete, distorted).<sup>2</sup> *Embodiment* is a conspicuous feature of human finitude since illness, death, and cognitive decline are ever-present reminders of one's limitations. Yet, human embodiment entails much more than simply the biological organism of *Homo sapiens*. On the superficial level, the human body is a finite quantity of extended physical atoms organized to metabolize and reproduce. However, even to the casual observer, the human body contains any number of non-extended qualities, things such as thoughts, aspirations, and deliberations. These non-extended qualities develop and persevere through time as the mind, self, or soul. The unity of these extended and non-extended capacities, along with unique memories and self-awareness, extend mere biological life into a unique individual autobiographical person.<sup>3</sup> All persons are humans, but only I am *me*.

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<sup>2</sup> Finitude for this thesis refers to all the inherent limitations of human existence. Temporal limits refer to physical confinement to one location, in the present moment, with a view to inevitable physical death (humans are neither omnipresent nor immortal). Physical limits refer to confinement to a physical body (humans are neither simple nor omnipotent). Mental limits refer to human limited capacity for knowledge and reason (humans are not omniscient). Spiritual limits refer to human dependence upon God and humanity's sinful corruption (humans are contingent and morally imperfect). This definition of human finitude is not the usual philosophical use of the term, which has many meanings. On one end of a spectrum, Freud and Heidegger regularly used finitude as a synonym for the human psychological attitude toward death, bestowing finitude with ultimate human meaning. On the other end, postmodernists use finitude to express a total skepticism that there can be any knowledge of reality or truth, depriving finitude of any significant meaning. Roger Frie, "On the Nature and Meaning of Human Finitude," *American Journal of Psychoanalysis* 73 (June 2013): 158-72. Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum International, 2008), 40.

<sup>3</sup> J. Rachels writes, "In the human body we find biological life extended to biographical life: the unity of capacities, aspirations, deliberations, decisions, activities, and relationships." J. Rachels, *The End of Life* (Oxford: Oxford University Press, 1986), 5.

## **Finitude Is Good**

Human finitude is widely viewed as a curse. Leon Kass admits that most persons view finitude as abominable, summarizing as “Life is good, death is bad. Therefore, the more life, the better.”<sup>4</sup> Yet, Kass disagrees, “the finitude of human life is a blessing for every human individual, whether he knows it or not.”<sup>5</sup> Kass argues that the shadow of mortality motivates a life of seriousness and meaning, moves humans to create beautiful and enduring objects of art, and compels all people to reach out for transcendence beyond themselves. He writes, “Through moral courage, endurance, greatness of soul, generosity, devotion to justice—in acts great and small—we rise above our mere creatureliness, spending the precious coinage of the time of our lives for the sake of the noble and the good and the holy.”<sup>6</sup> Thus, finitude need not be bitter; it can be a sweet taste of greater things to come: “Wholeness, wisdom, goodness, and godliness—longings that cannot be satisfied fully in our embodied earthy life.”<sup>7</sup>

Embodiment represents the most visible feature of human finitude because it is the locus from which the self emanates.<sup>8</sup> As a part of the physical universe, the body is obligated to biological needs (oxygen, water, energy from food) and constrained by natural laws (gravity, entropy, conservation of energy). These biological needs are necessary requirements for embodied life, and their paucity threatens the body with morbidity and

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<sup>4</sup> Leon Kass, “L’Chaim and Its Limits: Why Not Immortality?” *First Things*, May 2001, 19.

<sup>5</sup> Kass, “L’Chaim and Its Limits,” 20.

<sup>6</sup> Kass, “L’Chaim and Its Limits,” 22.

<sup>7</sup> Kass, “L’Chaim and Its Limits,” 22.

<sup>8</sup> The language selected here is intended to avoid substance dualism where the immaterial self is considered to inhabit the material body, because enhancements of the body would have little or no impact on the self. It is also intended to avoid emergentism and similar theories of consciousness because their presupposition of metaphysical naturalism renders them largely incoherent. What is in mind here with the word “emanate” is a more Thomist dualism that intimately unites the body and soul. J. P. Moreland explains, “The soul is an individuated essence that makes the body a human body and that diffuses, informs, animates, develops, unifies and grounds the biological functions of its body.” J. P. Moreland and Scott B. Rae, *Body & Soul: Human Nature & the Crisis in Ethics* (Downers Grove, IL: IVP, 2000), 202.

inevitable mortality. The human body is dependent, frail, and temporary. The Bible confirms that earthly bodies are “just a vapor that appears for a little while and then vanishes away” (Jas 4:14).<sup>9</sup>

Herein lies the paradox of embodiment. Humans are enthralled with sensual stimulation (food, sex, recreation), so people esteem the body with inflated value, yet humans deeply resent the body’s weaknesses (morbidity, mortality, and cognitive decline) so people despise and reject embodiment. For many, the body is worshiped for all it provides, but at the same time despised for all it cannot deliver. Either the body is everything that I am, or the body is just a confining shell for me to escape. Yet, the Bible reveals that this is a false dilemma—embodiment is not everything or nothing. Rather, embodiment is ordained by God for a purpose, created good by design, yet corrupted by sin, and redeemed by Christ for a future glorified embodiment. What is the bodily resurrection of Christ if not a vindication of the inherent goodness and purpose of the human body?

### **Embodiment Is Good**

In the beginning, God intentionally created humans as embodied creatures. God pronounced “everything He had made” as “very good” and the first humans were part of that good creation (Gen 1:31). Here, טוב proclaims a godly divine goodness; וְהָיָה טוֹב adds the superlative to connote supreme value. This divine goodness of embodiment is grounded in the immutable goodness of God and His divine purpose for humanity. As Keil and Delitzsch explain, וְהָיָה טוֹב is a pronouncement that all creation was “perfect in its kind, so that every creature might reach the goal appointed by the creator, and accomplish the purpose of its existence.”<sup>10</sup> Thus, the human body is divinely good and

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<sup>9</sup> See 1 Pet 1:24; Job 14:1; Ps 103:15; Heb 9:27.

<sup>10</sup> C. F. Keil, *Commentary on the Old Testament*, vol. 1, *The Pentateuch* (Peabody, MA: Hendrickson, 2011), 42-43.



created to fulfill a number of divine purposes. These purposes include rulership, relationship, revelation, and righteousness.<sup>11</sup>

The rulership purpose for humans is first revealed in Genesis 1:28 where God commands, “Be fruitful and multiply, and fill the earth, and subdue it; and rule over . . . every living thing that moves on the earth. In Genesis 2:15, “the LORD God took the man and put him into the Garden of Eden to cultivate it and keep it.” God has ordained that at least one purpose for humans is to steward creation as His vice-regents. To operate as stewards within a material world, humans must have a material body. As James Dunn explains, “It is precisely as embodied, and by means of this embodiment, that the person participates in creation and functions as part of creation.”<sup>12</sup>

The relationship part of this stewardship mandate is to care for those who cannot care for themselves.<sup>13</sup> The Old Testament repeatedly commands acts of charity and compassion for the poor, widows, orphans, and strangers.<sup>14</sup> The New Testament

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<sup>11</sup> John Kilner points out other important purposes within the *imago Dei* include redemption (Chafer), justification (Thielicke), regeneration (Orr), reconciliation (Hoekema), adoption (Aquinas), election (MacDonald), and resurrection (Clines). John F. Kilner, *Dignity and Destiny: Humanity in the Image of God* (Grand Rapids: Eerdmans, 2015), 47. Lewis Sperry Chafer, *Systematic Theology* (Dallas: Dallas Seminary Press, 1947), 2:167. Helmut Thielicke, *Theological Ethics: Foundations* (Minneapolis: Fortress, 2007), 162, 195-96. James Orr, *God's Image in Man, and Its Defacement in the Light of Modern Denials* (Grand Rapids: Eerdmans, 1948), 278-79. Anthony Hoekema, *Created in God's Image* (Grand Rapids: Eerdmans, 1994), 55-56. Thomas Aquinas, *Summa Theologica*, 2nd, rev. ed., trans. Fathers of the English Dominican Province (1920; n.p.: New Advent, 2008), III.23.2, accessed February 11, 2019, <http://www.newadvent.org/summa/index.html>. Nathan MacDonald, “The *Imago Dei* and Election: Reading Genesis 1:26-28 and Old Testament Scholarship with Karl Barth,” *International Journal of Systematic Theology* 10, no. 3 (2008): 303-27. David J. Clines, “The Image of God in Man,” *Tyndale Bulletin* 19 (1968): 87.

<sup>12</sup> James D. G. Dunn, *The Theology of Paul the Apostle* (Grand Rapids: Eerdmans, 1998), 61.

<sup>13</sup> This altruistic and protective mandate of the horizontal relationship between people is only necessary because of sin. Without sin there would be no morbidity or disability, no lame or leper to care for. Without sin there would be no exploitation or oppression, no poor or orphan to protect. Yet, without sin there would still remain a stewardship mandate to love one another, share received blessings with others, and to apply spiritual gifts in service to others. See John 13:34; Rom 13:8; 1 John 3:11; Luke 3:10-11; Acts 2:35; 1 Tim 6:18; 1 Pet 4:10; Rom 12:4-13.

<sup>14</sup> The triad of strangers, orphans, and widows occurs over twenty times in the Bible as a synecdoche for all who must rely upon the charity and compassion of others for their very lives. God repeatedly commands that his people care for “the least of these” (Matt 25:45). See Exod 22:22; Deut

commands the church, the spiritual embodiment of Christ, to care for and to love one another (Rom 12:4-5; 1 Cor 12:12-27; Eph 1:22, 3:6, 5:23; Col 1:18, 1:24). Embodiment is the necessary equipping for such divine work. One's attitude to embodiment ought to be gratitude, honoring the body as divinely good and essential for one's purpose.

The revelation purpose of embodiment is manifested when humans perceive "His invisible attributes, His eternal power and divine nature" within the wonders of creation (Rom 1:20). By sight humans marvel at His distant galaxies, by taste people savor a mountain spring, and by smell all delight in the honeysuckle. Such sensory experiences, available through embodiment, demand appreciation and explanation. As John Murry explains, "From the things which are perceptible to the senses cognition of these invisible perfections is derived, and that thus a clear apprehension of God's perfections may be gained from his observable handiwork invariably revealing our omnipotent Creator."<sup>15</sup> Calvin insists, "We cannot open our eyes without being compelled to behold Him."<sup>16</sup> Embodiment enables the perception of general revelation.<sup>17</sup>

Finally, the righteousness purpose of embodiment is manifested as God unites humanity with Himself through the Holy Spirit (Prov 11:18; Pss 34:15, 37:6; Matt 5:6, 6:33; Rom 5:19; 2 Cor 5:21; 1 Tim 6:11). All persons were "created to be like God in true righteousness and holiness" (Eph 4:24b NIV).<sup>18</sup> As embodied humans become united with the Godhead through faith: "Or do you not know that your body is a temple of the

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10:18, 14:29, 16:11, 16:14, 24:17, 24:19, 24:20, 24:21, 27:19; Isa 1:17, 1:23, 9:17, 10:2; Jer 7:6, 22:3, 49:11; Lam 5:3, Zech 7:10; Mal 3:5, and Jas 1:27.

<sup>15</sup> John Murray, *The Epistle to the Romans* (Grand Rapids: Eerdmans, 1968), 40.

<sup>16</sup> John Calvin, *Institutes of the Christian Faith* (Peabody, MA: Hendrickson, 2008), 17.

<sup>17</sup> Human senses are necessary for mediated general revelation. Calvin held that general revelation is both mediated and unmediated. Mediated general revelation is available to the physical senses, while unmediated revelation is "a sense of the deity is inscribed on every heart" available by immediate intuition. Calvin, *Institutes*, 9.

<sup>18</sup> God commands for His people to "Be holy, for I Am holy." Lev 11:44-45, 19:2, 20:7, 26; 1 Pet 1:15-16.

Holy Spirit who is in you, whom you have from God, and that you are not your own?” (1 Cor 6:19). The body of Christ is both the physical locus of atonement in the crucifixion, and a beautiful metaphor for the church (1 Cor 12:27; Rom 12:5; Eph 1:22-23, 5:23). Paul explains, “Now you are Christ’s body” (1 Cor 12:27). The goodness of the body is further confirmed and vindicated in the resurrection of Christ, and in the promise of the bodily resurrection of the faithful by grace (1 Cor 15:20-21). In short, God declares that embodiment is good and divinely purposeful.

### **Objections to Embodiment**

There are several Christian objections to this view that the human body is divinely good. Historically, many Christians agreed that Adam’s original body was created good, but after the fall Adam’s body lost its unqualified goodness and became the source of sin. For example, Augustine argued that lust is not an act of reason or will; lust is the body disobeying the will.<sup>19</sup> For a few extreme medieval ascetics, the mortification of the flesh even required a punishment of the body through poverty, penance, fasting, or even flagellation.<sup>20</sup> This historical distain for embodiment mistakenly located sin within

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<sup>19</sup> Augustine argued that lust is not an act of reason or will; lust is the body disobeying the will: “Every lover of wisdom and holy joys who is both committed to a married life and also conscious of the apostolic ideal could wish that, just as all his other members obey his reason in the performance of their appointed tasks, so the organs of parenthood, too, might function in obedience to the orders of will and not be excited by the ardors of lust.” Augustine, *City of God* (New York: Image Books, 1958), 315.

<sup>20</sup> Even some protestant theologians held to less extreme notions of sanctification through mortification of the flesh. Number 3 of Luther’s 95 Theses asserts, “Yet it does not mean solely inner repentance; such inner repentance is worthless unless it produces various outward mortification of the flesh.” *The 95 Theses*, accessed February 11, 2019, <https://www.luther.de/en/95thesen.html>. Samuel Wesley, Sr., John Wesley’s father, wrote, “Mortification is still an indispensable Christian duty.” Arthur Alan Torpy, *The Preventive Piety of Samuel Wesley, Sr.* (Lanham, MD: Scarecrow Press, 2009), 104. John Calvin viewed mortification as a gift from God, writing, “Yea, rather as the flesh is from time to time obstreperous, even when it seems to be tamed, it is no wonder to find him repeatedly subjecting us anew to the rod. This is done in different ways. He humbles some by poverty, some by shame, some by diseases, some by hard and painful labours; and thus, according to the diversity of vices to which we are prone, he applies to each its appropriate remedy.” John Calvin, *Commentary on the Book of Psalms* (Grand Rapids: Baker, 2009), 4:451. Even the Puritan John Owens believed that “where sin, through the neglect of mortification, gets a considerable victory, it breaks the bones of the soul.” John Owen, *The Mortification of Sin* (n.p.: CreateSpace Independent, 2013), 20. More modern interpretations of the reformers convey a more nuanced view of mortification. According to David Winecoff, “Calvin used repentance, mortification, new life, conversion,

the body instead of the will. Rather, the goodness of the human body emanates from the goodness of God manifested within the divine *telos* for humans. To hold such a negative view of the body is to confuse *σῶμα* with *σάρξ*. *Σάρξ* is the corruption of *σῶμα* by sin; it is a synecdoche denoting the rebellious will of all humans.<sup>21</sup> Ironically, to reject the goodness of the body is the ultimate expression of *σάρξ*. Since the divine purpose for the body remains unaltered even as it suffers morbidity and mortality in punishment for sin, the goodness of the body remains immutable.<sup>22</sup> Theologian Brent Waters concludes, “The finitude and mortality inherent to creation are not evil, but are perceived as such when viewed through the lens of disordered desire.”<sup>23</sup> In *When Embodiment Isn’t Good*, Jackie Scully observes that today’s “theologians . . . are trying to undo and redeem the centuries of rejection of the body.”<sup>24</sup>

### **Embodiment Is a Blessing**

The presupposition of many who advocate human enhancement is that the body is materially defective, a lamentable curse upon the human condition. They are

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and regeneration to denote the same thing as he means by the word sanctification.” David K. Winecoff, “Calvin’s Doctrine of Mortification,” *Presbyterion* 13, no 2 (Fall 1987), 85-101. John MacArthur explains, “Mortification involves the cultivation of new habits of godliness, combined with the elimination of old sinful habits from one’s behavior.” MacArthur summarizes, “Here is perhaps the most straightforward, obvious means of mortifying sin: *stop doing it*.” John F. MacArthur, Jr., “Mortification of Sin,” *The Master’s Seminary Journal* 5 (Spring 1994): 13-14, emphasis original. For the reformers, mortification is not self-abuse of the body but self-defense of the soul. Brent Waters, “Whose Temple Is It Anyway? Embodiment, Mortality, and Resurrection,” *Journal of Spiritual Formation & Soul Care* 7, no. 1 (2014): 39.

<sup>21</sup>John Owen criticized the Roman Catholic system of penance, pilgrimages, and self-flagellation as the “mistaken ways and means of mortification.” John Owen, *The Works of John Owen* (Edinburgh: Banner of Truth, 1853), 6:16-17.

<sup>22</sup>Death and decay were not originally part of Adam and Eve’s human nature. Death was introduced as a punishment for the first sin in the Garden (Gen 2:16-17).

<sup>23</sup>Brent Waters, “Whose Temple Is It Anyway? Embodiment, Mortality, and Resurrection,” *Journal of Spiritual Formation & Soul Care* 7, no. 1 (2014): 39.

<sup>24</sup>Jackie Leach Scully, “When Embodiment Isn’t Good,” *Theology and Sexuality* 9 (1998): 11.

mistaken.<sup>25</sup> The human body is a divine good, even if it must contend with the sinful flesh. Embodiment is God’s equipping for humans to fulfill their purpose. Ephesians 2:10 says, “For we are His workmanship, created in Christ Jesus for good works, which God prepared beforehand so that we would walk in them.” Embodiment, including its limitations and vicissitudes, is a divine blessing that ought to be received with gratitude and enjoyed obediently.<sup>26</sup>

### **Embodiment and Human Freedom**

Humans are quite unique from animals, despite naturalistic objections.<sup>27</sup>

Animals operate solely by their instincts—their innate conditioned responses to environmental stimuli. Since animals must obey their instincts, their behavior is determined; they have no freedom to act contrary to instinct.<sup>28</sup> In contrast, humans can

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<sup>25</sup> The view in error is that the body’s inherent limitations are defects. By contrast, the Bible confirms that some bodily defects were not part of God’s original design but are products of sin (i.e., addiction and HIV). Other defects are divine punishment upon the body because of sin (i.e., disease and morbidity). These bodily defects produced by sin are merely attenuated by enhancement technology (i.e., medications and surgery), not eliminated. For these are actually spiritual defects manifesting through the body, and only spiritual regeneration and the bodily resurrection it affords can heal such deficiencies.

<sup>26</sup> First Tim 4:4-5 says, “For everything created by God is good, and nothing is to be rejected if it is received with gratitude; for it is sanctified by means of the word of God and prayer.”

<sup>27</sup> The Bible is emphatic: humans are not mere animals. Only humans were created in the image of God, elevated above the animals, and given dominion over the animals (Gen 1:26; Ps 8:4-6). Yet, most philosophical naturalists insist that humans are merely animals, and that human behavior is predetermined just like the animals. Richard Dawkins writes, “We, and all other animals, are machines created by our genes.” Richard Dawkins, *The Selfish Gene* (Oxford: Oxford Press, 1989), 3.

<sup>28</sup> Humans are constituted as animals, but humans are not “mere” animals. Mere-animal behavior is conditioned by past actions of cause and effect; they do not “remember” the past in the present moment of action; rather, they react solely as a response to past conditioning. In the same way, animals do not imagine future counterfactual consequences in the present moment to inform behavior. Neither do animals have self-awareness or first-person perspective. Animals, therefore, lack agency, moral culpability, or free will. Lynne Baker writes, “The point is that animals have no control over their goals; but that we, unlike the rest of the animal kingdom, have a certain control over (some of) our goals.” Lynne Rudder Baker, *Persons and Bodies: A Constitution View* (Cambridge: Cambridge University Press, 2000), 14-15.

choose to override their instincts and behave according to transcendent stimuli.<sup>29</sup> For example, humans can choose supererogatory acts of self-sacrifice in defiance of Darwinian survival instincts.<sup>30</sup> Only humans are truly free.<sup>31</sup>

Yet, human freedom is restricted by the finitude of the body. The boundaries of free choice are set by each individual's innate physical endowments. A man of average intelligence is not truly free to become a chess grand champion; a woman without perfect pitch is not truly free to become an opera star. Further, finitude of lifespan sets limits upon many of the most important choices in life, such as which spouse, college, or career to choose, because making one choice necessarily forfeits forever the opportunity to choose an alternative. Each choice remains unalterable, for even if one remarries, earns an additional degree, or changes careers, he is not the same person with the same

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<sup>29</sup> Baker explains,

If we are nothing but animals, then either goals that people die for—for example, extending the rule of Allah, furthering the cause of democracy, or something else—should be shown to promote survival and reproduction . . . even a fully adequate Darwinian explanation of altruism would not begin to explain uniquely human goals that seem neither to promote survival and reproduction nor to result from biological malfunction. (Baker, *Persons and Bodies*, 14)

<sup>30</sup> Supererogatory acts are variously defined. Some believe any unselfish act, even donating blood, rises to the level of supererogation. But the acts which confound Darwinism are those where a person gives her life for transcendent values: truth, justice, or God. This "Paradox of Altruism" has persisted despite claims to the contrary. Every Christian missionary who risks life and limb to honor Christ is evidence of the deficiencies that remain within evolutionary theory that humans are mere animals. Richard Titmuss, *The Gift Relationship: From Human Blood to Social Policy* (New York: New Press, 1997). David Wilson, "Evolution of Selfless Behaviour," *New Scientist* 211 (August 2011): i-viii. Max Hamburg, "The Paradox of Human Goodness," *Zygon* 15 (June 1980): 223-34.

<sup>31</sup> This dissertation must set aside the distractive, albeit important, debates concerning free-will versus predestination. For this treatise, the definition of free will follow Alvin Plantinga's argument that free will is

being free with respect to an action . . . a world containing creatures who are significantly free (and freely perform more good than evil actions) is more valuable, all else being equal, than a world containing no free creatures at all. Now God can create free creatures, but He can't cause or determine them to do only what is right. For if He does so, then they aren't significantly free after all; they do not do what is right freely. (Alvin Plantinga, *God, Freedom, and Evil* [Grand Rapids: Eerdmans, 1974], 29-30)

Sociology research indicates that nearly all persons in all cultures believe in an indeterminate universe, human free will, and moral culpability. Hagop Sarkissian et al., "Is Belief in Free Will a Cultural Universal?" *Mind and Language* 25 (June 2010): 346-58.

memories, motivations, and expectations due to his intervening experiences. One cannot forget every influence from every person and event one encountered from the point of making a choice to the point of making that choice differently a second time. Heraclitus was right: “You cannot step twice into the same stream.”<sup>32</sup>

The life each person lives is unique, a one-of-a-kind artwork, precisely because no one else has the same body with the same corporeal limitations; therefore, no one makes the same choices in the same order. This chain of unique free choices perseverates through time as more than human *biological life*. Because humans can pull memories of the past into the present, along with the imaginings of future choices, humans are able to generate an *autobiographical life*. Moreover, since each free decision between alternatives entails value judgements, the autobiographical life is also an ethical life. This ethical life, with the agency it entails, contributes to the concept of humans as persons. In short, the freedom for persons to create a unique autobiographical ethical life is made possible, in part, by the finitude of human embodiment.<sup>33</sup>

### **Freedom “From”**

However, this freedom that persons enjoy is understood quite differently through different lenses. For many Western thinkers, human freedom is simply “freedom

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<sup>32</sup> Plato, *Cratylus*, 402 a. Frederick Copleston, *A History of Philosophy*, vol. 1, *Greece and Rome from the Pre-Socratics to Plotinus* (New York: Image Books, 1993), 39.

<sup>33</sup> To press this point from the opposite direction, one should consider the following thought experiment: if humans had no limitations of body or lifespan, if humans could do anything they could imagine and have life eternal in which to do it, they could conceivably perform every possible act, eventually. There would be no opportunity cost for choosing any actions since no alternative is truly lost—every alternative choice would remain available to choose in the future. If every alternative is always available later, then human freedom becomes devalued, its importance diminished. As everyone eventually performed everything and learned everything, the distinction between individual autobiographical lives would diminish. Everyone would become like everyone else, so individuality and authenticity would diminish as well. And most importantly, the ability to eventually do everything and know everything would blur the distinction between humans and God. Limitless human imagination might finally aspire to “be like God,” the epitome of sinful rebellion against the divine nature, an echo of the epic failure in Eden. Human finitude is an antidote to such delusions of grandeur.

from something.” This is freedom in the negative, a freedom *from* prohibitions, constraints, or coercion upon one’s choice of personal actions.<sup>34</sup> Inevitably, this view of freedom takes on a political flavor whereby the greatest threat to freedom is anyone who might place limits on some “lifestyle choices.” Political freedom-in-the-negative has devolved into a right to any libertine autonomous choice by citizens. For example, the US Constitution’s right to “life, liberty, and the pursuit of happiness” is frequently interpreted as a right to define happiness as “anything I pursue.”<sup>35</sup>

There is also a Christian sense of freedom as “freedom from.” This can be mere political freedom from prohibitions to assemble, worship, and evangelize. Or more biblically, it can be judicial freedom from the penalty of the Old Testament law.<sup>36</sup> In the larger picture, this is viewed as ethical freedom from slavery to sin. In this latter sense, all humans are born enslaved to sin, similar to the animals enslaved to instincts. The unregenerate person operates under a default mode of sin and rebellion, only able to obey one master—the flesh. Jesus offers freedom from this sin, the ability to recognize and choose obedience to another master, namely Christ. Paul proclaims, “It is for freedom that Christ sets us free” (Gal 5:1). Lutheran Bishop Elizabeth Easton explains, “Freedom from is liberation from all spiritual bondage. We are set free from being trapped in

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<sup>34</sup> Free will as a negative freedom-from-constraints was perhaps first articulated by Isaiah Berlin’s 1969 paper “Two Concepts of Liberty.” Isaiah Berlin, *Four Essays on Liberty* (Oxford: Oxford University Press, 1979). Free will for many Enlightenment philosophers is defined as an individual freedom to act according to one’s will without external constraints. David Hume writes, “This hypothetical liberty is universally allowed to belong to everyone who is not a prisoner and in chains.” David Hume, *An Enquiry Concerning Human Understanding* (Oxford: Oxford University Press, 2007), 69.

<sup>35</sup> For example, Judge Wickham Corwin struck down a law limiting abortion because “the right to an abortion is based upon inalienable rights to liberty and ‘the pursuit of happiness.’” Napp Nazworth, “Abortion Rights Based upon ‘Pursuit of Happiness,’ Judge Says,” *Christian Post*, July 19, 2013, accessed February 7, 2018, <https://www.christianpost.com/news/abortion-rights-based-upon-pursuit-of-happiness-judge-says-100493/>.

<sup>36</sup> Rom 6:14 says, “For sin shall not be master over you, for you are not under law but under grace.”



ourselves, consumed by ourselves, from the belief and terror that we can and must save ourselves. That our self is the center of the universe.”<sup>37</sup>

### **Freedom “For”**

However, there is *freedom for* also, a freedom-in-the-positive. Christians are no longer just slaves *from something* but slaves *for someone*.<sup>38</sup> When the Christian embraces freedom from an involuntary servitude to sin and death, he enjoys freedom for another master. Paul proclaims that believers have been “freed from sin and enslaved to God” (Rom 6:22) In addition, God commands that all people love one another (John 13:34). Luther identifies this paradox: “A Christian is a perfectly free lord of all, subject to none. A Christian is a perfectly dutiful servant, subject to all.”<sup>39</sup> Stanley Hauerwas explains,

In contrast, it is the Christian belief that true freedom comes by learning to be appropriately dependent, that is, to trust the one who wills to have us as his own and who wills the final good of all. In more traditional language, for the Christian to be perfectly free means to be perfectly obedient. True freedom is perfect service . . . Christian freedom is literally a gift.<sup>40</sup>

The finitude of embodiment provides this foundation for Christian freedom. Embodiment requires meeting physical needs, and meeting these needs requires choices between various alternatives. Physical, cognitive, and moral finitudes are given by God and provide the preconditions for any real choice between alternatives. Without embodiment and its finitude, there is no true freedom, autobiographical life, or personhood.

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<sup>37</sup> Elizabeth Eaton, “After October 31: Freedom From, and Freedom For,” *World & Word* 37 (Fall 2017): 380-86.

<sup>38</sup> Throughout the New Testament, Christians describe themselves as δούλος Χριστοῦ (Rom 1:1; Phil 1:1; Jas 1:1; 2 Pet 1:1; Jude 1:1).

<sup>39</sup> Martin Luther, “The Freedom of the Christian,” *Luther’s Works*, vol. 31, *Career of the Reformer I*, trans. W. A. Lambert (Philadelphia: Fortress, 1999), 9.

<sup>40</sup> Stanley Hauerwas, *A Community of Character: Toward a Constructive Christian Social Ethic* (Notre Dame, IN: University of Notre Dame Press, 1981), 130-31.

As Karl Rahner explains, only by saying “yes” to the finitude of human existence “can a free person turn a necessary fate externally imposed on him into a free act of the person himself.”<sup>41</sup>

Finitude and physical needs also provide a basis for moral agency. Daniel Sulmasy explains, “Imagine, for instance, that God were to disallow all occasions of suffering (finitude) . . . this would severely restrict human freedom. We would not be free to choose materially to benefit each other, because we would have no material wants; no acts of charity would be possible.”<sup>42</sup> Thus, finitude provides the starting point of one’s spiritual growth toward God. Through human limitations, persons learn dependency upon God; finitude is the antidote to self-sufficiency and pride. Recognizing finitude in others is the prerequisite for empathy, charity, and loving service. Moreover, without the reality of death, people would not seek eternal life; without the weakness of the flesh, sinners might not seek forgiveness. Embodiment and finitude are the building blocks of the Old Self from which Christ begins to build the New Self (Rom 6:6-7; Eph 4:22-24).

### **Freedom for Self-Creation**

The autobiographical life is the sum of the free decisions comprising a unique collection of experiences, accomplishments, and failures, which constitute the individual self. Within the limits of one’s embodiment, each person is free to construct his own life and his own self-identity. As Rahner explains, “According to a Christian understanding, man, as the being who is free in relation to God, is in a most radical way empowered to do what he wills with himself, freely able to align himself towards his own ultimate

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<sup>41</sup> Daniel T. Pekarske, *Abstracts of Karl Rahner’s Theological Investigations 1-23* (Milwaukee: Marquette University Press, 2006), 64.

<sup>42</sup> Daniel P. Sulmasy, “Finitude, Freedom, and Suffering,” in *Pain Seeking Understanding: Suffering, Medicine, and Faith*, ed. Margaret E. Mohrmann and Mark J. Hanson (Cleveland: Pilgrim Press, 1999), 98.

goal.”<sup>43</sup> Hans Jonas concurs, “Man is the maker of his life *qua human*, bending circumstances to his will and needs.”<sup>44</sup> If Rahner and Jonas are right, the direction of each person’s life is neither random nor predetermined; people are neither insignificant flotsam tossed about on the waves of chance, nor soulless machines driven by inviolable scientific laws. Each person is free to make of his life what he wills. Consciously or unconsciously, each person provides the direction and purpose for his or her own life every time a free choice of action is made. Finitude and embodiment are given as the initial conditions by which humans can freely live.

### **Embodiment and Dignity**

Thus far I have argued that embodiment is a divine blessing because God created embodiment as good, and because embodiment provides the preconditions for human freedom. Now, it will be argued that embodiment also provides the only satisfactory grounding for the equal dignity for all humans. Human dignity is among the most beautiful gifts that humans receive from God. It is only upon the grounds of equal human dignity that the sacredness of all human life can be defended and celebrated. It is dignity that provides the moral vision for a *koinonia* ethic of love and care. Wherever dignity is diminished, there exists an economy of exploitation and bigotry. Herein, the term *human dignity* broadly refers to the equal inherent worth of all persons.<sup>45</sup> Human dignity is currently very popular in the Western world, but a specifically theistic grounding for human dignity must compete against alternative rationales offered by political theory, anthropology, and the cosmology of other religions.<sup>46</sup>

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<sup>43</sup> Karl Rahner, *Theological Investigations IX* (New York: Herder and Herder, 1972), 212.

<sup>44</sup> Hans Jonas, *Philosophical Essays: From Ancient Creed to Technological Man* (Englewood Cliffs, NJ: Prentice-Hall, 1974), 5.

<sup>45</sup> The English word “dignity” derives from the Latin *dignitas* meaning “worthiness.”

<sup>46</sup> While I have chosen to distinguish human dignity as political, anthropological, or cosmological concepts, there are other taxonomies for the various groundings for equal human dignity. For

## Political Dignity

Political human dignity is accepted by much of the democratic world.<sup>47</sup> The grounding for political human dignity is simply popular consensus. The United Nations Universal Declaration of Human Rights asserts that “all human beings are born free and equal in dignity and rights.”<sup>48</sup> Such political declarations might allude to a natural law grounding for human rights, but their true grounding is simply by mutual consent.<sup>49</sup> The UN Declaration exists by the international agreement of participating states. Similarly, the US Constitution grounds its authority in the “consent of the governed.” Public opinion is expressed by popular vote, which translates into civil law. Human rights scholar Jack Donnelly admits that he “cannot defend a particular list of [human] rights

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instance, a common schema divides grounding into (1) legal norms (consensus), (2) shared norms (culture), and (3) justified norms (philosophical). All three rely on “natural law” and “social contract” to some extent, but their interpretations are quite different. For Hobbes, the nature of man was egoism, which could be subordinated to the State for security—self-interest voluntarily exchanged for self-preservation by consensus. Thomas Hobbes, *Leviathan* (New York: Penguin Putnam, 1985), 190. John Locke, *Two Treatises of Government and a Letter Concerning Toleration* (n.p., Digireads.com, 2015), 60-61. For Locke, man has a shared sense of some moral “natural laws” aimed at the survival of the culture and community. For Immanuel Kant, humans have a rational nature which “already marks them out as ends in themselves...and an object of respect.” Immanuel Kant, “Groundwork of the Metaphysics of Morals,” in *Immanuel Kant Practical Philosophy*, ed. and trans. Mary Gregor (New York: Cambridge University Press, 1996), 79. While there is considerable overlap between these categories, there remains a persistent desire to philosophically ground the concept of equal human dignity for all.

<sup>47</sup> According to the Pew Research Center, 60 percent of the modern world is governed under some form of democratic system, including all of North America and Europe. Drew DeSilver, “Despite Concerns about Global Democracy, Nearly Six-in-Ten Countries Are Now Democratic,” *Pew Research Center*, December 6, 2017, accessed April 24, 2018, <http://www.pewresearch.org/fact-tank/2017/12/06/despite-concerns-about-global-democracy-nearly-six-in-ten-countries-are-now-democratic/>.

<sup>48</sup> Michael Freeman explains, “The United Nations, in proclaiming its Universal Declaration of Human Rights, did not, however, refer to God presumably because ‘God’ had become an essentially contested concept.” Michael Freeman, “The Philosophical Foundations of Human Rights,” *Human Rights Quarterly* 19 (August 1994): 497-98.

<sup>49</sup> Most advocates of this “social contract” form of political human dignity usually claim to ground their theory in some form of natural rights, but it is clear that only by consensus are such claims accepted. For example, a theist might ground dignity within the natural law given by general revelation of God’s eternal law, while the non-theist might ground dignity within the natural law discovered by human scientific intellect. Each grounding for equal dignity may be mutually incompatible, yet laws to protect dignity can be mutually agreed by consensus. Freeman, “Philosophical,” 514. See also Wesley J. Smith, “The Bioethics Threat to Universal Human Rights,” *The Human Life Review* 37 (Winter/Spring 2011): 68.

with direct philosophical arguments but maintains that the actual consensus makes this problem unimportant.”<sup>50</sup> However, consensus is a poor grounding indeed, since at any time public opinion can change, forcing consent to be withdrawn and civil protections for equal dignity to cease. For example, the Confederate States withdrew from the US Constitution because, in part, they refused to recognize that blacks have equal dignity to white persons. Saudi Arabia refused to sign the UN Declaration because they do not agree that women have equal dignity to men.<sup>51</sup> Clearly, public opinion provides an unreliable grounding for human dignity.

### **Anthropological Dignity**

Anthropological human dignity is also accepted by much of the modern world. The grounding for anthropological human rights is located within some unique common attribute of shared humanness, usually reason or agency. Alan Gewirth argues that any “prudent rational agent” who demands dignity for himself will naturally recognize the dignity of other agents.<sup>52</sup> James Griffin grounds human dignity in human autonomy that provides for moral agency and personhood.<sup>53</sup> Yet, moral awareness and agency are also a poor grounding for human dignity since there are many humans who either do not yet possess reason and agency, or who have lost rationality and agency. Such groundings for

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<sup>50</sup> Freeman, “The Philosophical Foundations of Human Rights,” 491.

<sup>51</sup> Eight countries withheld signing the U.N. Declaration on Human Rights, including Saudi Arabia. Instead, Saudi Arabia signed the Cairo Declaration of Human Rights in Islam, which grounds equal dignity to men upon their “subordination to Allah,” but denies equal dignity to women and followers of other faiths. David Hollenbach, “Comparative Ethics, Islam, and Human Rights,” *Journal of Religious Ethics* 38 (2010): 580-87. A political consensus grounding for the dignity for *all* persons appears impossible. Jack Donnelly, *Universal Human Rights in Theory and Practice* (Ithaca, NY: Cornell University Press, 2003), 288.

<sup>52</sup> Alan Gewirth, *Human Rights: Essays on Justification and Application* (Chicago: University of Chicago Press, 1983).

<sup>53</sup> James Griffin, *On Human Rights* (Oxford: Oxford University Press, 2008), 32-33.

human dignity have been used to deny equal worth of the unborn, the mentally disabled, and the elderly.

### **Cosmological Dignity**

Cosmological human dignity is less appreciated by much of the modern world because it appeals to the objective external values associated with religious claims.<sup>54</sup> It is difficult for religious claims to find universal acceptance within a pluralistic world. Like anthropological dignity, cosmological human dignity also appeals to a specific common attribute of humanity, but rather than identifying a *natural* shared attribute, cosmological dignity claims a *supernatural* shared attribute, namely that all humans are created by God. Therefore, all humans have equal dignity under God.

Yet, grounding human dignity by appealing to a common human origin in God presents two problems.<sup>55</sup> The first problem is that humans are not the only creatures that God created, so how is human dignity different from the dignity of other animals? While this objection has been partially addressed earlier in this chapter by arguing that only humans have freedom, the theological grounding for a uniquely human dignity remains. The second problem is that God did not create all humans identical, some are physically stronger or more intellectually endowed, so how do all humans share identical dignity if they are not created identical? This objection has also been partially addressed previously by arguing that the dignity of humans is grounded in the dignity of God, in Whom humans were created to image. What remains is to explain how those who are poor imagers of God have equal dignity to those who image God more fully.

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<sup>54</sup> Michael Ignatieff explains, “Rights doctrines arouse powerful opposition because they challenge powerful religions, family structures, authoritarian states, and tribes.” Michael Ignatieff, *Human Rights as Politics and Idolatry* (Princeton, NJ: Princeton University Press, 2001).

<sup>55</sup> Of course a third important problem is that not all persons believe in God, so how can God be a grounding for equal human dignity. The answer to this question reverts back to human dignity as consensus. Theists and non-theists can agree to equal human dignity even when they are grounded by mutually exclusive concepts. However, within such a consensus, the word “dignity” may no longer signify an identical meaning.

## **Dignity in the *Imago Dei***

The answer to the first objection is that humans are a special creation of God as *imago Dei*, the image of God. Only after the creation of all the animals does God declare, “Let Us make man in Our image, according to Our likeness; and let them rule over the fish of the sea and over the birds of the sky and over the cattle and over all the earth, and over every creeping thing that creeps on the earth” (Gen 1:26). Humans are uniquely valued by God because only humans are images of God. Humans are placed “a little lower than God,” but higher than “the beasts of the field, the birds of the heavens and the fish of the sea” (Ps 8:5-8). God has bestowed a greater dignity to His imagers than any other earthly creature. Human dignity remains uniquely human.

The answer to the second objection is that the *imago Dei* grounds dignity within God, not within the human images of God. Since only humans are *imago Dei*, some have mistakenly sought to ground human dignity within the set of uniquely human attributes, such as cognition. The difficulty is that some people are not as intellectually endowed as others. Such differences among humans imply that some persons are more complete images of God, while others are somewhat deficient. This can lead to the conclusion that the *imago Dei* lies upon a continuum, where some persons are worth less to God because they are lesser images of God.

However, God does not view any humans as less valuable than others. For God so loved the world—*all* people—that He gave His only Son (John 3:16). The Good Shepherd leaves the ninety-nine sheep to seek the one that is lost (Luke 15:3-7). Christians are to love their enemies and serve even the least among men (Matt 5:44, 25:40). The Scriptures declare that all humans have equal dignity before God. How then can both the atheist and the saint, the anencephalic fetus and the Nobel Laureate, serve as *equal* images of God?

The solution to this paradox is not to reduce the *imago Dei* to an essential kind defined by any given set of distinctive qualitative features that permit “humanness” to exist upon a continuum. Three alternate views of the human ontology of the *imago Dei*

eliminate such a continuum: (1) a divinely conferred ontology, (2) a spatiotemporal-lineage ontology, and (3) an identity statement ontology.

The first view argues that the *imago Dei* conveys an ontological status divinely conferred upon humans by virtue of their inherent *telos*. In *Dignity and Destiny*, John Kilner locates the *imago Dei* in Christ Whom humans are created to image. Christ is of supreme worth, so the human images of Christ share equal worth (even rebellious or cognitively impaired humans). Kilner provides the useful illustration of a Denarius: some denarii are so worn or marred that the image of Caesar was barely visible, yet all denarii were worth the same amount. In the same way, some humans are so apostate that the image of Christ is barely visible, but all humans remain equally valuable to God. Kilner explains, “Humanity’s status as created in God’s image is rooted in the purpose and standard of human creation, not in what is descriptively true about people today.”<sup>56</sup>

A second view of the ontology of the *imago Dei* that avoids a humanness continuum argues that the *imago Dei* is a relationship as a *part to the whole*, rather than as a *member of a kind*.<sup>57</sup> Instead of the individual displaying some set of universal human standards or receiving a bestowed ontological status, the individual demonstrates his or her causal connection to other humans, specifically the first *imago Dei* in Adam.

According to this view, the relationship between any given person and the *imago Dei* is not as a person possessing the member attributes of a class, but as a member

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<sup>56</sup> Kilner, *Dignity and Destiny*, 93.

<sup>57</sup> Biology tends to define the species *homo sapiens* as an essential kind, possessing universal qualitative features of distinctive morphology, behavior, or genetics. Yet, such qualitative features fail to supply a universal essence for humans. For instance, some physically disabled humans might lack the morphology of opposable thumbs or the ability to walk upright, yet they remain human. Other persons with psychiatric illness or mental disability might lack the minimum rationality to meet any essential behavioral requirements for being human. Still others, such as persons with Down’s syndrome, may not meet a particular genetic definition for humanity, yet they clearly remain human. For these reasons, many biologists now argue for a “species as individuals” methodology rather than a “species as essential kind” methodology for the taxonomic classification of different species. David L. Hull, “Individuality and Selection,” *Annual Review of Ecology and Systematics* 11 (1980): 311-32.



belonging to a “spatiotemporally continuous lineage.”<sup>58</sup> By analogy, one could consider the relationship between family members. From the member-of-a-class perspective, insufficient morphological or behavioral attributes that are common to both children and their parents could conclusively identify offspring as members of a particular family. In short, children of one set of parents may look or act more like the parents of another non-biological family. What makes one’s own children members of one’s family is their genealogical lineage and this lineage does not lie upon a continuum.<sup>59</sup>

Therefore, what makes all humans equal in dignity is that they are all children of Adam, the prototype *imago Dei*. Membership in the family of humanity is not upon a continuum. Either one is descended of the lineage of Adam or one is not of Adam’s lineage (such as animals and other created things). This view enjoys certain biblical support. One evidence for the humanity of Christ is demonstrated by Jesus’ lineage to Adam through His birth of Mary (Luke 3:23-38). Paul argues that all humans are “borne [in] the image of the man of dust,” namely Adam (1 Cor 15:49 RSV).<sup>60</sup> At the Areopagus, Paul proclaimed, “He [God] made from one man every nation of mankind to live on all the face of the earth”(Acts 17:23).<sup>61</sup> Common human lineage defines humanness.

A final view of the *imago Dei* that avoids placing “humanness” upon a continuum is understanding the *imago Dei* as a divine identity statement. On the surface, the identity statement “Humans are *imago Dei*” appears to require some set of essential

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<sup>58</sup> Hull, “Individuality and Selection,” 313.

<sup>59</sup> This analogy between defining humanity as common lineage and defining family as common lineage entails a biological perspective rather than a legal or sociological perspective of the family. Legal and sociological perspectives of family add concepts like adoption, step-parents and step-children, and half-siblings to the analogy which are unhelpful. To add legal or sociological concepts to the analogy, for example, humans might “adopt” family pets, but that does not make them human.

<sup>60</sup> τοῦ χιίκοῦ is genitive masculine singular for the “man of dust,” namely Adam.

<sup>61</sup> Of particular interest here is the term ἐξ ἑνός (out of one). ἑνός is the singular masculine genitive pronoun referring to human origins in a single male, namely Adam.

properties of the category *imago Dei* shared by any entity in the category human. Proponents of essential kind, spatiotemporal lineage, and Kilner's teleological ontology of the *imago Dei* necessarily rely upon *a posteriori* observations of traits, lineage, and purpose.<sup>62</sup> Yet, *a posteriori* is a man-made epistemic requirement supervening upon the identity statement, "Humans are *imago Dei*." In *Understanding Identity Statements*, Thomas Morris argues, "What can appear at first to be clearly a cross-category identity can in various ways be argued not to bridge ultimately distinct, conceptually disparate modes of discourse, but rather to function semantically as an ordinary statement of numerical identity."<sup>63</sup> Put simply, God declares that humans are *imago Dei*, and so they are. No attributes, lineages, or *telos* needs to be observable to accept God's pronouncement that the equal ontology of humanity is *imago Dei*.

The equal dignity afforded to all persons can only satisfactorily be grounded in their common ontology as images of God. Political groundings for human dignity fail because popular consensus is mutable and capricious. Anthropological groundings for human dignity fail because humans differ in their physical and cognitive aptitudes and skill. Human dignity is received through the *imago Dei*, and the *imago Dei* is expressed through embodiment. In short, it is first through human embodiment as images of God that persons receive and recognize their equal dignity as humans.

### **Embodiment and Authenticity**

To this point I have argued that embodiment is a divine blessing because God created embodiment as good, embodiment provides the preconditions for human freedom, and embodiment is integral to the *imago Dei*, the only satisfactory grounding for the equal

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<sup>62</sup> This statement is not intended to exclude the role of *a priori*, intuition, and other epistemic faculties in the apprehension of these theories, only that human observations of traits, heredity, and human purpose remain an important conspicuous method of application.

<sup>63</sup> Although Morris applies his ontology to statements of identity concerning Christology, it can be equally applied to identity statements concerning anthropology. Thomas V. Morris, *Understanding Identity Statements*, Scots Philosophical Monographs 5 (Aberdeen: Aberdeen University Press, 1984), 137.

dignity for all humans. Next, I argue that embodiment also provides the prerequisite for a life of authenticity.

## **Authenticity**

Authenticity is a calling to live truthfully, not only in one's relationship with others, but also in each person's dealings within themselves. Os Guinness explains, "The notion of calling, or vocation, is vital to each of us because it touches on the modern search for a basis for individual identity and an understanding of humanness itself."<sup>64</sup> Notions of authenticity and self-identity are vital for each person because they can lead to a life of contentment and happiness, or to a life of disappointment and regret. Yet, as traditional institutions and mores have been cast off, self-identity has been set adrift, and the quest for authenticity has become a cultural obsession.

The term *authenticity* refers to two interrelated concepts: (1) a reliable representation that is faithful to the original, and (2) a work of undisputed authorship.<sup>65</sup> However, for there to be any "faithfulness to an original," an original design or archetype must be in view. Where is one to find this archetype for individual identity? Is identity something mutable that I *choose* for myself or is identity something *given* within my unchangeable nature? In other words, this archetype can be either an internal subjective standard, as in "I become who I choose to be," or an external objective standard, as in "I choose to be who I was designed to become." This dissertation will refer to the former as *existentialist authenticity* and the latter as *essentialist authenticity*.<sup>66</sup> Both quests rely

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<sup>64</sup> Os Guinness, *The Call: Finding and Fulfilling the Central Purpose of Your Life* (Nashville: Thomas Nelson, 2003), 20.

<sup>65</sup> Elizabeth J. Jewell and Frank Abate, eds., *New Oxford American Dictionary* (Oxford: Oxford University Press, 2010), s.v. "authenticity."

<sup>66</sup> Herein, the terms *essentialist* and *existentialist* are employed as practical conveniences that, although they convey many aspects of their usual philosophical applications, are not to be confused with any specific historical position. For this treatise, essence is the necessary set of properties that gives an entity its identity. For example, one essence of humans is that they are images of God, which entails that each human has an inherent purpose even before his or her creation (essence precedes existence). Existentialism is a

upon freedom and embodiment for crafting a life of truth, but each differs in its definition of human authenticity and its test for determining if authenticity has been achieved.

### **Existentialist Authenticity**

Shakespeare's advice, "This above all—to thine own self be true" has become the mantra of postmodernism.<sup>67</sup> Sociologist Rebecca Erickson defines human authenticity as "a commitment to self-values . . . by which the subjective experience of feeling "true to oneself" is constructed and articulated."<sup>68</sup> Living life true to one's self-identity is a modern construct of authenticity arising from the triumph of individualism. The more autonomy one expresses in life's choices, the more authenticity one can claim.

The existentialist claims that embodiment is the raw physical material for an individualistic aesthetic project of self-creation, whereby the individual is both clay and potter.<sup>69</sup> The existentialist says, "I need to choose who I want to be, so I can begin

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cluster of philosophical, esthetic, and cultural movements sharing the belief that humans are not entities with fixed properties; rather, humans are practical, embodied, beings-in-the-world who self-create through freedom, choice, and commitment (existence precedes essence). See Aristotle, *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 689-712. and Martin Heidegger, *Being and Time* (New York: Harper & Row, 1962).

<sup>67</sup> William Shakespeare, *Hamlet* (n.p.: Digireads.com, 2015), 39.

<sup>68</sup> Rebecca J. Erickson, "The Importance of Authenticity for Self and Society," *Symbolic Interaction* 18, no. 2 (Summer 1995): 135.

<sup>69</sup> The existentialist in mind here excludes Christian existentialists like Kierkegaard, although he shared a similar starting point with later nontheistic existentialists that humans are not objects but individual "relations-in-being." While later existentialists like Heidegger, Marx, and Sartre turned from God, Kierkegaard concluded that the most defining human relation was one's relation to God. Thus, "becoming what one is" and evading inauthenticity was not "a matter of solitary introspection, but rather a matter of passionate commitment to a relation to something outside oneself that bestows one's life with meaning." Only God can provide this meaning. Kierkegaard writes, "The thing to understand myself, [is] to see what God really wants me to do." Søren Kierkegaard, *Fear and Trembling* (New York: Penguin, 1985), 70. Kierkegaard is an existentialist only in his emphasis on the individual and individual choice; he shares with the essentialist an understanding that God provides the purpose of life, not autonomous desires. In contrast, the existentialism of Heidegger insists, "We exist for the sake of ourselves: enacting roles and expressing character traits that contribute to realizing some image of what it is to be human in our own cases." Somogy Varga and Charles Guignon, "Authenticity," in *The Stanford Encyclopedia of Philosophy*, Fall 2017, ed. Edward N. Zalta, accessed January 31, 2018, <https://plato.stanford.edu/entries/authenticity/>. In other words, Kierkegaard's existentialism still strives toward some external transcendent measure, the

constructing my life.” Existentialist authenticity increases when one’s chosen talents and disposable income are dedicated to creating one’s desired embodiment. Nearly 16 million plastic surgeries were performed in the US in 2015 alone, a 115 percent increase since the year 2000. David Song, president of the American Society of Plastic Surgeons, explains, “Patients have more options than ever, and working closely with their surgeon, they’re able to focus on specific target areas of the body to achieve the look they desire.”<sup>70</sup>

Sculpting one’s body to match self-image is one example of existentialist authenticity.

Yet, the boundaries of self-fulfillment have expanded beyond cosmetic surgery into cosmetic pharmacology by which a person can quite literally select a new personality for themselves. Psychiatrist Peter Kramer confirms there are many healthy persons using Prozac to overcome inhibitions and social unease in their quest for more confidence, zest, and “brilliance,” turning “wall flowers into social butterflies.”<sup>71</sup> For existential authenticity, permanently altering the body, the personality, and, hence, the self, *is* authentic as long as these changes were freely chosen.

Even a cursory critique of existentialist authenticity reveals numerous weaknesses. First, by rejecting any objective community guides for authenticity and embracing only subjective autonomous desires, self-creation becomes self-defeating. Communities are defined by certain shared attributes of its members. Members critique and validate each other for demonstration of these attributes.<sup>72</sup> To identify as a woman

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Knight of Faith, while Heidegger turns to an internal humanistic measure.

<sup>70</sup> American Society of Plastic Surgeons, “New Statistics Reflect the Changing Face of Plastic Surgery: American Society of Plastic Surgeons Releases Report Showing Shift in Procedures,” Press Release, February 25, 2016, accessed February 2, 2018, <https://www.plasticsurgery.org/news/press-releases/new-statistics-reflect-the-changing-face-of-plastic-surgery>.

<sup>71</sup> Peter Kramer coined the term “cosmetic pharmacology” precisely to distinguish healthy patients who use psychiatric drugs to enhance their personality from patients who need these medications to treat their psychiatric disease. Peter Kramer, *Listening to Prozac: The Landmark Book about Antidepressants and the Remaking of the Self* (New York: Penguin, 1997), 11-14.

<sup>72</sup> Some community attributes are given and ontologically unalterable, such as race or sex. Other attributes are bestowed upon those who desire membership, such as nationality or military service. Still others

requires that the community validate one's claim as authentic. To reject community standards as a demonstration of autonomy is to reject the only available validation for the authenticity of one's self-image.<sup>73</sup> Radical autonomy weakens the very community bonds against which the individual is defined; it turns its face from the very mirror that reveals the self.<sup>74</sup> Neglecting the relational dimension of embodied life results in a "narrow and flatter" self-identity.<sup>75</sup> Hence, the existentialist project threatens to devolve into a self-indulgent Narcissism, a "cult of authenticity" approaching idolatry.<sup>76</sup>

Second, the test for autonomous authenticity demands proof that one's life decisions are made free of any external influences. In *The Ethics of Authenticity*, Charles Taylor explains that, for the existentialist, making life choices free from external standards

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are (usually) freely chosen such as religious denominations or social clubs. More recently, these categories have been challenged as more individuals choose to self-identify in communities for which they lack the requisite attributes. For example, Caucasian woman Rachel Dolezal identified as a black woman and served as the president of the Spokane chapter of the National Association for the Advancement of Colored People (NAACP) until the black community rejected her "membership" as a minority. For another example, many men who never served in the military are identifying as soldiers, dressing in uniforms replete with medals that they never earned. In rejection of their membership in the army community, Congress passed the 2007 Stolen Valor Act making it a misdemeanor to falsely imitate a US soldier. Unfortunately, in 2012, the Stolen Valor Act was struck down by the 9th U.S. Circuit because it violated free speech. Barrie Friedland, "Why Can't Rachel Dolezal Transcend Race?" *Baltimore Sun*, April 24, 2018, accessed April 24, 2018, <http://www.baltimoresun.com/news/opinion/oped/bs-ed-dolezal-defense-20170603-story.html>. Stolen Valor Act of 2013, H. Res. 258, 113th Cong., 1st sess., *Congressional Record*, vol. 159, daily ed. (May 20, 2013): H2779.

<sup>73</sup> This rejection of community standards helps to explain the fanaticism of transsexuals to require others to address them in the pronoun of their sexual self-image. In this way the community is forced to authenticate the individual's self-image. For example, in 2016, New York City's Commission on Human Rights mandated that employers use an individual's preferred gender pronoun or be subject to fines up to \$250,000 for harassment. Joe Tacopino, "Not Using Transgender Pronouns Could Get You Fined," *New York Post*, May 19, 2016, accessed April 24, 2018, <https://nypost.com/2016/05/19/city-issues-new-guidelines-on-transgender-pronouns/>.

<sup>74</sup> Henry Fairlie, "Too Rich for Heroes: Toward the Recovery of Myth and Legend," *Harper's*, November 1978, 33-44.

<sup>75</sup> Alan Bloom, *The Closing of the American Mind* (New York: Simon and Schuster, 1987), 61.

<sup>76</sup> Christopher Lasch, *The Culture of Narcissism: American Life in an Age of Diminishing Expectations* (New York: Norton, 1979), 166.

confers human dignity.<sup>77</sup> Existential authenticity requires ignoring advice from friends and family, church and state, or community and clan. Stripped of any meaningful standard, existentialist authenticity reduces to the absurd whereby “all options are equally worthy, because they are freely chosen.”<sup>78</sup>

Finally, since existentialist authenticity is reduced solely to autonomous choice, and because choice is only limited by the human imagination, the potential choices for self-identity become limitless. Overwhelmed by the sheer number of possibilities, some persons resort to multiple virtual personalities, the very antithesis of authenticity.<sup>79</sup> Others suffer a cognitive dissonance resulting from self-identities that conflict with reality.

### **Essentialist Authenticity**

In contrast, the essentialist treats embodiment as the given mystery of a purposeful Creator for a guided project of self-discovery, whereby each person is like an already-completed novel to be read and lived.<sup>80</sup> The essentialist says, “I need to discover who I was meant to be, so I can fulfill the purpose of my life.” The Christians adds, “God has a plan for creation and that plan includes me.”<sup>81</sup> Paul explains, “For we are His

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<sup>77</sup> Charles Taylor, *The Ethics of Authenticity* (Cambridge, MA: Harvard Press, 1991), 37.

<sup>78</sup> Taylor, *Ethics of Authenticity*, 37.

<sup>79</sup> Nicole Lee quotes one anonymous millennial:

I think Mark Zuckerberg’s notion of people having a single, authentic life is total and utter [fallacy]. People have diverse, rich lives that aren’t contained within a single idea and personae. The life I lead in front of my family members is not the life I lead when I’m with my friends, which isn’t the life I lead with the people I engage with online. (Nicole Lee, “Having Multiple Online Identities Is More Normal than You Think: The Notion that We Have Just One Authentic Self as a Fallacy,” *Engadget*, March 4, 2016, accessed May 8, 2018, <https://www.engadget.com/2016/03/04/multiple-online-identities/>)

<sup>80</sup> Actors in plays merely march to a scripted dialogue, but characters in novels seem free to roam. Novels are frequently better at permitting literary characters to reveal their backstory, aspirations, and inner life. Polster Erving, *Every Person’s Life Is Worth a Novel* (Highland, NY: Gestalt Journal Press, 1987), 1.

<sup>81</sup> The belief that God’s divine plan for creation includes a plan for each individual human enjoys wide support. Most of the church fathers, reformers, and contemporary theologians affirm that God has created the universe with a purpose and that His plan will unfold according to His sovereign will, yet

workmanship, created in Christ Jesus for good works, which God prepared beforehand so that we would walk in them” (Eph 2:10). Essentialist authenticity is a product of discovering and utilizing one’s given natural talents and spiritual gifts for their greatest potential for God.<sup>82</sup> To assist this discovery, dozens of books and workshops offer “spiritual gift inventories” and instruction on “spiritual disciplines.”<sup>83</sup> Os Guinness explains, “The truth is not that God is finding us a place for our gifts but that God has created us and our gifts for a place of his choosing—and we will only be ourselves when

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without compromising human free will or moral culpability. Theodoret of Cyrillus writes, “The divine government of the world is the execution of the eternal divine world-plan in time.” Theodoret of Cyrillus, *On Divine Providence*, trans. T. P. Halton (Mahwah, NJ: Paulist Press, 1988), 4-5. Cornelius van der Kooi explains, “Calvin argues that God’s providential care is the driving force in history, and that it becomes tangible in human life as either admonition or punishment. All things have a purpose, with nothing happening against God’s will.” Cornelius van der Kooi, “Calvin’s Theology of Creation and Providence: God’s Care and Human Fragility,” *International Journal of Systematic Theology* 18, no. 1 (January 2016): 48. The Westminster Catechism states, “God’s works of providence are his most holy, wise, and powerful preserving and governing all his creatures; ordering them, and all their actions, to his own glory.” *Westminster Larger Catechism*, Q18, accessed February 11, 2019, <http://thewestminsterstandard.org/westminster-larger-catechism/>. B. B. Warfield writes, “There is nothing that is, and nothing that comes to pass, that [God] has not first decreed and then brought to pass by His creation or providence.” B. B. Warfield, “Predestination,” in *The Works of Benjamin B. Warfield*, vol. 2, *Biblical Doctrines* (Grand Rapids: Baker, 1991), 21. John MacArthur writes, “Is it not God alone who planned the end from the beginning (Is. 46:9-11)?” Richard Mayhue and John F. MacArthur, Jr., *Christ’s Prophetic Plans: A Futuristic Premillennial Primer* (Chicago: Moody, 2012), 14. Daniel Fuller asserts, “The people of God have that all-important ‘clear [trumpet] call’ (1 Cor. 14:8) upon which to build and strengthen their Christian lives to play the role that God has for each in carrying out his great plan for the world.” Daniel Fuller, *The Unity of the Bible: Unfolding God’s Plan for Humanity* (Grand Rapids: Zondervan, 1992), 27-28. John Walton says, “God has a plan in history that He is sovereignly executing.” John Walton, *Covenant: God’s Purpose, God’s Plan* (Grand Rapids: Zondervan, 1994), 24.

<sup>82</sup> Scripture confirms, “As each one has received a special gift, employ it in serving one another as good stewards of the manifold grace of God” (1 Pet 4:10).

<sup>83</sup> Sydney Page of Taylor Seminary traces the popularity of spiritual gift inventories to Peter Wagner’s 1979 book *Your Spiritual Gifts Can Help Your Church Grow* in which his “Wagner-Modified Houts Questionnaire spawned hundreds of imitators.” Sydney Page, “The Assumptions behind Spiritual Gifts Inventories,” *Didaskalia* 22 (Fall 2011): 39-51. However, there are serious pitfalls in over-emphasizing spiritual gifting. Os Guinness points out two major errors to avoid: the Catholic distortion and the Protestant distortion. The Catholic distortion is to assume that only the clergy have received the spiritual gifts, excusing the lay from a calling to serve within the church. The Protestant distortion is “a heightened awareness of giftedness, but the emphasis on giftedness leads toward selfishness rather than stewardship.” Guinness, *The Call*, 46.



we are finally there.”<sup>84</sup> Multiple options for choosing self-identity remain, but the set of appropriate choices is defined by community traditions, given aptitudes, and biblical ethics.

Unlike the existentialist who rejects external influences in forming self-image, the essentialist relies on community to understand true identity.<sup>85</sup> This view of authenticity is expressed by terms like sincerity and honor. Sincerity means being truthful in all one’s dealings with others; honor mean fulfilling the expectations of one’s social role or duty (father, soldier, etc.). Human authenticity is achieved by striving to conform to a conventional objective community ethos, an ethos that embodies ages of community wisdom. For Christians, this community is the church, guided by a biblical ethos that is grounded in the unchanging wisdom and goodness of God.<sup>86</sup>

The Christian essentialist need not manufacture an imagined facsimile of the self, she is given a personal archetype in the earthly Jesus. Paul instructs, “Be imitators of me, just as I also am of Christ” (1 Cor 11:1). The Scriptures provide the divine narrative and offer each person the opportunity to write themselves into the redemptive story by

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<sup>84</sup> Guinness, *The Call*, 46.

<sup>85</sup> Self-identity is still an individual project of free choice, but the church functions to define, teach, and validate whether one’s self-identity remains true to God’s calling or suffers a measure of self-deception, which demands correction. Guinness explains, “Individual callings should complement, not contradict, the corporate calling. If there is any disagreement, the corporate calling as set out in Scripture should take precedence. Anyone citing his or her individual calling as grounds for rejecting the church’s corporate calling is self-deluded.” Guinness, *The Call*, 48.

<sup>86</sup> For the centuries of pre-modernity, authenticity expressed a community standard of sincerity and honor. With the rise of modernity, conformity to social expectations came to be viewed as a subjugation and inauthenticity that Hegel derided as a “heroism of dumb service.” Objective collective standards for authenticity were exchanged for subjective individual standards. This new sense of authenticity rejected the hidden true self, instead advocating that one should attempt to shape one’s own life as a work of art, which the postmodernist Foucault dubbed “An Aesthetics of Existence . . . an existence blessedly free from the shackles of truth, meaning and sociality.” Peter Berger, “On the Obsolescence of the Concept of Honor,” *European Journal of Sociology* 11, no. 2 (1970): 338-37, reprinted in Stanley Hauerwas and A. MacIntyre, eds., *Revisions: Changing Perspectives in Moral Philosophy* (Notre Dame, IN: University of Notre Dame Press, 1983). G. W. F. Hegel, *Phenomenology of Mind* (New York: Macmillan, 2003), 300. Benda Hofmeyer, “The Contemporary Pertinence of the Later Foucault: Have His Strategies of Resistance Stood the Test of Time?” *South African Journal of Philosophy* 27, no. 2 (2008): 108-19.

participation in the body of Christ. Alistair MacIntyre asserts that persons co-author their own lives as an episode embedded within the larger narrative of history.<sup>87</sup> Choosing the right narrative and choosing to live in accordance to Christ provides the test of true authentic human life.

The main difficulty of the essentialist view of authenticity is epistemological: how am I to know God's purpose for me and whether I am fulfilling this purpose. Knowing the will of God will always challenge Christians.<sup>88</sup> Isaiah rhetorically asks, "Who comprehends the mind of the LORD?" (Isa 40:13a NET).<sup>89</sup> However, Paul provides the answer: "For who has known the mind of the Lord, so as to advise him? But we have the mind of Christ" (1 Cor 2:16 NET). The archetype of authentic human living is exemplified in Jesus, and people learn about Jesus through Scripture.<sup>90</sup> Further, the truth of Scripture is proclaimed and imparted by the church, the body of Christ. Herein are given the tools for overcoming the epistemological problem of knowing God's will: imitate Jesus, obey the Scriptures, and serve the church. Life for Christians is not like a play where our authenticity is judged by how well each recites the script; life is more like a painting where each artist is free to paint his life as a portrait of Jesus. No two paintings are

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<sup>87</sup> Alistair MacIntyre, *After Virtue: A Study in Moral Theory* (Notre Dame, IN: University of Notre Dame Press, 2007), 211-15.

<sup>88</sup> Even when the will of God seems clear, how is one to know if he is following God's will? Any self-examination requires a conscious introspection that is free from bias. But is this possible? The Bible warns, "The heart is more deceitful than all else, and is desperately sick; who can understand it?" (Jer 17:9). In *The Limits of Authenticity*, Ben Yacobi warns, "Therefore no self-examination, however long and detailed, can ever fully reveal one's true identity, and thus what being authentic would truly involve." Ben G. Yacobi, "The Limits of Authenticity," *Philosophy Now* 92 (2012), accessed February 3, 2018, [https://philosophynow.org/issues/92/The\\_Limits\\_of\\_Authenticity](https://philosophynow.org/issues/92/The_Limits_of_Authenticity). Yet the scriptures are clear, "Test yourselves to see if you are in the faith; examine yourselves!" (2 Cor 13:5). God's will is not a minute-by-minute script, but an attitude of obedience, a conformity to the model of Christ in all life's decision and actions.

<sup>89</sup> Job laments, "Can anyone teach God knowledge?" (Job 21:22).

<sup>90</sup> Second Timothy 3:16-17 says, "All scripture is inspired by God and profitable for teaching, for reproof, for correction, for training in righteousness; so that the man of God may be adequate, equipped for every good work."

identical, but each life ought to be a “faithful copy of the original” in Christ.

### **True Authenticity**

True authenticity can only be achieved by the essentialist outlook upon life. The essentialist builds his self-image on the rock of Christ’s example, while the existentialist outlook builds his self-image upon the shifting sands of ever-changing human desire. The existentialist remains forever unsatisfied, always creating and re-creating himself according to new imaginings for his self-image. Lacking any objective archetype for humanity, he can never be “faithful to an original,” so, he can never find the contentment of living a life of true authenticity. In contrast, the essentialist discovers the purpose and meaning of embodied life within the body of Christ. Fulfilling this given purpose is living authentically. In this view, embodiment is a blessing because it provides the given precursor for pursuing a life of true authenticity.

### **Conclusion**

In chapter 2, I argued that most advocates of human enhancement build their position upon the implicit presupposition that embodiment is a deficiency of the human condition that must be improved or escaped. In this chapter, I argued that this presupposition is mistaken, that embodiment is actually a blessing by providing the foundations for human freedom, equal dignity, and a life of authenticity.

Perhaps a final illustration of embodiment is helpful. Imagine a worker who winters in a greenhouse to care for the exotic plants of his employer. He may not leave the greenhouse until his shift is completed, but he has total freedom to perform his assigned duties. Through the frosted panes, the worker can barely see his employer outside, and he can only communicate by tapping on the glass. While the glass is a barrier, it is also necessary for both worker and plants. Embodiment is both barrier and equipping. Embodiment may appear to some as a prison to escape, a wall between people and God, but this is short-sighted. “For now we see through a glass, darkly, but then face to face”

(1 Cor 13:12 AV). So while there is still work to be done, let each person remember the purpose of embodiment and honor this gift as a blessing.

## CHAPTER 4

### *IMAGO DEI AS THE TELOS OF HUMANITY*

Chapter 2 reviewed the state of debate concerning the ethics for cognitive enhancement, concluding that a central presupposition of many advocates is that the inherent limitations of embodiment are a deficiency of the human condition. Chapter 3 challenged this presupposition by arguing that the human body was created intrinsically good and that embodiment provides for such benefits as human free-will, dignity, and authenticity. This chapter will argue that two essential elements guide every human enhancement project: a human *telos* and a human archetype.

This chapter will argue that the Christian human ideal by which enhancement technology ought to be evaluated is rooted in the *imago Dei*.<sup>1</sup> The previous chapter reviewed several views defending the ontology of the *imago Dei*. In this chapter, the *telos* of the *imago Dei* is developed. I offer a critique of three prominent views of the *imago Dei* as located within Adam, concluding that Jesus is the true archetype for humanity. The image of God in man is fully revealed to man in the person of Jesus. Jesus supplies both the archetype and the *telos* for true humanity, providing a moral guide for human enhancement. Oliver O'Donovan's Natural Ethic will then be employed to argue that the true *telos* for humanity is the active participation in Christ's redemption of the created order. O'Donovan's ethic for this participation with Christ is a virtue ethic of properly ordered love.

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<sup>1</sup> The ethic developed here is a Christological bibliocentric argument to help Christians deliberate the morality surrounding the use of human enhancement technology. It is intended neither as an apologetic argument for non-Christians, nor an argument to guide public policies. It is hoped that this treatise will initiate a dialogue among Christian ethicists concerning the moral application of current and future biotechnologies intended to enhance healthy humans to supernormal attributes, especially memory and cognition.

## *Imago Dei*

To assert that humans need enhancement implies there is a perfect human standard for comparison; there must be a human archetype in mind to provide the direction for improvement.<sup>2</sup> Because the first human was created “in the image of God,” nearly every Christian anthropology begins with the *imago Dei* as identified within Adam.<sup>3</sup> While there are many approaches to deriving a biblical anthropology from the *imago Dei*, at their core each appears to share a common comparative methodology: if one subtracts the attributes of non-imagers (animals) from imagers (humans), what remains must be the essence of the *imago Dei*. This methodology has produced three main models for the *imago Dei*: the substantive/structural model, the functional model, and the relational model. Perhaps one of these models can provide the human archetype to direct human enhancement.

### **Substantive/Structural Model**

The substantive/structural model of the *imago Dei* seeks to identify the uniquely human *attributes* that are not shared with animals.<sup>4</sup> Unfortunately, modern science aims

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<sup>2</sup> Gen 1:26 states, “Then God said, “Let Us make man in Our image, according to Our likeness.” For this treatise, *צלם* (image) and *דמות* (likeness) are considered synonymous in agreement with many prominent commentators. C. F. Keil and F. Delitzsch, *Commentary on the Old Testament*, vol. 1, *The Pentateuch* (Peabody, MA: Hendrickson, 2011), 39.

<sup>3</sup> This treatise asserts that Adam and Eve were actual historical persons, but it must be acknowledged that there are Christians who argue that Adam and Eve were merely literary inventions of the Genesis author. For example, biblical scholar Peter Enns asserts, “Evolution demands that the special creation of the first Adam as described in the Bible is not literally historical,” concluding, “One cannot read Genesis literally—meaning as a literally accurate description of physical, historical reality—in view of the state of scientific knowledge today and our knowledge of ancient Near Eastern stories of origins.” Peter Enns, *The Evolution of Adam: What the Bible Does and Doesn't Say about Human Origins* (Grand Rapids: Brazos Press, 2012), xvi, 137.

<sup>4</sup> Some theologians argue for a distinction between “structural” and “substantive” models for the *imago Dei*, whereby structural attributes possess degree, but substantive properties are holistic. For this treatise such distinctions may be valid, but they are not pertinent. Aku Visala, “Imago Dei, Dualism, and Evolution: A Philosophical Defense of the Structural Image of God,” *Zygon* 49, no. 1 (March 2014): 101-20.

to shrink the distinctions between human and animal, leaving little more than linguistic<sup>5</sup> or aesthetic<sup>6</sup> attributes. Within theology, however, there is no shortage of proffered candidates for these uniquely human attributes. Alan Torrance offers the qualities of “reason, morality, and transcendence.”<sup>7</sup> Wentzel Huyssteen states that the *imago Dei* conveys “consciousness, self-awareness, and rationality.”<sup>8</sup> Wolfhart Pannenberg sees the image of God as “freedom, imagination, and reason.”<sup>9</sup> Although the list of exclusively human attributes to describe the *imago Dei* appears endlessly diverse, they share a common origin in human rationality—a capacity to reason that is usually credited to the human soul. Augustine refers to this capacity to reason as the “immortal substance” of man located within the image of the Divine.<sup>10</sup> Aquinas adds that God made man in “His own image by giving him an intellectual soul, which raises him above the beasts of the field.”<sup>11</sup> Calvin

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<sup>5</sup> For example, one of the more complex linguistic theories is posited by Warren Brown and Brad Strawn as the “Complex Emergent Developmental Linguistic Relational Neurophysiologicalism” model of human anthropology. Warren S. Brown and Brad D. Strawn, “Self-Organizing Personhood: Complex Emergent Developmental Linguistic Relational Neurophysiologicalism,” in *The Ashgate Research Companion to Theological Anthropology*, ed. Joshua R. Farris and Charles Taliaferro (New York: Routledge, 2015), 101.

<sup>6</sup> Denis Dutton argues that aesthetic capacities evolved to provide unique survival values to humans. Denis Dutton, *The Art Instinct* (New York: Bloomsbury Press, 2010), 5.

<sup>7</sup> Marc Cortez, *Christological Anthropology in Historical Perspective: Ancient and Contemporary Approaches to Theological Anthropology* (Grand Rapids: Zondervan, 2016), 13.

<sup>8</sup> J. Wentzel van Huyssteen, *Alone In the World? Human Uniqueness in Science and Theology* (Grand Rapids: Eerdmans, 2006), 113.

<sup>9</sup> Pannenberg grounds the *imago Dei* not in human ontology but in an “openness” or “exocentricity,” which makes human relationship to the world and to the transcendent quite distinct from the animals. Wolfhart Pannenberg, *Anthropology in Theological Perspective*, trans. Matthew J. O’Connell (Edinburgh: T & T Clark, 1999), 27.

<sup>10</sup> Augustine, “On the Holy Trinity,” in *Nicene and Post-Nicene Fathers*, vol. 3, ed. Philip Schaff (Edinburgh: T & T Clark, 1887), accessed April 4, 2019, <https://www.ccel.org/ccel/schaff/npnf103.i.html>, 14.4 Also see Joshua R. Farris, “A Substantive (Soul) Model of the *Imago Dei*: A Rich Property View,” in Farris and Taliaferro, *The Ashgate Research Companion to Theological Anthropology*, 165.

<sup>11</sup> Peter Kreeft, ed., *Summa of the Summa* (San Francisco: Ignatius, 1990), 344.

concludes that it is upon Adam's soul that "God engraved his own image."<sup>12</sup> J. P. Moreland identifies the "image" with the "free will, rationality, and the self" that form the "human soul."<sup>13</sup> Clearly, for many theologians, the central attribute of the *imago Dei* is a rationality that is inexorably linked to the soul.

Yet, the substantive/structural model contains a serious weakness.<sup>14</sup> By locating the *imago Dei* within any list of human attributes, it becomes apparent that not all humans equally express these attributes. This might suggest that the *imago Dei* lies upon a continuum from weaker imagers to stronger imagers. It might follow that those humans who possess less of a certain attribute are less human and therefore possess less inherent human dignity. Such thinking, intentionally or unintentionally, supports the abortion of precognitive embryos who have not yet attained the full rationality of the *imago Dei* or the euthanizing of mentally damaged patients who have since lost some rationality. Although the substantive/structural model has enjoyed the longest historical popularity, it has been losing support in recent years due to this weakness.

The substantive/structural model of the *imago Dei* provides an insufficient archetype for human cognitive enhancement. On one hand, since this model locates the essence of humanity in the rational soul, enhancing human cognition might appear to reap

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<sup>12</sup> John Calvin, *Commentaries on the Book of Genesis*, trans. John King (Grand Rapids: Baker, 2009), 1:112.

<sup>13</sup> J. P. Moreland, *The Recalcitrant Imago Dei: Human Persons and the Failure of Naturalism* (London: SCM Press, 2009), 4-5.

<sup>14</sup> There are other criticisms of the substantive/structural model. For instance, Paul Sands notes, "In practice, a substantiality view almost always places the body below the mind and ascribes the *imago* only to the latter." Sands believes this diminishes the value of embodiment. Paul Sands, "The *Imago Dei* as Vocation," *Evangelical Quarterly* 82, no. 1 (2010): 32. Joel Green argues that concepts such as "soul" are non-biblical Platonic ideas. Joel B. Green, "Why the *Imago Dei* Should Not Be Identified with the Soul," in Farris and Taliaferro, *The Ashgate Research Companion to Theological Anthropology*, 179. Marc Cortez believes that "all creation" is an image of God, so the *imago Dei* is not exclusive to humans. Yet, these concerns are peripheral to the main objection that this model sometimes places human dignity upon a continuum. Marc Cortez, *Theological Anthropology: A Guide for the Perplexed* (London: T & T Clark, 2010), 19.



spiritual benefits. On the other hand, this model elevates human rationality to the neglect of human morality. After all, a cognitively enhanced mind might also produce a more capable criminal.<sup>15</sup> Enhancing the mind is not the path to enhancing the soul. Ronald Cole-Turner points out the paradox of Christians seeking to transform into the “new self” by choosing to enhance the “old self.”<sup>16</sup>

The main weakness of the substantive/structural model is that it equates the *imago Dei* with rational capacity without identifying the *purpose* for human cognition. It emphasizes the ontology of the image to the neglect of the teleology of the image.<sup>17</sup> It is important to distinguish the *imago Dei* as ontology (formal cause) and the *imago Dei* as *telos* (final cause). All persons are ontologically *imago Dei*, possessing the capacity to reflect God. Yet, some persons refuse to actualize their teleology as *imago Dei*. Similarly, human cognition merely describes a morally neutral capacity, a potentiality made actual by intention for application toward some goal. The substantive/structural model fails if it lacks a clear *telos* for the rationality within the *imago Dei*.<sup>18</sup>

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<sup>15</sup> Persson and Savulescu argue that cognitive enhancement without concomitant moral enhancement can only result in smarter criminals who are more difficult to apprehend or to protect society against. They warn, “Cognitive enhancement by means of drugs . . . could [even] increase the risk of the development or misuse of weapons of mass destruction.” Ingmar Persson and Julian Savulescu, “The Perils of Cognitive Enhancement and the Urgent Imperative to Enhance the Moral Character of Humanity,” *Journal of Applied Philosophy* 25, no. 3 (2008): 162-77.

<sup>16</sup> Ronald Cole-Turner, “Introduction: The Transhumanist Challenge,” in *Transhumanism and Transcendence: Christian Hope in an Age of technological Enhancement*, ed. Ronald Cole-Turner (Washington, DC: Georgetown University Press, 2011), 9.

<sup>17</sup> Gordon Spykman observes, “We *are* imagers of God. Imaging represents our very makeup, our constitution, our glory.” Gordon J. Spykman, *Reformational Theology: A New Paradigm for Doing Dogmatics* (Grand Rapids: Eerdmans, 1992), 224, emphasis original. Michael Williams calls this the “ontological aspect to the image of God.” Michael D. Williams, “First Calling: The *Imago Dei* and the Order of Creation,” *Presbyterion* 39, no. 1 (Spring 2013): 41.

<sup>18</sup> There are many other criticisms of the substantive/structural model: its static character, its individualistic focus, its misogynistic tendencies, and its inherent mind-body dualism. Sands, “The *Imago Dei* as Vocation,” 28-41.

## Functional/Vocational Model

In contrast to seeking unique human attributes, the functional/vocational model of the *imago Dei* seeks to locate the image within the *work* that God assigns to humanity.<sup>19</sup> This model employs the same comparative methodology as the substantive/structure model, but rather than comparing attributes, it compares the unique vocations that humans are equipped to perform, vocations of which the animals appear incapable. This model accepts that rationality is a divine equipping, but it asks, “What is the purpose (*telos*) for this rational equipping?”

Here again, the first clues to the function of the *imago Dei* can be found in Genesis, where God commands humans to “be fruitful and multiply, and fill the earth, and subdue it; and rule over the fish of the sea and over the birds of the sky and over every living thing that moves on the earth” (Gen 1:28). Therefore, the first calling for humans is to serve as God’s designated stewards over creation.

Modern notions of stewardship convey a sense of maintenance, implying that God’s established order within the garden only required a detached supervision. True biblical stewardship is a far richer concept that entails “utilizing and managing all the resources God provides for the glory of God and the betterment of His creation.”<sup>20</sup> God actually commands that humans “subdue” creation, to finish what God created by bringing

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<sup>19</sup> Oliver Crisp explains, “The image of God in Genesis is not ‘that spark in us that makes us human rather than animal’ such as rationality or possessing a soul.” Oliver Crisp, “A Christological Model of the Imago Dei,” in Farris and Taliaferro, *The Ashgate Research Companion to Theological Anthropology*, 225. Claus Westermann concurs, “Resist the tendency to see the image of a likeness of God as a something, a quality.” Claus Westermann, *Creation*, trans. John H. Scullion (Philadelphia: Fortress, 1974), 57-58.

<sup>20</sup> Charles Bugg, “Stewardship,” in *Holman Bible Dictionary*, ed. Trent C. Butler (Nashville: Holman, 1991), 1303-4. Often, Christian stewardship is narrowly understood in economic terms alone. Household stewardship concerns family finances, church stewardship concerns tithing, and workplace stewardship concerns environmental responsibility. In contrast, biblical stewardship begins with the concept that God owns everything (Ps 24:1); therefore, human responsibilities for stewardship extend to every resource within creation, even time and talents.

it into order.<sup>21</sup> Adam was charged to “cultivate” the garden.<sup>22</sup> Cultivation conveys a sense of laboring to bring order from disorder, segregating species of plants into plots, turning wilderness into farms, and taming jungles into groves. From creation’s inception humans were tasked to continue God’s work of creating order from chaos. After the fall, this vocation remained unaltered but frustrated, by both human sin and creation’s resistance to order. Human sin obscures humanity’s true *telos*, confusing one’s perceptions of God and of oneself, disordering one’s love from God to self. In punishment, creation resists order, the ground is cursed with thorn and thistle, and only by sweat and toil will creation reluctantly yield to order (Gen 3:18-19). Humanity’s royal commission, “crowned with glory and honor,” to rule over the earth as God’s appointed vice-regents appears for many people as merely scratching out a living (Ps 8:5-6). Despite the fall, though, one’s function under God remains: humans are to continue to image God by properly ordering creation.<sup>23</sup>

The functional/vocational model is an improvement on the substantive/structural model since it adds the teleological purpose and direction for human enhancement; namely, humans need to become better rulers of God’s creation. And for rulership, there must be some hierarchical structure within creation that needs maintenance and enforcement. This vertical dimension to the *imago Dei* introduces the concept of a divine created order that humans ought to honor and obey. Humans are neither to be like God, nor to act like animals, but to fulfill their calling as stewards of the created order, from within the created order.

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<sup>21</sup> Subdue in Gen 1:28 (שָׁבַע) conveys reordering against resistance. The same word is used for reordering humans as in subjugation to enslavement (Jer 34:11,16) and overcoming resistance as in sexual assault (Esth 7:8).

<sup>22</sup> Cultivate (עָבַד Gen 2:5,15; 3:23; 4:12) like that required of a slave (Exod 5:18, 21:2,5) or a draft animal (Deut 15:19), is hard labor commanded by one’s master.

<sup>23</sup> The command for Adam to cultivate is repeated after Adam is ejected from Eden (Gen 3:23), confirming that the mandate to bring order from chaos continued after the fall.

Yet, the functional/vocation model also suffers the same weakness as the substantive/structural model by placing the fulfillment of the *imago Dei* upon a sliding scale. Humans who steward poorly may be viewed as deficient imagers, as less human, and deserving of less human dignity. Also, dominion as a vocation of the *imago Dei* has sometimes been misconstrued as ownership, a license for a selfish exploitation of creation by its appointed heirs.<sup>24</sup> Perhaps most critical, the functional/vocation model relies heavily upon a Genesis account of a terrestrial vocation, to the exclusion of more transcendent or eschatological purposes.<sup>25</sup>

For these reasons, the functional/vocational model of the *imago Dei* offers an incomplete archetype for human enhancement. On one hand, it is helpful to define the *imago Dei* as stewardship of God's creation because it provides a *telos* to inform enhancement, but on the other hand, its emphasis upon the vertical hierarchical dimension of Genesis tends to neglect the horizontal responsibilities.<sup>26</sup> The functional/vocational model remains incomplete without this relational component for the *telos* of humanity. It thereby provides an insufficient archetype for human enhancement.

### **The Relational Model**

The relational model combines elements of both previous models by uniting the human relational capacity within the substantive/structural model into the functional/vocation model of the *imago Dei*. In short, relationship is the paramount human

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<sup>24</sup> See Lynn White's accusation against Christians and Francis Schaeffer's response. Lynn White, "The Historical Roots of Our Ecological Crisis," *Science* 155 (1967): 1203-7. Francis A. Schaeffer and Udo. W. Middelman, *Pollution and the Death of Man* (Wheaton, IL: Crossway, 1970), 75.

<sup>25</sup> For instance, in "*Imago Dei* as Vocation," Sands lists the four ethical implications of the *imago Dei* in purely economic and political terms: (1) the equal respect for women and minorities, (2) the protection of life against war or abortion, (3) the resistance to ideologies of power, and (4) the protection of the environment's ecosystem. Sands, "*Imago Dei* as Vocation," 39-41.

<sup>26</sup> Some theologians would reject this criticism. Sands insists that "the vocational view subsumes the legitimate insights of the other views into its own more biblically faithful perspective." Proper rulership entails caring for others. Sands, "The *Imago Dei* as Vocation," 28.

vocation. Proponents find biblical support for this model in Genesis 1 within the man-woman relationship, in Genesis 2 within Adam and Eve's relationship with God, and in the relationality inherent within the Trinity. As Karl Barth explains, the relationality between humans reflects "the relationship and differentiation between the I and the Thou in God Himself . . . in the relationship of man and woman in which man is a Thou to his fellow and therefore an I in responsibility to this claim."<sup>27</sup> Much of the New Testament points to a horizontal relationship of equal dignity since Christians are "neither Jew nor Gentile, neither slave nor free, nor is there male and female, for you are all one in Christ Jesus" (Gal 3:28).<sup>28</sup> In the relational model, the primary *telos* of the *imago Dei* is to love God and to love one's neighbor as thyself.

Yet, the relational model is not without opponents. Most criticisms are exegetical. Phyllis Bird accuses Barth of reading modern conceptual categories into the Genesis account.<sup>29</sup> Other scholars are concerned that New Testament theological concepts, such as agape sacrificial love, are being read back into the Genesis accounts of the *imago Dei*.<sup>30</sup> For this reason, some theologians have attempted a multifaceted approach to combine the best features of each model of the *imago Dei* into one account. For example, Marc Cortez offers a "representation, presence, and covenant" model for the image of God wherein humans are "unique, mysterious, relational, responsible, embodied yet broken, persons."<sup>31</sup>

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<sup>27</sup> Karl Barth, *Church Dogmatics III.1: The Doctrine of Creation* (London: T & T Clark, 2010), 196.

<sup>28</sup> See also Col 3:11; 1 Cor 12:1-31; Eph 2:15.

<sup>29</sup> Phyllis Bird, "'Male and Female He Created Them': Gen 1:27b in the Context of the Priestly Account of Creation," *Harvard Theological Review* 74, no. 2 (1981): 132.

<sup>30</sup> Cortez, *Theological Anthropology*, 27.

<sup>31</sup> Cortez, *Theological Anthropology*, 30.

The relational model of the *imago Dei* combines the best features of its predecessors, but it still fails to provide a complete picture of the *imago Dei* because, like its predecessors, it locates the archetype of humanity within Adam. The relational view begins with the pre-Fall Adam who walks with God in the garden and enjoys companionship with Eve, but only afterward does this model attempt to incorporate the human relationality demonstrated by Jesus. Cortez argues, “The starting point of any anthropology informed by the *imago Dei* must, of course, be the centrality of the person and work of Jesus Christ.”<sup>32</sup> The common failing of all three models is that they begin with Adam who is made *in* the image of God, instead of beginning with Jesus who *is* the image of God. Adam is more accurately a prototype for humanity; Adam was the first of his kind and the form for all subsequent humans. Adam as prototype was replaced by the incarnate Jesus, the second Adam. Jesus is the perfected ideal, the true archetype to guide human transformation.

Each model implies that the image of God is within humans, but people do not “have the image” of God; people “are imagers” of God.<sup>33</sup> Through human sin, one’s view of God has become veiled and difficult to image, but in Jesus, the glory of God is perfectly revealed.<sup>34</sup> To be a true imager of God is to image Jesus. Jesus must be the starting point for a teleological understanding of the *imago Dei* as the archetype for human enhancement because the *imago Dei* is perfectly fulfilled in Christ.

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<sup>32</sup> Cortez, *Theological Anthropology*, 30-40.

<sup>33</sup> As Douglas Hall explains, “The *imago Dei* is not a trait found in humans but a dynamic happening that occurs when human beings are turned toward God and one another. In short, humans do not ‘have’ the image of God; rather, they image God.” Douglas John Hall, *Imaging God: Dominion as Stewardship* (Grand Rapids: Eerdmans, 1986), 98.

<sup>34</sup> Perhaps a metaphor is helpful here. When I view myself in a mirror, I might say, “My image is in the mirror.” But this is only semantics; my image is not *in* the mirror but reflected *by* the mirror. Further, even the best mirror cannot image me in the dark. In a similar way, humans do not possess the image of God, they reflect the image of God. Further, the darkness of sin makes God difficult to image, but with Christ, God is gloriously illuminated so all persons can see Him more clearly and image Him more truly.

## *Imago Dei* in Jesus

Despite the biblical centrality of Christ, the archetype of man in Christ introduces epistemological challenges. Jesus is fully human, but He is also fully divine. Which of Jesus' acts are examples of His humanity, and which are examples of His divinity? Are prophesizing and performing miracles examples for all humans to emulate or are they divine interventions that are outside human control? In other words, how is the humanity of Jesus to be extracted from the divinity of Jesus? Which acts of this perfect man are sinful humans even capable of imaging?

Skeptics insist that the complexity of the human person cannot be extracted from the example of Christ.<sup>35</sup> Cortez warns, "Any mistakes we make in understanding who and what *Jesus* is will have corresponding devastating implications for how we understand what it means to be *human*. If Christology informs anthropology, it can also eviscerate it."<sup>36</sup> Care must be taken to avoid an anthropological exclusivism whereby humans that do not emulate Jesus are less human, as well as avoid soteriological universalism whereby the shared nature of the *imago Dei* implies salvation to all humans.

One way to avoid these potential pitfalls, is *not* to begin Christological anthropology with Adam and proceed to Jesus, but to begin and end with Jesus, the alpha and omega (Rev 22:13). In Christ there is no exclusivism; all people enjoy equal dignity (Rom 5:8; John 3:16; Acts 10:34-35, 2 Pet 3:9). In Christ there is no universalism; some will reject salvation (Matt 10:33). As Ian McFarland observes, no argument about humanity "can be theologically binding unless it has a clear Christological warrant."<sup>37</sup>

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<sup>35</sup> Marc Cortez, "The Madness in Our Method: Christology as the Necessary Starting Point for Theological Anthropology," in *The Ashgate Companion to Theological Anthropology*, ed. Joshua Ryan Farris and Charles Taliaferro (New York: Routledge, 2015), 15-26.

<sup>36</sup> Marc Cortez, *Christological Anthropology in Historical Perspective: Ancient and Contemporary Approaches to Theological Anthropology* (Grand Rapids: Zondervan, 2016), 190, emphasis original.

<sup>37</sup> Ian A. McFarland, *Difference & Identity* (Cleveland, OH: Pilgrim, 2001), 115.

The World Council of Churches proclaims in unity, “Jesus Christ is the one in whom true humanity is perfectly realized.”<sup>38</sup> He is the “person par excellence” who both reveals and realizes true personhood in history.<sup>39</sup> Man was created *in* the image of God, but Jesus alone *is* the image of God (2 Cor 4:4; Col 1:15).

### **Jesus Redeems Created Order**

In summary, the main shortfall of the structural/substantive model of the *imago Dei* is that it lacked a clear *telos* for humanity. Knowing what something *is* (ontology) is not always the same as knowing what something *is for* (teleology). The functional model attempted to correct this omission by suggesting a human *telos* that is located within the different vocations for which humans were designed by God to fulfill. More specifically, the relational model exclusively located the *imago Dei* in what they see as humanity’s most important vocation: to fellowship with God and one’s neighbors (Matt 22:35-40; Mark 12:28-31; Luke 10:25-28).<sup>40</sup> All three models of the *imago Dei* fail because they hold Adam as the archetype for humanity. Adam is the human prototype; Jesus is the human archetype. Jesus provides both the proper teleological archetype to judge the morality of *existing* enhancement technologies and the proper direction for *future* human enhancement.

Yet, the *telos* of Jesus is magnificently complex and multifaceted. Jesus is the sinless Lamb of God whose self-sacrifice on the cross for sinful man provides propitiation, forgiveness, redemption, intercession, and justification to the believer. Jesus fills the offices

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<sup>38</sup> World Council of Churches, *Christian Perspectives on Theological Anthropology: A Faith and Order Study Document*, Faith and Order paper, no. 199 (Geneva: World Council of Churches, 2005), 51.

<sup>39</sup> Edward Russell, “Reconsidering Relational Anthropology: A Critical Assessment of John Zizioulas’s Theological Anthropology,” *International Journal of Systematic Theology* 5, no. 2 (2003): 175.

<sup>40</sup> This is the Great Commandment and *telos* for humans. John Piper writes, “And Jesus turns to us and says, ‘The whole scroll, the whole Law and the Prophets, the whole history of redemption and all my Father’s plans and acts hang on these two great sovereign purposes of God—that he be loved by his people, and that his people love each other.’” John Piper, “Love Your Neighbor as Yourself, Part 1,” April 30, 1995, accessed January 5, 2018, <https://www.desiringgod.org/messages/love-your-neighbor-as-yourself-part-1>.



of perfect prophet, heavenly priest, and eternal king. Jesus forms His church, models its ethics, directs its actions, and nurtures its body. Yet, which of these functions are fallen humans even capable of imitating? The answer is provided by Jesus in His Great Commandment to love God and love others (Matt 22:35-40).<sup>41</sup> Because “God is love” and Jesus is “the image of the invisible God,” Christians are to “be imitators of God, as beloved children; and walk in love, just as Christ also loved you” (1 John 4:16b; Col 1:15a; Eph 5:1-2a). The acts of Jesus reveal their purpose as love, so in acts of love humanity fulfills its purpose in Christ.<sup>42</sup>

However, to reduce the *imago Dei* and its human *telos* into love is to invite subjective interpretation. Indeed, Joseph Fletcher justified abortion as a loving response to Jesus’ Great Commandment to love one’s neighbor as oneself.<sup>43</sup> Clearly, notions of relationship in both its vertical and horizontal dimensions must have some objective referent in order to provide any moral guidance. In *Resurrection and Moral Order*, Oliver O’Donovan provides just such an objective referent for a relational model of the *imago Dei* that can serve as a *telos* for humanity.<sup>44</sup>

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<sup>41</sup> Jesus defined the greatest love as that which would sacrifice life for friends (John 15:13). He even went so far as to say, “Love your enemies” (Matt 5:44).

<sup>42</sup> John 13:35 says, “By this all men will know that you are My disciples, if you have love for one another.”

<sup>43</sup> Joseph Fletcher writes, “The situationists, if their norm is the Christian commandment to love the neighbor, would almost certainly, in this case, favor abortion.” Once the concept of love is unmoored from the rest of Scripture, especially from the gospel narrative, it becomes a subjective emotion, a permissive rationale devoid of content. Even James Childress, who writes the introduction to the latest edition of Fletcher’s *Situation Ethics*, admits that Fletcher goes beyond agape love toward utilitarian interpretations of love. Joseph Fletcher, *Situation Ethics: The New Morality* (Philadelphia: Westminster, 1966), 6, 38.

<sup>44</sup> Oliver O’Donovan, *Resurrection and Moral Order: An Outline for Evangelical Ethics* (Grand Rapids: Eerdmans, 1994).

## **Oliver O'Donovan and Created Order**

For O'Donovan, the Genesis account of chaos-into-order is the overarching theme to creation that provides the context for understanding the *imago Dei*, human stewardship over creation, and the proper human relationship with God and neighbor. The creation event establishes order, and as O'Donovan explains, "This order stands over against us and makes its claims upon us . . . the order of things that God has made is *there*. It is objective, and mankind has a place within it. Christian ethics, therefore, has an objective reference because it is concerned with man's life in accordance with this order."<sup>45</sup> By love, Jesus is redeeming fallen creation by restoring it to its proper order, and humans are tasked to join in this redemption by properly ordering their love for God and neighbor. Yet, these human loving relationships within the Created order are much more complex than merely reestablishing vertical hierarchies (God-human) and horizontal communities (human-human).

### **Created Order**

On the superficial level, the vertical dimension of relationships within the created order are purely hierarchical, a platonic notion of "order-to-serve." As Psalm 8 describes, man is a "little lower than God," but all the animals are placed "under his feet" (vv. 3-8). This view yields a hierarchy of dignity wherein animals serve humans and humans serve God.

In contrast, O'Donovan argues that a more robust Aristotelian notion of "order-to-flourish" better conceptualizes the created order: "One cannot speak of the flourishing of any kind without implicitly indicating a wider order which will determine what flourishing and frustration within that kind consist of."<sup>46</sup> Everything in creation has an objective *telos*; fulfilling that *telos* is the definition of flourishing. The hammer flourishes

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<sup>45</sup> O'Donovan, *Resurrection and Moral Order*, 17.

<sup>46</sup> O'Donovan, *Resurrection and Moral Order*, 34-35.

by driving nails, not pounding screws; the carpenter flourishes by framing ships not laying bricks. Although a hierarchy remains between hammer and carpenter, each also has a proper relationship to its unique purpose. In a similar way, a superficial understanding of the horizontal dimension reduces human community to merely a cooperative reciprocity that seeks to avoid social hierarchy. At a minimum, this view reduces community relationships to the Golden Rule.<sup>47</sup>

O'Donovan sees horizontal relationships as a generic ordering of "kinds"; a shared ontology that exists before any interactions. The "kinds" are assigned by God through their inherent properties similar to the manner of individual animals who are assigned by God to a particular species by virtue of their inherent properties. O'Donovan writes, "They stand alongside each other as members of a 'kind'. These relations do not yet presume any extension in time; they are not yet relations between happenings, like, for example, the relation of cause and effect. They belong to the world as it were stopped still in its tracks; they are given in the fact of creation itself."<sup>48</sup> These twin concepts, vertical "order-to-flourish" and horizontal "ordering of kinds," provide the foundational architecture for a properly ordered universe. O'Donovan concludes, "Without these twin concepts we could not think of a 'universe.'"<sup>49</sup>

This created universe is therefore a complex network of interpenetrating teleological and generic relations which are surprisingly complex, even paradoxical. Plants and animals are both creatures of a kind, but plants are ordered to animals as food. Yet, there are also carnivorous plants that flourish by consuming animals. Consider that an acorn might flourish by growing into a tree, or by feeding a pig. How can one come to understand the complex plurality of such relationships?

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<sup>47</sup> Matt 7:12 reads, "Treat people the same way you want them to treat you."

<sup>48</sup> O'Donovan, *Resurrection and Moral Order*, 32.

<sup>49</sup> O'Donovan, *Resurrection and Moral Order*, 32.

The answer is to look to the One Who created it, Who sustains it, and ultimately Who redeems it. In the great cosmic Christology of Colossians, Jesus is the Creator, “by Him all things were created,” including the Created order (Col 1:15-16). Jesus sustains this order: “In Him all things hold together” (Col 1:17). And Jesus redeems this order: “To reconcile all things to Himself, having made peace through the blood of His cross” (Col 1:20). On the cross creation is redeemed, but Jesus’ bodily resurrection “tells us of God’s vindication of his creation, and so of our created life.”<sup>50</sup>

For O’Donovan, the resurrection of Jesus is where the Created order is revealed to humans, and this Created order gives the *telos* for human flourishing. Before extracting O’Donovan’s natural ethics from his understanding of the created order, it may be helpful to contrast the two major alternative ethics that are also derived from the created order: creation ethics and kingdom ethics. Creation ethics is derived from the created order discerned within the scriptural accounts of Eden, while the kingdom ethics is derived from the created order discerned within the scriptural accounts of the New Kingdom.

### **Creation Ethics**

As discussed previously, the structural/substantive model of the *imago Dei* argues that rationality is the essential attribute that defines humanity. When human rationality is properly applied, humans discern the divine law. Natural law is the moral law “written on the heart” for each person to obey. Natural law sees reason and conscience informing the human will of the moral law inherent within creation. This natural law is viewed as an important component of humanity’s *telos* under God (Rom 2:15). In this view, obedience to a natural law is the *telos* of humanity.

Natural law has the clear advantage of grounding an objective moral law in God’s eternal law—a law that applies to everyone, both regenerate and reprobate. Yet, it has the disadvantage of undervaluing the noetic effects of sin. Since the only time in which

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<sup>50</sup> O’Donovan, *Resurrection and Moral Order*, 13.

sin was not an epistemological barrier to natural law was in Eden before the fall, pre-fall Adam is sometimes viewed as the perfect human. Such creation ethics may favor the crucifixion as the central historical event, since the cross displays God's condemnation of Adam's sin.<sup>51</sup> The crucifixion of Jesus in obedience to the Father becomes the reversal of Adam's disobedience in Eden. Redemption suggests the return to something that was lost, rather than a transformation to something that is new.

When creation ethics is applied to human enhancement, the human body is directed back to its original state, free of morbidity and mortality, with a mind innocent of sin and the knowledge of good and evil. This is crucifixion without resurrection. As O'Donovan warns, "We must go beyond thinking of redemption as a mere restoration, the return of a *status quo ante*. The redemption of the world, and of mankind, does not serve only to put us back in the Garden of Eden where we began. It leads us on to that further destiny to which, even in the Garden of Eden, we were already directed."<sup>52</sup> Creation ethics misreads the natural law compass when it aims humanity toward a return to Adam in Eden.

### **Kingdom Ethics**

In contrast to the structural/substantive model that looks back to creation for ethics, the functional and relational models look forward to the New Creation. Kingdom ethics acknowledges a role for natural law but sees divine revelation of the kingdom of

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<sup>51</sup> The preeminence of the crucifixion for creation ethics develops from its emphasis on the redemption from sin and the restoration of humanity. O'Donovan explains, "We shall find God's reversal of Adam's choice already visible in Christ's representative death, where 'in the likeness of sinful flesh and for sin, [God] condemned sin in the flesh' (Rom 8:3)." Although the resurrection remains essential for creation ethics since it vindicates creation, the resurrection does not point back to Adam's restoration as much as it points forward to humans as new creations, with resurrected bodies quite different from Adam's embodiment. Interestingly, O'Donovan accuses Stanly Hauerwas, an opponent of natural law, of a similar "tendency to privilege the crucifixion over the other moments of the Christ-event, in keeping with an emphasis on martyrdom and death as the normative expression of Christian witness." O'Donovan, *Resurrection and Moral Order*, xv, 14.

<sup>52</sup> O'Donovan, *Resurrection and Moral Order*, 55.

Christ as necessary for the moral life. In this view, the noetic effects of sin blind the unredeemed to the reality of Christ. Only the divine transformation of old man into the new man can restore perception of the King, a King whose kingdom was inaugurated but will not be fully established until the eschaton. In the eschaton, people live in permanent sinless filial relationship with the King of Kings and with each other. In the present age, a deontological ethic grounded upon biblical commands must suffice.<sup>53</sup> For kingdom ethics, the *telos* of human kind lies in a future fulfillment of the kingdom.<sup>54</sup> In this view, the archetype for man becomes the obedient millennial citizen.

This view has the advantage of grounding an objective moral law in Scripture and in Christ, but it has the disadvantage of appearing unavailable to the unregenerate, and it can seem remote for the Christian in the here and now. In kingdom ethics, Jesus' ascension is the central historical event, since Christ ascends to reign "at the right hand of the Father" (Ps 110:1, 118:16; Act 7:55-56; Rom 8:34; Eph 1:20; Col 3:1, Heb 1:3). The human body awaits to be supernaturally enhanced to its future sinless state, with a unique physiology suggested by Jesus' own post-resurrection visits.<sup>55</sup> This view sees current

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<sup>53</sup> For example, Greg Bahnsen constructs his kingdom ethics emphasizing the Old Testament Decalogue, while Glen Stassen and David Gushee construct their kingdom ethics emphasizing the Sermon on the Mount. Stassen and Gushee are ultimately chartering a Christian virtue ethic, but they subsume these virtues to divine command. Greg L. Bahnsen, "The Theonomic Reformed Approach to Law and Gospel," in *Five Views on Law and Gospel*, ed. Stanley N. Gundry (Grand Rapids: Zondervan, 1996), 142. Glen H. Stassen and David P. Gushee, *Kingdom Ethics: Following Jesus in Contemporary Context* (Downers Grove, IL: IVP, 2003), 28.

<sup>54</sup> For O'Donovan, kingdom ethics includes any ethic derived from the teachings particular to the "eschatological kingdom which the New Testament proclaims." Some weaknesses common to kingdom ethic systems are an emphasis on the Sermon on the Mount to the exclusion of the rest of cannon and its focus on the future consummated kingdom that sometimes leaves little ethical guidance for the here and now. O'Donovan criticizes,

If the kingdom were purely transcendent, if it did not impose a true order upon our worldly obligations, then we would be without guidance as to how to live in the world. We would be poised between world and kingdom as between life and death; but that is to say we would in practice adopt an unreformed worldliness, for the transcendent kingdom, having no point of purchase upon our life in the world, would become merely a rhetorical consideration. (O'Donovan, *Resurrection and Moral Order*, 15, 142)

<sup>55</sup> The risen Jesus clearly had a body according to the witness of Thomas (John 20:24-29), and Jesus ate and drank (Luke 24:42-43). But the risen Jesus also displayed more supernatural attributes since

embodiment as a temporary state, like a caterpillar awaiting supernatural enhancement into a butterfly. Such a view risks that humans may seek to postpone their teleological fulfillment until some future eschaton. O'Donovan criticizes kingdom ethics for its insinuation that "the destined end is not immanently present in the beginning."<sup>56</sup> Kingdom ethics misreads the scriptural compass when it aims humanity toward a future perfected state.

### **Natural Ethics**

Natural law ethics sees reason and conscience informing the human will of the moral law inherent in creation. Kingdom ethics sees divine revelation informing the will about the transformation possible through the Holy Spirit. O'Donovan criticizes this confrontation between creation and kingdom ethics:

A kingdom ethics which was set up in opposition to creation could not possibly be interested in the same eschatological kingdom as that which the New Testament proclaims. A creation ethics, on the other hand, which was set up in opposition to the kingdom, could not possibly be evangelical ethics, since it would fail to take note of the good news that God had acted to bring all that he had made to its fulfillment. In the resurrection of Christ creation is restored and the kingdom of God dawns.<sup>57</sup>

Whereas, in terms of the Christ event, creation ethics emphasizes the crucifixion and kingdom ethics emphasizes the ascension, O'Donovan attempts to overcome this tension by uniting both themes within the resurrection, because the resurrection initiates the redemption of creation by vindicating God's created order. O'Donovan explains, "The resurrection of Christ, upon which Christian ethics is founded, vindicates the created order in this double sense: it redeems it and it transforms it. For the resurrection appears

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He could arguably change His appearance (Luke 24:30-31, John 20:14-16; 21:6, 7) and pass through locked doors (John 20:19). Debate remains as to whether these are de facto properties of all resurrected bodies or unique to the divine Christ.

<sup>56</sup> O'Donovan, *Resurrection and Moral Order*, 64.

<sup>57</sup> O'Donovan, *Resurrection and Moral Order*, 15.

in the Gospels under a double aspect, as the restoration of Jesus from the dead and as his glorification at God's right hand."<sup>58</sup>

Creation ethics provides an incomplete understanding of this created order when it looks only to natural law. Kingdom ethics also has an incomplete understanding of this order when it looks only to the eschaton. This is because both creation and kingdom ethics yield mere propositional knowledge ("knowledge that") about the created order.

O'Donovan's natural ethic argues for an intuitive holistic knowledge of "how," leading to a cooperative unification with Jesus. His natural ethic sees participation in Christ's authority over the natural order as the key to the Christian life. This is a significant epistemological turn. Propositional knowledge is expected to objectively apprehend and contain its object; "I know that Tallahassee is the capital of Florida," even if I have never been in Tallahassee. In contrast, with procedural knowledge the object subjectively lays claim to us; "I know how to ride a bicycle" is only true if the muscle-memory of the skill resides within me.<sup>59</sup> Procedural knowledge is only acquired by *doing it ourselves*, not by cognitive ascent to propositions of truth. Humans cannot come to understand God's created order through empirical inference by examination of the natural world. Neither is the created order explicitly diagramed within the scriptures as propositions. Scripture is essential to discerning the created order because it introduces Christ, but knowledge of the created order can only be given by Christ *through participation* with Christ.

O'Donovan explains,

Such knowledge, according to the Christian gospel, is given to us as we participate in the life of Jesus Christ. He is the point from which the whole [of the created order] is to be discerned. . . . He is the one whose faithfulness to the created moral order was answered by God's deed of acceptance and vindication, so that the life of

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<sup>58</sup> O'Donovan, *Resurrection and Moral Order*, 56.

<sup>59</sup> O'Donovan writes, "We expect scientific knowledge to 'comprehend' or 'contain' its object, whereas in this knowledge [created order] the object contains us." O'Donovan, *Resurrection and Moral Order*, 79.



man within this order is not lost but assured for all time. True knowledge of the moral order is knowledge “in Christ.”<sup>60</sup>

Metaphorically, the created order is like a divine mystery written by the Father in a foreign language that people do not yet know. The Father does not merely give humans a dictionary (natural law) and its grammar (commandments). These are necessary but insufficient to fully discern the created order. So, the Father then sends His Son to converse with each person in this foreign language. Only by this participation in this conversation can humans come to adequately comprehend God’s *telos* for humans within the created order. The objective reality of the created order is then made subjective when the Holy Spirit evokes one’s free response as a moral agent to this truth.<sup>61</sup>

Sin is a willful rejection of the created order, or a “misconstruing of that order to construct false and terrifying world views.”<sup>62</sup> Attempting to subvert the created order, people may seek to elevate themselves “to be like gods” (Gen 3:5), or to lower God to “the form of corruptible man and of birds and four-footed animals and crawling creatures” (Rom 1:23). In the opposite direction, some sinfully attempt to lower humans down to the animals,<sup>63</sup> or elevate the animals up to humans.<sup>64</sup> To violate the created order is immoral, to affirm and restore the created order is the moral life.

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<sup>60</sup> O’Donovan, *Resurrection and Moral Order*, 85.

<sup>61</sup> O’Donovan, *Resurrection and Moral Order*, 106.

<sup>62</sup> O’Donovan, *Resurrection and Moral Order*, 82.

<sup>63</sup> The Cambridge Declaration on Consciousness prepared by a “prominent international group of cognitive neuroscientists, neuropharmacologists, neurophysiologists, neuroanatomists and computational neuroscientists” declares that “non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that humans are not unique.” Cambridge Declaration on Consciousness, Francis Crick Memorial Conference on Consciousness in Human and non-Human Animals, Churchill College, University of Cambridge, July 7, 2012. Assessed November 24, 2018. <https://www.google.com/search?q=cambidge+declaration+on+consciousness&ie=utf-8&oe=utf-8&client=firefox-b-1>.

<sup>64</sup> In 2002, Germany granted constitutional right to some “non-human animals.” In 2013, India declared dolphins “non-human persons.” In the United States, multiple suits have been filed to grant

## The Moral Life

According to O'Donovan, creatures are not alone in the created order, operations are also ordered. For example, "Speech is ordered to truth, and marriage to fidelity."<sup>65</sup> An appreciation and obedience to this operational created order is the wisdom that informs moral living. For O'Donovan, *wisdom* is knowledge of the created order, *moral law* is this wisdom codified and organized, and the *moral code* is the didactic cultural artifact of the moral law.<sup>66</sup> Although laws and codes guide the moral life, O'Donovan rejects a morality defined solely by deontology. He states that without the *telos* provided by the created order, Divine Command Theory becomes "Christian voluntarism . . . where all Christian moral duties become analogous to ecclesiastical house-rules."<sup>67</sup>

Clearly, morality is not located only within the acts themselves, and certainly not in their consequences. The intentions of the agent are necessary to know the morality of the act. There is an epistemic priority to intentions: "Acts are not self-explanatory, at least in one important respect: we can never be sure precisely what was done until we know what the agent meant to do."<sup>68</sup> For example, a person might be motivated by compassion to donate to charity, alternatively he might be motivated by pride to seek accolades for the same donation. When morality is primarily located within the agent, rather than the act, then virtue ethics is in mind. The practice of virtues transforms the character of the agent toward a fulfillment of his or her *telos* within God's created order. Therefore, the prescriptive system of O'Donovan's created order is essentially a virtue ethic.<sup>69</sup>

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personhood to chimpanzees, orangutans, apes, dolphins, whales, and elephants, but so far without success. Emily Fitzgerald, "[Ape]rsonhood," *Review of Litigation* 34, no. 2 (Spring 2015): 357.

<sup>65</sup> O'Donovan, *Resurrection and Moral Order*, 34.

<sup>66</sup> O'Donovan, *Resurrection and Moral Order*, 191.

<sup>67</sup> O'Donovan, *Resurrection and Moral Order*, 16.

<sup>68</sup> O'Donovan, *Resurrection and Moral Order*, 215.

<sup>69</sup> O'Donovan, *Resurrection and Moral Order*, 181.

In its basic structure, virtue ethics describes the Aristotelian procedure whereby agents imitate the acts of virtuous persons until these acts become habits, which develop into the default behaviors, which in turn define and transform character. What becomes critical is the underlying teleological aims of the virtues. In *After Virtue*, Alistair MacIntyre explains that virtue ethics describes a procedure by which “man-as-he-happens-to-be” can be transformed into “man-as-he-could-be-if-he-realized-his-essential-nature.”<sup>70</sup> Without an objective teleological “magnetic north,” no prescriptive compass can guide this transformation. In *Nicomachean Ethics*, intentions were aimed at the good, interpreted as *eudaimonian* “happiness.” Yet, human happiness is too subjective and can only lead to relativism. What is necessary for virtue ethics to succeed is an objective *telos*, a *telos* that O’Donovan argues is one’s perception, appreciation, and restoration of God’s created order.

### **Restoring Created Order as the *Telos* for Humanity**

At this point, one can provide a concise summary of O’Donovan’s human ontology, epistemology, and natural ethic. Ontologically, humans are *imago Dei* occupying an essential place within God’s created order, an order of teleological hierarchy and generic kinds. Epistemologically, knowledge of the created order comes only by participation with Christ’s authority within this order; it is not propositional knowledge but procedural knowledge. The natural ethic is one’s participation in Christ’s authority over the created order, which is achieved through the practice of Christian virtues.

### **Natural Ethic and Virtue**

These virtues transform and equip people for encountering novel ethical situations which deontological laws could never predict. Virtue development prepares

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<sup>70</sup> Alasdair MacIntyre, *After Virtue* (Notre Dame, IN: University of Notre Dame Press, 2007), 54.

people to “recognize and respond to *new* ends-of-action.”<sup>71</sup> For O’Donovan, “Such a vision is what the ancients meant by the term ‘wisdom.’ Wisdom is the perception that every novelty, in its own way, manifests the permanence and stability of the created order, so that, however astonishing and undreamt of it may be, it is not utterly incommensurable with what has gone before.”<sup>72</sup> If wisdom is knowledge of the created order, then moral law is the claim this created order makes upon the human agent. Moral codes are the didactic codifications of this moral law. To borrow O’Donovan’s metaphor, the moral codes are the bricks for constructing a building that can only be comprehended by wisdom.<sup>73</sup>

### **Virtue and Character**

Moral codes aim to identify and promote specific moral acts, but Jesus taught that moral acts initiate within the agent. “For from within, out of the heart of men, proceed the evil thoughts, fornications, thefts, murders, adulteries, deeds of coveting and wickedness, as well as deceit, sensuality, envy, slander, pride and foolishness. All these evil things proceed from within and defile the man” (Mark 7:21-23). Outward behavior begins with inward thoughts. In a radical rebuke of moral legalism, Jesus declared, “Everyone who looks at a woman with lust for her has already committed adultery with her in his heart” (Matt 5:28). For O’Donovan, public acts reveal the agent’s private character. One’s character is the fount from which one’s moral acts flow.

### **Virtue of Love**

Moral acts disclose moral dispositions, which become habits, and habits reveal character. Character, in turn, is the collection of moral virtues of which love is the

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<sup>71</sup> O’Donovan, *Resurrection and Moral Order*, 184, emphasis original.

<sup>72</sup> O’Donovan, *Resurrection and Moral Order*, 189.

<sup>73</sup> O’Donovan, *Resurrection and Moral Order*, 200.

paramount unifying Christian virtue. The scriptures warn that, without love, all spiritual gifts, moral knowledge, and righteous acts become meaningless (1 Cor 13:1-13).

Augustine wrote, “I would not define virtue in any other way than as the perfect love of God.”<sup>74</sup> Aquinas referred to love as “the form of the virtues.”<sup>75</sup> For O’Donovan, “Love is the unitary orientation that lies behind all the uniquely varied responses to the generic variety of the created order.”<sup>76</sup> “Love is. . . the fulfillment of the moral law on the one hand, and the form of the virtues on the other.”<sup>77</sup>

Yet, to remain intelligible, love must have an object. Jesus commands that the proper object of love is God and neighbor (Matt 22:36-40). Some theologians, like Søren Kierkegaard, feared that a collision between love for God and love for neighbor might occur.<sup>78</sup> Yet, Augustine’s notion of properly ordered love segregates and prioritizes these loves: God first, neighbor next, and one’s self last.<sup>79</sup> O’Donovan also denies that there could ever be a conflict between a love of God and a love of neighbor because “the two

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<sup>74</sup> Augustine, *The Catholic and Manichean Ways of Life: De moribus ecclesiae Catholicae et de moribus Manichaeorum* (Washington, DC: Catholic University of America Press, 1966), 22, accessed November 24, 2018, <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&cad=rja&uact=8&ved=2ahUKEwj3s-Gre3eAhXmqIkKHfJSDgYQFjAGegQIBhAC&url=http%3A%2F%2Fwww.strobertbellarmine.net%2Fbooks%2FCUAPS--056AugustineCatholicandManicheanWaysofLife.pdf&usg=AOvVaw3GG8P6G999xbzPQ6KQvgCn>.

<sup>75</sup> Aquinas, *Summa Theologiae*, II-II. 23.7,8, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>76</sup> O’Donovan, *Resurrection and Moral Order*, 224.

<sup>77</sup> O’Donovan, *Resurrection and Moral Order*, 226.

<sup>78</sup> Søren Kierkegaard, *Either/Or: A Fragment of Life* (New York: Penguin, 1992), 507.

<sup>79</sup> Augustine writes, “Every man is to be loved as a man for God’s sake; but God is to be loved for His own sake. And if God is to be loved more than any man, each man ought to love God more than himself. Likewise, we ought to love another man better than our own body, because all things are to be loved in reference to God.” Augustine, *On Christian Doctrine, in Four Books* (Grand Rapids: Christian Classics Ethereal Library, n.d.), I.27, accessed December 3, 2018, <http://www.ccel.org/ccel/augustine/doctrine.html>.

loves, of God and neighbor, are one love, held together and differentiated by an order.”<sup>80</sup> Properly ordered love constitutes filial obedience to the created order.

Since the created order is given by Christ through participation in Christ’s redemption of this order, properly ordered love is a “love of Christ [which] has priority over all other obligations because it is the love of Jesus as the Christ, the acceptance of him as the one whom the Father has sent . . . that we are given to love the whole of reality in its due order: God, the neighbor, self and the world.”<sup>81</sup> Christian love affirms and reestablishes God’s created order.

### Conclusions

This chapter began by seeking to establish the proper human archetype toward which any human enhancement ought to be directed. The key scriptural clue to this archetype is Adam’s creation as *imago Dei*. Clearly, imaging God is humanity’s divine teleological purpose. A central aspect of Adam’s purpose as God’s imager was to preserve the natural order of God’s creation within the garden. After the fall, this mandate remained in force; Adam was commanded to continue his work to bring order to creation. Except now, man’s sinful nature obscures his purpose, which is further frustrated by a creation, which vigorously resists order.

Yet, Adam is only the prototype, not the archetype of humanity; Adam was created *in* the image of God, Jesus *is* the image of God. *Jesus* is the true archetype for humanity toward which humans ought to aspire. The image of God in man is fully revealed to man in Christ. According to O’Donovan, the *telos* of the *imago Dei* remains unchanged to bring order to creation, but sin makes each person’s feeble efforts futile. In Christ, all persons are given renewed vision and strength to fulfill his purpose. In Christ, all persons participate in His redemption and reordering of creation. This divine participation is

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<sup>80</sup> O’Donovan, *Resurrection and Moral Order*, 237.

<sup>81</sup> O’Donovan, *Resurrection and Moral Order*, 243.

achieved through the practice of Christian virtues, of which the supreme unifying virtue is love. Love of Christ encapsulates the love of the moral law, which properly orders love of God, neighbor, self, and world providing the method and direction for the fulfillment of one's intended design.

However, a virtue ethic of love, even one modeled upon Jesus, initially lacks the specificity and objectivity to address moral questions concerning human enhancement. For example, it remains unclear how to apply a virtue of love to, say, determining if it is moral to use cognitive enhancing medications to master koine Greek. What is needed now is an explication of the biblical and Christological virtue of love in order to supply a more specific moral criteria for evaluations of real-life applications of human enhancement. In the next chapter, the virtue of love that is inherent within the created order and modeled by Christ is brought into sharper focus and given objective content for application to human enhancement.

CHAPTER 5  
THE MORAL BOUNDARIES OF THE *IMAGO DEI*

**Introduction**

The previous chapter argued that two essential elements guide every human enhancement project: a human *telos* and a human archetype. Human enhancements are always aimed at helping persons fulfill some desired purpose, and all enhancements are pursuing some perfected human archetype. It was also argued that the original human *telos* was human participation with God in maintaining the order of creation, and the original human prototype was Adam as *imago Dei*. After the fall, this human *telos* remained in force, yet became more difficult to fulfill. Humans became burdened with a sinful nature that blinded them to their purpose, and they confronted a world in greater disorder that resisted human authority over creation. Spiritual blindness made both the *telos* and the archetype more difficult to discern and therefore impossible to fulfill. “But when the fullness of the time came, God sent forth His Son” (Gal 4:4a). In Christ, “the image of the invisible God,” the *imago Dei* was once again made manifest to humanity in the person of Jesus (Col 1:15a). As the second Adam, Jesus models the *telos* of humanity by redeeming and reordering a fallen and disordered creation (1 Cor 15:45).

Christ brings the human *telos* into sharper focus. Employing O’Donovan’s natural ethic, it was argued that to be “in Christ” means to participate in Christ’s authority over the created order, to redeem and reestablish this order. Specifically, it was argued that this participation is achieved through the development and practice of Christian virtues. Although deontological commandments provide an invaluable didactic codification of right conduct, virtue ethics provides better equipping to adjudicate *novel* moral situations. Commandments can never specifically address every possible moral situation.



This is especially applicable to future technologies, such as those presented by human enhancement. Chapter 4 concluded that restoration of the proper order to creation begins with a proper reordering of love. This virtue of properly ordered love provides the necessary direction and mode to evaluate the human enhancement project.

Yet, the virtue of love without further explication remains too vague to supply specific moral criteria for real-world application to human enhancement. The purpose of this chapter is to examine the *human* aspects of Jesus to better elucidate the key concepts of love that Jesus teaches and models for humans. First, various concepts of the two natures of Christ are explored, arguing that kenotic Christology provides the best model from which to extract aretaic values. Second, the kenotic passage of Philippians 2:1-8 is examined to conclude that it is not human *attributes* that Jesus models, but human *attitudes*, specifically the attitude of perfect love, expressed by a humble attitude of mind and a compassionate attitude of heart. Humility and compassion express the love of neighbor, while reverence expresses the love of God. Last, since humble and compassionate acts can still be subverted by sin into selfish acts, the attitude of reverence stands as judge over humility and compassion as the final arbiter of human morality. These three Christological attitudes—humility, compassion, and reverence—demarcate the archetype of man in Christ and provide the equipping for discerning the morality surrounding human enhancement technologies.

### **Archetype as Kenotic Attitudes**

Jesus is the *Theoanthropos*, the God-Man. It has always been difficult for Christians to articulate the dual natures of Christ. The classical formulation from the Council of Chalcedon affirms that Christ is “truly God and truly Man . . . acknowledged in two natures, unconfusedly, unchangeably, indivisibly, inseparably . . . concurring in one

Person.”<sup>1</sup> Yet, if the *telos* of humanity is revealed in Jesus’ human nature, then the human attributes of Jesus need to be separated from the divine attributes of Christ, without violating the integrity of the one person, the Son of God. Chalcedon represents the outer boundary of orthodoxy for Christology, but within this expanse remains a multitude of opinions concerning how to understand Christ’s humanity against His divinity. In general, the three main positions are (1) skeptical Christology, (2) hypostatic Christology, and (3) kenotic Christology.

### **Skeptical Christology**

Skeptical Christology describes the arguments that the duality of Christ will never be intellectually apprehended. Kierkegaard insisted, “That God has existed in human form . . . is surely the paradox *sensu strictissimo*, the absolute paradox.”<sup>2</sup> British theologian Don Cupitt writes, “The eternal God, and a historical man, are two beings of quite different ontological status. It is simply unintelligible to declare them identical.”<sup>3</sup> John Hick goes so far as to say that the “God-Man formula” of Chalcedon orthodoxy is devoid of content, “a form of words without assignable meaning . . . not literally true . . . a mythical concept.”<sup>4</sup> Although Christians may argue that the incarnation is mysterious or paradoxical, they must never hold that it is unintelligible.<sup>5</sup>

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<sup>1</sup> Henry Bettenson, ed., *Documents of the Christian Church* (New York: Oxford University Press, 1960), 72-73.

<sup>2</sup> Søren Kierkegaard, *Concluding Unscientific Postscript*, ed. David F. Swenson and Walter Lowrie (Princeton, NJ: Princeton University Press, 1968), 194-95.

<sup>3</sup> Don Cupitt, “The Finality of Christ,” *Theology* 78 (December 1976): 625.

<sup>4</sup> John Hick, “Jesus and the World Religions,” in *The Myth of God Incarnate*, ed. John Hick (London: SCM Press, 1977), 178-79.

<sup>5</sup> Stephen Evans, ed., *Exploring Kenotic Christology* (Vancouver, BC: Regent College Publishing, 2006), 2.

Other theologians simply deny that there are any distinctions between Jesus' divine and human natures. When confronted with the apparent incongruity of Jesus' divine omniscience and Scripture's claim that Jesus did not know the day of final judgment, Aquinas insists that Jesus was not ignorant, rather, He was simply unwilling to reveal the date.<sup>6</sup> Aquinas concludes, "We are given to understand that the Son knows, not merely in the Divine Nature, but also in the human."<sup>7</sup> Similarly, Louis Berkhof denies that there are any noetic distinctions between Jesus' divine and human natures: "The person can be said to be almighty, omniscient, omnipresent, and so on, but can also be called a man of sorrows, of limited knowledge and power, and subject to human want and miseries," yet, "the deity cannot share in human weakness."<sup>8</sup> Berkhof seems to argue that conflicting predicates for Jesus can remain inexplicable.

Scripture itself distinguishes the divine noetic attributes of Christ from the human noetic attributes of Jesus. Jesus "grew in wisdom," did not know who touched His cloak, and did not know the date of final judgment (Luke 2:52; Mark 5:29-31; Mark 13:34). In His divinity, the Savior is eternal, omnipresent, omniscient, omnipotent, immutable, life-giving, creator, sustainer, and the forgiver of sin.<sup>9</sup> In His humanity, Jesus hungers, thirsts, fatigues, expresses emotions, and experiences suffering (John 19:1, 18, 28). As fully divine, Jesus is the sinless substitutionary sacrifice that atones for all sin, for all time. As fully human, on the cross Jesus takes the full wrath of God for all humans, for all

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<sup>6</sup> Aquinas, *Summa Theologica*, IIIa.10.2, ad 1, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>7</sup> Aquinas, *Summa Theologica*, IIIa.10.2.

<sup>8</sup> Louis Berkhof, *Systematic Theology* (Grand Rapids: Eerdmans, 1939), 324.

<sup>9</sup> Eternal (John 1:1; Heb 1:11-12; Ps 102:25-27), omnipresent (Matt 28:20; John 14:23; Eph 3:17; Col 1:27; Rev 3:20), omniscient (John 2:25, 4:18, 16:30; Matt 16:21, 17:22, 20:18, 26:1-2), omnipotent (Matt 28:18; 26:1-2), immutable (Mal 3:6; Jas 1:17), life-giving (John 1:4, 14:6; Ps 36:9; Jer 2:13), creator (John 1:3), sustainer (Col 1:17; Heb 1:3), and forgiver of sins (Mark 2:1-12; Isa 43:25).

time. Despite the assertions of the skeptics, Scripture supports that there remains some distinction between the divine and human aspects of Christ.

### **Hypostatic Christology**

The term hypostasis (ὑπόστασις) comes from Greek philosophy meaning the fundamental reality underlying everything else. Hypostasis became the vocabulary appropriated by Chalcedon to express the unity of Christ, one hypostasis (reality), in two natures (ἐν δύο φύσεσιν). This hypostatic union of Christ's two natures has been traditionally articulated by Protestantism in two different ways, a Calvinist view and a Lutheran view. John Calvin believed that the attributes of Christ's two natures could never be separated or transferred without changing the essence of His nature.<sup>10</sup> In contrast, Luther held that Christ's two natures were separate but mutually communicated between each nature, without changing the essence of either.<sup>11</sup>

From the Calvinist view, the divine and human attributes of Christ are inseparable; therefore, the hypostatic model cannot offer insights for the human enhancement project. In contrast, the Lutheran hypostatic model suggests a comparative methodology for segregating those attributes which belong to Jesus' human nature from His divine attributes. This hypostatic methodology begins with the eternal Logos and

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<sup>10</sup> In his *Institutes*, Calvin writes, For we maintain, that the divinity was so conjoined and united with the humanity, that the entire properties of each nature remain entire . . . [despite that] the scriptures sometimes attribute to him [Christ] qualities which should be referred specially to his humanity, and sometimes qualities applicable peculiarly to his divinity, and sometimes qualities which embrace both natures, and do not apply specially to either. (John Calvin, *Institutes of the Christian Religion*, trans. Henry Beveridge [Peabody, MA: Hendrickson, 2008], II.14.1, 309-10)

<sup>11</sup> Luther believed that in the transfer of eternal life between Christ and the sinner, there must also be an exchange of properties between Christ's natures. The death of human Jesus "communicates" to the divine Christ. Luther writes, "God in his own nature cannot die; but now that God and man are united in one person, it is called God's death when the man dies who is one substance or one person with God." This distinction propagated significant disagreements concerning Jesus' impeccability, impassability, and His presence in the Lord's Supper. Martin Luther, *Luther's Works*, vol. 41, *Church and Ministry*, trans. W. A. Lambert (Philadelphia: Fortress, 1999), 103-4.

attempts to understand the human Jesus by examining the supernatural attributes “communicated” or “predicated” in the incarnation.<sup>12</sup> Ronald Feenstra explains, “The Incarnate Son of God has the divine attributes essentially and from all eternity and has the essential human attributes (which do not include being sinful) because he took on human nature in the Incarnation.”<sup>13</sup> In other words, the divine Logos *added* human attributes to become flesh. This view emphasizes that Jesus “took on” the form of a bondservant to be made in the likeness of men (Phil 2:7). The historical strength of this interpretation is that the divine aspects of Christ remain unaltered, thereby preserving the impassability and impeccability of God.<sup>14</sup>

Yet, a “communication of attributes” between the divine Christ and the human Jesus presents problems for identifying His uniquely human attributes. Which attributes should be solely ascribed to Jesus’ humanity that do not communicate to the divine Logos? For instance, Jesus displays supernatural knowledge of heavenly events and visions of the future, which are ascribed to His divine nature, yet, there remains knowledge that the Father possesses but Jesus does not possess.<sup>15</sup> Is one part of Jesus’ cognitive capacity

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<sup>12</sup> Supporters of this view that the incarnation *added* attributes to Jesus via his embodiment will point to Luke 2:52 where “Jesus *grew* both in stature and in wisdom and understanding” and Heb 5:8 where “Jesus *learned* obedience through what he suffered.”

<sup>13</sup> Ronald J. Feenstra, “A Kenotic Christology of the Divine Attributes,” in Evans, *Exploring Kenotic Christology*, 142.

<sup>14</sup> Athanasius of Alexandria, Cyril of Alexandria, Pope Leo I, and others supported this “communication of attributes” language in the period leading to the Council of Chalcedon. Athanasius writes, “Yet because of that flesh which He put on, these things [suffering] are ascribed to Him, since they are proper to the flesh, and the body itself is proper to the Saviour.” Feenstra, “A Kenotic Christology,” 141-42. Athanasius, *Four Discourses Against the Arians*, III.34, accessed December 3, 2018, [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUK\\_Ewj9wanSo4TfAhUQJt8KHRMcCHwQFjAAegQICRAC&url=http%3A%2F%2Fwww.documentacatholic.com%2F03d%2F0295-0373%2C\\_Athanasius%2C\\_Orationes\\_contra\\_Arianos\\_%5BSchaff%5D%2C\\_EN.pdf&usg=AOvVaw2gAh9T\\_g6RVLLHbQax0mRd](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUK_Ewj9wanSo4TfAhUQJt8KHRMcCHwQFjAAegQICRAC&url=http%3A%2F%2Fwww.documentacatholic.com%2F03d%2F0295-0373%2C_Athanasius%2C_Orationes_contra_Arianos_%5BSchaff%5D%2C_EN.pdf&usg=AOvVaw2gAh9T_g6RVLLHbQax0mRd).

<sup>15</sup> Matt 24:36 says, “But of that day and hour no one knows, not even the angels of heaven, nor the Son, but the Father alone.”

attributed to His earthly body, while another part of His cognition credited only to His divine nature? How would the human enhancement project distinguish between the two?

Thomas Morris offers a helpful solution to this noetic paradox by distinguishing “being human” from “being merely human,” and “being divine” from “being divine *simpliciter*.”<sup>16</sup> When applied to the noetic paradox that Jesus does not know something that the Father knows, Morris postulates an “asymmetric accessing relationship” between Jesus’ “distinctly divine consciousness” and His “distinctly earthly consciousness.” He explains, “The divine mind had full and direct access to the earthly, human experience resulting from the Incarnation, but the earthly consciousness did not have such full and direct access to the content of the overarching omniscience proper to the Logos.”<sup>17</sup>

Ronald Feenstra criticizes Morris’ approach because it defines omniscience as a divine attribute which necessarily contains “the property of omniscient-unless-freely-and-temporarily-choosing-to-be-otherwise.”<sup>18</sup> Feenstra believes this explanation could leave all three persons of the Godhead temporarily non-omniscient, contrary to classical orthodoxy.

Hypostatic Christology, despite Morris’s contribution, appears unable to clearly identify which aspects of Jesus are exclusively human. Therefore, hypostatic Christology cannot provide insight into which aspects ought to be enhanced within “mere” humans. If Jesus’ human attributes are somehow nested in His divinity, as Morris suggests, then how is the humanity of Jesus to be isolated and enhanced? The hypostatic model appears unable to provide a clear concept of Jesus’ human attributes to evaluate human enhancement.

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<sup>16</sup> Stephen T. Davis, “Is Kenosis Orthodox?” in Evans, *Exploring Kenotic Christology*, 116-17.

<sup>17</sup> Thomas V. Morris, *The Logic of God Incarnate* (Eugene, OR: Wipf and Stock, 2001), 103.

<sup>18</sup> Feenstra, “A Kenotic Christology,” 152.

## Kenotic Christology

Notice that the hypostatic methodology began with the divine Logos and sought to identify what human attributes were *added* to the incarnation. By contrast, kenotic Christology begins with the divine Logos and seeks to identify which divine attributes were *subtracted* in the incarnation. Kenotic Christology draws its name from the verb “emptied” (ἐκένωσεν), since Christ “emptied Himself, taking the form of a bond-servant, and being made in the likeness of men” (Phil 2:7). According to kenotic Christology, whichever attributes Jesus “emptied” from Himself, what remains must be His pure humanity.

Potential criteria for identifying the residual human attributes of Christ’s “emptying” appear endless. For instance, Duns Scotus employed a substance versus accident criteria.<sup>19</sup> Gottfried Thomasius believed that truth, holiness, and love were retained, while omnipotence, omniscience, and omnipresence were surrendered without a loss of divinity.<sup>20</sup> August Ebrard segregated the divine attributes from the human attributes according to eternal versus temporal manifestations.<sup>21</sup> Wolfgang Gess attributed Jesus’ human attributes to those He displayed before He progressively gained an awareness of His divinity.<sup>22</sup> Contemporary theologians, such as Hugh Mackintosh, have decided that only “love” remains immutably divine in Jesus.<sup>23</sup> Stephen Davis conspicuously

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<sup>19</sup> Duns Scotus, *The Quodlibetal Questions*, trans. Felix Alluntis and Allan B. Wolter (Washington DC: Catholic University of America Press, 1975), 432-33.

<sup>20</sup> Thomasius makes a distinction between the essence of the Logos and His derivative attributes. God’s will is His supreme essence, so a free self-limitation of attributes “is not a denial but rather a manifestation of the [divine] essence.” Such attributes emanating from the divine essence are further divided into “immanent” attributes, such as truth, holiness, and love, and “relative” attributes, such as omnipotence, omniscience, and omnipresence. Thomas R. Thompson, “Nineteenth-Century Kenotic Christology,” in Evans, *Exploring Kenotic Christology*, 83.

<sup>21</sup> Alexander B. Bruce, *The Humiliation of Christ* (New York: A. C. Armstrong & Son, 1889), 152-59.

<sup>22</sup> Bruce, *Humiliation of Christ*, 144-52.

<sup>23</sup> Hugh R. Mackintosh, *The Doctrine of the Person of Jesus Christ* (Edinburgh: T & T Clark, 1913), 477.

appropriates Thomas Morris' "truly human" versus "merely human" terminology to support a hybrid hypostatic view that Jesus "self-limited" His divine attributes.<sup>24</sup>

Critics of kenotic Christology worry that attempts to distill Christ's humanity from His person will compromise His integrity by diminishing His divinity.<sup>25</sup> For how can God limit himself or divest Himself of some of His attributes without ceasing to be God? More pointedly, how can Jesus' self-limiting of supernatural attributes provide insights into humanity? For example, if Christ "emptied" Himself of specific divine knowledge, how are people to do likewise since persons, as humans, already lack such knowledge? Kenotic methodology as commonly described remains unhelpful because it primarily describes only what humans *are not*. Kenotic Christology suggests a negative definition of humanity. For instance, humans are clearly not omniscient, omnipotent, or omnipresence; it is not necessary for kenotic Christology to confirm it. It appears that classical kenotic Christology, like hypostatic Christology, cannot elucidate the human attributes within the Christ, and therefore cannot meaningfully contribute to the ethics of human enhancement.

### **Attributes versus Attitudes**

Perhaps as long as Jesus' two natures are viewed as a collection of attributes there will always remain some difficulty distinguishing between His divine and human natures. The very idea of attributes entails concepts of capacities that are brought to bear upon circumstances; potentialities that become actualities only by intention, action, or application. Even if these exclusively human potential capacities could be identified in Jesus, guidance about when and how to apply such attributes to human enhancement would remain difficult. Even the paramount human attributes of love can be improperly

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<sup>24</sup> Evans, *Exploring Kenotic Christology*, 122.

<sup>25</sup> Evans, *Exploring Kenotic Christology*, 8.



aimed. For humans surely share a divine capacity to love, but the object and expression of love can be corrupted. Loving evil over good is a frequent synecdoche for sin.<sup>26</sup> Thus, attributes themselves, whether divine or human, would appear to be neutral until they are employed, and the manner and aim of their use can be for good or bad.

The weakness of both hypostatic and kenotic Christology is that both methods are limited to the examination of Jesus' attributes, capabilities, or potentialities for identifying true humanness. However, looking beyond the *different attributes* of Jesus' human and divine nature, this examination ought to extend to the *similar attitudes* displayed within both natures of Christ. Since Jesus is fully human, humans ought to emulate Jesus' attitudes. God possesses divine attitudes which Jesus images as the human archetype, so other humans may image God in the same manner. Therefore, it is in Jesus' attitudes that the guiding ethos for human enhancement may be found.

Herein, the term *attitude* refers to the underlying affective and conative orientation necessary for the correct application of capacities or attributes toward the good.<sup>27</sup> Accordingly, human attributes or capacities are inherently morally neutral; it is in the intention of their application that ethics emerges. For example, cognitive capacity may be directed toward curing cancer or toward developing weapons of mass destruction. Creative capacities may be employed to compose hymns or to create pornography. Moral guidance is rarely located within any human capacity itself, but within the human attitudes that guide such capacity in its application. So too, within the human archetype of Jesus, it is His attitudes that ought to be sought, not His attributes.

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<sup>26</sup> Pss 4:2, 52:3; Prov 17:19; Hos 9:10; Mic 3:2; John 3:19; Rev 22:15.

<sup>27</sup> The term *attitude* used in this dissertation overlaps in many ways with the term *virtue*. Both attitude and virtue convey concepts of practiced moral orientation influencing behavior, but the term *virtue* may imply concepts associated with any number of other virtue theories that are not intended here. To avoid this ambiguity and to remain consistent with the idea of *φρονέω* (rather than *ἀρετή*, which is not found in the Philippians passage), the term *attitude* is more accurate for this dissertation.

With this in mind, kenotic Christology may yet bear fruit. If the great kenosis passages of Philippians 2:1-8 are viewed with an eye to Jesus' attitudes, rather than attributes, then several divine attitudes emerge that Jesus teaches are the essential components of true humanity.

### **Kenotic Attitudes of Philippians 2**

Although advocates of kenotic Christology argue that the whole of Scripture supports their view, it is the second chapter of Paul's Epistle to the Philippians that contains the great kenosis passage from which kenotic Christology draws its inspiration.<sup>28</sup> Thomas Constable declared that Philippians 2 is nothing less than "the 'mind of Christ.'"<sup>29</sup> John Walvoord asserts that the kenotic passages are the "most valuable in the epistle . . . an attitude of devotion and sacrifice illustrating that which Christ demonstrated to the full in His own humiliation."<sup>30</sup> The kenosis pericope reveals the attitudes of Jesus that, to be argued forthwith, are intended to be displayed in the human imagers of God.

### **Establishing the Greek**

Establishing the Greek of Philippians 2:1-8 is fairly straightforward and the few textural variants in these verses do not introduce material concerns. Bruce Metzger only includes four variants for this pericope in his *Textual Commentary on the Greek New*

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<sup>28</sup> As a matter of prolegomena, Pauline authorship remained uncontested until the nineteenth century, but the evidence highly supports that Paul is the author: (1) there is internal attestation (1:1) the author's use of the first person "I" throughout, (2) the events, acquaintances, and theology of Philippians is consistent with Paul, (3) Pauline authorship was accepted by the early theologians Clement of Rome, Polycarp, Clement of Alexandria, Tertullian, and Irenaeus, and (4) Philippians is attributed to Paul by the Muratorian Canon and Apostolicon of Marcion. Most scholars hold that Paul wrote this epistle around AD 62 to 63 during his first imprisonment in Rome (Acts 28:16-31) to the church in Philippi that he founded during his second missionary journey. Geoffrey W. Bromiley, ed., *International Standard Bible Encyclopedia* (Grand Rapids: Eerdmans, 1986), 4:836-39.

<sup>29</sup> Thomas Constable, "Notes on Philippians: 2017 Edition," accessed October 5, 2017, [www.sonlight.com/constable/notes/pdf/philippians.pdf](http://www.sonlight.com/constable/notes/pdf/philippians.pdf), 4

<sup>30</sup> John Walvoord, *To Live Is Christ: An Exposition of Paul's Epistle to the Philippians* (n.p.: Jawbone Digital, 2012), Kindle.

*Testament*.<sup>31</sup> In verse 2:4, the variant ἕκαστοι is rejected as “a scribal conformation to the plurals in the context.”<sup>32</sup> In verse 2:5, some variants add γὰρ to τοῦτο, but this is rejected as a later addition.<sup>33</sup> In verse 2:7, ἀνθρώπων appears as ἀνθρώπου as a “non-doctrinal conformation to the singular δούλου.”<sup>34</sup> None of these variants create translational controversies. Additional variants contained in the NA<sup>27</sup> are even less significant.

Accordingly, the Greek of Philippians 2:1-8 is established as

Εἴ τις οὖν παράκλησις ἐν Χριστῷ, εἴ τι παραμύθιον ἀγάπης, εἴ τις κοινωνία πνεύματος, εἴ τις σπλάγχνα καὶ οἰκτιρμοί, πληρώσατέ μου τὴν χαρὰν ἵνα τὸ αὐτὸ φρονῆτε, τὴν αὐτὴν ἀγάπην ἔχοντες, σύμψυχοι, τὸ ἐν φρονοῦντες, μηδὲν κατ' ἐριθείαν μηδὲ κατὰ κενοδοξίαν ἀλλὰ τῇ ταπεινοφροσύνῃ ἀλλήλους ἡγούμενοι ὑπερέχοντας ἑαυτῶν, μὴ τὰ ἑαυτῶν ἕκαστος σκοποῦντες ἀλλὰ καὶ τὰ ἐτέρων ἕκαστοι. Τοῦτο φρονεῖτε ἐν ὑμῖν ὃ καὶ ἐν Χριστῷ Ἰησοῦ, ὃς ἐν μορφῇ θεοῦ ὑπάρχων οὐχ ἀρπαγμὸν ἡγήσατο τὸ εἶναι ἴσα θεῷ, ἀλλὰ ἑαυτὸν ἐκένωσεν μορφὴν δούλου λαβών, ἐν ὁμοιώματι ἀνθρώπων γενόμενος· καὶ σχήματι εὐρεθείς ὡς ἀνθρώπος ἐταπείνωσεν ἑαυτὸν γενόμενος ὑπήκοος μέχρι θανάτου, θανάτου δὲ σταυροῦ.

### English Translation

The English translation of this passage is also fairly straightforward, but it requires a few grammatical and interpretive decisions. For example, σπλάγχνα is alternately translated as “bowels,” “heart,” or “affection” in other verses, depending upon the context.<sup>35</sup> For the most part, these decisions do not introduce material controversies.

Accordingly, Philippians 2:1-8 is translated,

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<sup>31</sup> Bruce M. Metzger, *A Textual Commentary on the Greek New Testament*, 2nd ed. (Freiburg, Germany: Freiburger Graphische Betriebe, 1971), 545-46.

<sup>32</sup> ἕκαστος is attested by P<sup>46</sup>, N, C, D, K, L, P, most minuscule it<sup>a</sup>, syr<sup>p, h</sup>, cop<sup>sa</sup>, goth *al*. ἕκαστοι is attested by A, B, F, G, Ψ, 33, 81, 104, 462, it<sup>g</sup>, and vg. Metzger, *Textual Commentary*, 545.

<sup>33</sup> N, A, b, and C, all lack γὰρ. Metzger, *Textual Commentary*, 545.

<sup>34</sup> The variant ἀνθρώπου is attested by P<sup>46</sup>, syr<sup>p, pal</sup>, cop<sup>sa, bo</sup>, Marcion, Origen, Cyprian, Hilary, and Ambrose. Metzger, *Textual Commentary*, 545-46.

<sup>35</sup> Acts 1:18 translates σπλάγχνον as “bowels” (AV) or “intestines” (NIV). In 1 John 3:17, σπλάγχνον is translated as “heart” (NASB) as the seat of compassionate emotions. In Phil 1:8, σπλάγχνον is translated as “affection” (NIV).

If, then, there is any encouragement in Christ, if any comfort of love, if any fellowship of spirit, if any love and compassion, fulfill my joy, being of the same attitude<sup>36</sup>, maintaining the same love, united in spirit, thinking with one purpose. Do nothing from selfishness or empty conceit, but with humility of mind let each of you regard one another as more important than himself. Do not look each to his own interests, but also to each other's interests. Have this attitude in yourselves which was also in Christ Jesus. Who, although He existed in the form of God, did not regard equality with God a thing to be grasped.<sup>37</sup> But emptied<sup>38</sup> Himself, taking the form of a slave,<sup>39</sup> being made in the likeness of men. Being found in appearance as a man, He humbled himself and became obedient to the point of death, even death on a cross.

## Interpretation of Philippians 2:1-8

Philippians 2 opens with a series of four indicatives supporting matching imperatives. The parallel construction of Philippians 2:1-2 creates four couplets, pairing each indicative with its corresponding imperative. In his familiar style, Paul presents the indicatives (2:1) before the imperatives (2:2).<sup>40</sup> As Carl Braatan summarizes, in Christian

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<sup>36</sup> Literally, “think the same [thing/thought].” Danker’s Greek Lexicon translates φρονέω as “have an opinion,” “give careful consideration to something,” and (specific to Phil 2:5) “to develop an attitude based on careful thought.” τὸ αὐτὸ φρονῆτε is thus translated here as “the same attitude.” Frederick William Danker, ed., *A Greek-English Lexicon of the New Testament and Other Early Christian Literature* (Chicago: University of Chicago Press, 2000), 1065-66.

<sup>37</sup> There exists a minor debate concerning whether the participle ὑπάρχων is concessive or causal. According to Wallace, if ὑπάρχων is causal then ἀρπαγμὸν means *robbery* (“who, *because* he existed in God’s form, did not consider equality with God as *robbery*”); if ὑπάρχων is concessive, then ἀρπαγμὸν means *a thing to be grasped* (“who, *although* he existed in God’s form, did not consider equality with God as *a thing to be grasped*”). Wallace ultimately concludes that the context provided by the next verse (“but he emptied himself”) confirms the latter translation. Daniel B. Wallace, *Greek Grammar: Beyond the Basics* (Grand Rapids: Zondervan, 1996), 634-35.

<sup>38</sup> The English translation of ἐκένωσεν (indicative aorist active third person singular of κενόω) is not controversial. Its biblical and extrabiblical translation is consistently “to empty” or “to render void.” It is within the theological interpretation that κενόω becomes less clear. Geoffrey W. Bromiley, trans., *Theological Dictionary of the New Testament*, ed. Gerhard Kittel (Grand Rapids: Eerdmans, 1965), 3:659-62.

<sup>39</sup> Alternatively, δοῦλος can be translated as “servant” (AV, NIV, RSV) or “bond-servant” (NASB) to emphasize the voluntary nature of Jesus’ submission, which the term “slave” may obscure.

<sup>40</sup> Michael Parsons calls Paul’s indicative-imperative style “the basic structure of his ethics.” Michael Parsons, “Being Precedes Act: Indicative and Imperative in Paul’s Writing,” *Evangelical Quarterly* 88, no. 2 (1988): 99. William Dennison explains, “The two are inseparable and irreversible. They are inseparable because the indicative without the imperative makes Paul and the believer a mystic. Also, the imperative without the indicative makes Paul and the believer a moralist. It is irreversible because the indicative is foundational for the imperative. Paul never writes in the imperative without first writing in the indicative.” William Dennison, “Indicative and Imperative: The Basic Structure of Pauline Ethics,” *Calvin Theological Journal* 14, no. 1 (April 1979): 73.

ethics “being precedes act.”<sup>41</sup> Only those *in Christ* can act like Christ.

**In Christ.** The terms “in Christ,” “in the Lord,” and “in Him” occur 164 times in the Pauline epistles.<sup>42</sup> To be “in Christ” is not a spiritual location but a relationship of organic unity; people are not like tools in Jesus’ box but like a branch grafted to His vine,<sup>43</sup> or limbs transplanted to His body.<sup>44</sup> As Christ is the archetype for true humanity, to be “in Christ” means fulfilling one’s human design. John Stott explains, “To be in Christ brings *personal fulfillment* as a human being. All around us are men and women who are unfulfilled and alienated, who are asking what it means to be a human being. They are seeking the secret of satisfaction, of happiness and are searching for their own identity.”<sup>45</sup>

From this view, “in Christ” also becomes a metonymy for striving to fulfill the human *telos* revealed in Christ.<sup>46</sup> The ontology of the *imago Dei* ensures that all humans share equal dignity under God, but the *telos* of the *imago Dei* is only being fulfilled by those who follow Christ.<sup>47</sup> To be *in Christ* is to share the same attitude of love; a love

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<sup>41</sup> Carl E. Braaten, *Eschatology and Ethics* (Eugene, OR: Wipf and Stock, 1974), 121.

<sup>42</sup> John R. W. Stott, “‘In Christ’: The Meaning and Implications of the Gospel of Jesus Christ,” *Knowing and Doing* (Summer 2007), accessed March 21, 2018, <http://www.cslewisinstitute.org>.

<sup>43</sup> John 15:5a says, “I am the vine, you are the branches.”

<sup>44</sup> First Cor 12:27 reads, “Now you are Christ’s body, and individually members of it.” See also Rom 12:5; Eph 3:6, 5:28; Col 1:18, 24.

<sup>45</sup> Stott, “In Christ,” 2, emphasis original.

<sup>46</sup> A metonymy is a figure of speech that substitutes one word or phrase for another word or phrase based upon a relationship of spatial, temporal, or attributive association. Persons who have an intimate filial relationship with Jesus, who display Jesus’ attitudes of love and obedience, and who place their faith in the death and resurrection of Christ are said to be “in Christ.”

<sup>47</sup> There is an important distinction between the ontology of the *imago Dei* and the *telos* of the *imago Dei*. As discussed in chap. 3, all humans are created as *imago Dei*, an ontological status conferred by God which secures the equal dignity of all people. The ontology of the *imago Dei* is not a quantity of degree; human dignity is not located upon a continuum. In contrast, the *telos* of the *imago Dei* in Christ is fulfilled by individuals to a greater or lesser degree. Yet, persons who neglect or reject the *telos* of the *imago Dei* revealed in Christ are not persons of lesser value to God. As the parables of the lost coin, the lost sheep, and the prodigal son illustrate, God loves and values those who are lost and who do not fulfill their divine *telos* (Luke 15:1-32).

which delivers the blessings of unity, fellowship, affection, and compassion. Paul has explained *why* all people should be in Christ, now he explains *how* each person can be in Christ: by humility, with compassion, in reverence.

**By humility.** The preeminent expression of love is humility. In Philippians 2:3-4, humility receives both a positive definition (regard one another as more important than himself) and a negative definition of what humility is not (selfishness or empty conceit). This definition of humility focuses on the hierarchical structure of relationships: the “ordered to serve” concept of relational hierarchy. Thus, humility is an attitude that predisposes a person to reorder from his place above others, to be served by others, toward a position below others, to become servant to others.

It may be helpful here to disambiguate humility, modesty, and their antonym pride. Pride results from an inaccurate view of one’s abilities, achievements, and significance. The prideful person assumes a status above others in order to be served by others because he falsely believes he is superior to others. Scripture emphatically condemns pride.<sup>48</sup> The opposite of pride is low self-esteem because it too is based upon an inaccurate self-assessment. The person of low self-esteem falsely believes herself to hold less status and value than is actual.

By contrast, humility and modesty both result from an *accurate* self-assessment of one’s skills and value.<sup>49</sup> John-Mark Miravalle confirms, “Humility, which the

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<sup>48</sup> Pride is a corruption of relationship, both horizontally and vertically. In the horizontal dimension pride expresses as self-exultation over others leading to oppression and exploitation of others. Pride destroys relationship with other people, producing slander (Ps 101:5), strife (Prov 13:10), and violence (Ps 73:6). In the vertical dimension pride expresses as self-reliance and rejection of God’s rightful authority over all persons. Pride is wicked (Ps 10:4), sinful (Ps 59:12), and rebellious (Zech 3:11). When God restores proper relationship “everyone who exalts himself shall be humbled, and he who humbles himself shall be exalted” (Luke 14:11) and they will recognize they are actually “wretched and miserable and poor and blind and naked” (Rev 3:17).

<sup>49</sup> Aquinas surmised that modesty “belonged properly to humility that a man restrain himself from being borne towards that which is above him. For this purpose, he must know his disproportion to that which surpasses his capacity.” Aquinas, *Summa* II-II.161.2, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>. Joseph Pieper states, “The ground of humility is man’s

contemporary reader is likely to associate already with the term ‘modest,’ is a realistic recognition of one’s proper limits.”<sup>50</sup> Modesty comes from the Latin root *modestus* which means “keeping within measure.”<sup>51</sup> The modest person has an accurate self-image and behaves commiserate within the measure of that image. A modest king allows himself to be served by his subjects, neither demanding a higher deference nor assuming a lower station than his office deserves. Modesty entails the self-presentation of this accurate self-image.

Humility is a different matter altogether. Humility shares with modesty an accurate self-image, but unlike modesty, biblical humility intentionally surrenders the prerogatives of social position and status in order to serve others. To be humble is to place the needs and interests of others before one’s own legitimate concerns (Phil 2:4). Jesus, the King of Kings, rightfully deserves to be served, not to be a servant. In humility, Jesus voluntarily sets aside his exalted prerogatives above all creatures. This is the model of humility that the imagers of God are instructed to emulate. All people are instructed to set aside any rightful prerogatives of economic status or social privilege to serve others. *In* Christ, God humbled Himself to become human to save humanity (Phil 2:7-8; 2 Cor 8:9; Heb 4:15). *As* Christ, Jesus serves those who would be His servants (John 13:5; Matt 20:28; Luke 22:27). *Through* Christ, the sinful become sinless by His sacrifice on the cross (Isa

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estimation of himself according to truth.” Josef Pieper, *The Four Cardinal Virtues* (Notre Dame, IN: University of Notre Dame Press, 1966), 189.

<sup>50</sup> John-Mark Miravalle, “Resisting the Less Important: Aquinas on Modesty,” *Journal of Moral Theology* 6 (2017): 167.

<sup>51</sup> In contemporary use, “modesty” has become restricted to issues of sexual propriety and the avoidance of provocative apparel. The Catechism of the Catholic Church defines modesty as “refusing to unveil what should remain hidden,” using synonyms like “decency” for inspiring one’s choice of clothing. “Catechism of the Catholic Church, no. 2521-2522,” accessed December 4, 2018, <https://www.catholicdoors.com/catechis/cat2464.htm>. David and Diane Vaughan define modesty as “dressing, acting, or speaking with propriety, respect, and moderation.” This view judges one’s modesty by the gap between personal behavior and cultural norms rather than the gap between self-assessed skills and value, and actual skills and value. David J. Vaughan, *The Beauty of Modesty: Cultivating Virtue in the Face of a Vulgar Culture* (Nashville: Cumberland House, 2005), 10.

53:7; John 10:15; Heb 12:2). Thus, the Scriptures command, “Have this attitude in yourselves which was also in Christ Jesus” (Phil 2:5).

**With compassion.** This attitude of humility requires qualification as to proper motivation. One could demonstrate humility in service to others, motivated solely by voluntarism. Theological voluntarism is a meta-ethical concept whereby human actions are right because God wills them. Voluntarism supports a deontological ethic wherein humans are to serve others as a duty commanded by God. Indeed, voluntarism and divine command are a sufficient beginning for growth in faith and obedience.<sup>52</sup> But Jesus demands more.<sup>53</sup>

Voluntarism might support mere blind obedience of the human will to divine command without rational evaluation and assent. Stephen Evens points out that voluntarism deemphasizes the connection between the goodness of God and the obligation to His commands. He explains,

On such a view doesn't God just command what it would be good to do anyway? I do not think so. It is a plus for the theory that God's commands are directed towards

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<sup>52</sup> It is argued herein that there is an epistemic priority to deontological ethics in that people first encounter biblical morality within the divine commands and recognize their obligation for obedience by recognition of createdness, much like a child's obedience to his father finds initial warrant in “because I told you to.” This epistemic priority seems to indicate a place for voluntarism in Christian ethics. Yet, in personal Christian growth each person ought to move from moral milk to solid food (1 Cor 3:2) and come to appreciate that God's commandments are grounded in His perfect goodness, by which the motivation for obedience ought to mature from mere fulfillment of obligations toward a genuine desire for what is inherently good. Jesus beckons each person to be transformed such that each person's very character seeks a righteousness that surpasses voluntarism and obligation. Of course, there are those who believe that recognition of the good enables a recognition of God's authority to command. Nowell Smith insists, “[W]e must be persuaded independently of his goodness before we admit his right to command.” Matthew Flannigan, “The Premature Dismissal of Voluntarism,” *Colloquium* 42 (May 2010): 64. Others insist that certain virtues are a prerequisite to obeying duties (Kant) or a prerequisite to recognizing good consequences (Mill). Emmanuel Kant, *The Metaphysics of Morals*, ed. Andrea Diem and David Lane (Walnut, CA: Mt. Saint Antonio College Philosophy, 2017), 59; John Stewart Mill, *Utilitarianism* (Overland Park, KS: Digireads.com, 2017), 35. They are treating virtue as instrumental rather than the original view that virtue is an end in itself (*eudaimonia*).

<sup>53</sup> In the Sermon on the Mount, Jesus exhorts His listeners to grow beyond nominal obedience to commandments toward a desire for perfect character. “You have heard it said . . . [insert command], but I tell you . . . [insert character].” For instance, murder points to anger and adultery points to lust (Matt 5:21-43). Jesus concludes, “Therefore you are to be perfect, as your heavenly Father is perfect” (Matt 5:48).



what is good, and thus are not arbitrary in character. However, it does appear that the concept of obligation is identical to the concept of that which it is “good to do.” Many acts are good in this sense without being obligatory.<sup>54</sup>

Jesus warned against a legalistic devotion to divine command without an accompanying attitude of the heart. God’s law remains in force; Jesus said, “Do not think that I came to abolish the Law or the Prophets; I did not come to abolish but to fulfill” (Matt 5:27). Yet, Jesus explained that the adulterer’s violation of the law occurs first “in his heart” (Matt 5:28). Charity must flow from the virtue of generosity (Rom 12:8) and a cheerful giver ought to “do just as he has purposed in his heart” (2 Cor 9:7). Jesus concludes, “I desire compassion, not sacrifices” (Matt 9:13, Hos 6:6). Jesus’ continually warns against external obedience for the law without an inward appreciation for the goodness of the law.<sup>55</sup> Voluntarism and deontological obedience are a valuable tutor, but the law is intended to eventually bring persons to Christ (Gal 3:24). Jesus instructs people to go beyond the duty of the law toward the transformative aretaic ethic of the heart. Acts of humility are indeed commanded by Jesus, but Jesus then urges, “Clothe yourselves with compassion” (Col 3:12 NIV).

Compassion is Latin for “co-suffering,” sharing in another’s pain with empathy. Empathy is literally “in feeling” with others. Metaphorically, empathy places a person alongside another who is suffering. In sharing pain, a person humbles himself to share some portion of another person’s suffering.<sup>56</sup> Although the attitude of compassion is revealed in compassionate acts, not all compassionate acts arise from an empathetic heart. Filial obedience, duty, or reason can also motivate compassionate acts without sharing in the pain of others. Jesus desires that acts of compassion flow from an empathetic heart. The kenotic attitude revealed in Philippians that Jesus desires is an internal character

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<sup>54</sup> C. Stephen Evans, *Kierkegaard’s Ethic of Love: Divine Commands and Moral Obligations* (Oxford: Oxford University Press, 2004), 16.

<sup>55</sup> Mark 7:6, Luke 11:42; 20:46-47, Matt 6:1, 15:7-9; 16-18; 23:27-28

<sup>56</sup> Paul exhorts, “Bear one another’s burdens, and thereby fulfill the law of Christ” (Gal 6:2).

disposed to empathetic compassion for others. If humility is the mind of Christ, then compassion is a heart of Christ.

**In reverence.** The kenotic passages in Philippians provide one more important moral component: the ultimate purpose served by humility and compassion. In *Mere Christianity*, C. S. Lewis illustrates the three components of morality with the wonderful analogy of an armada of ships at sea.<sup>57</sup> Each ship must first be seaworthy (proper personal ethic), and second, each ship must navigate according to common rules to avoid colliding with other ships (proper social ethics). However, seaworthy ships, sailing in correct formation, still lack an essential feature: a purpose and destination for their journey. In a similar manner, humility is the guiding ethic as each ship positions itself within the fleet. In compassion, one ship can come alongside another to lend assistance as needed. The third component, the common destination and mission of this fleet, is to fulfill its ultimate mission, which is to glorify God, the Creator of ships, seas, and everything else.

Philippians 2:8 explains Jesus “humbled Himself by becoming obedient.” Jesus’ obedience was not a deontological obligation; Jesus obeyed the Father in order to glorify the Father. Jesus said, “Father, the hour has come; glorify Your Son, that the Son may glorify You. . . . I glorified You on the earth, having accomplished the work which You have given Me to do” (John 17:1, 4). Scripture exhorts, “Whatever you do, do all to the glory of God” (1 Cor 10:31; Col 3:17, 1 Pet 4:11). *The Westminster Catechism* begins, “Man’s chief and highest end is to glorify God.”<sup>58</sup> In other words, human participation in Christ’s reordering of creation is the *penultimate telos* of man. The *ultimate telos* of man is the glorification of God.

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<sup>57</sup> C. S. Lewis, *Mere Christianity* (New York: HarperCollins, 1952), 71-77.

<sup>58</sup> Johannes G. Vos, *The Westminster Larger Catechism: A Commentary*, ed. G. I. Williamson (Phillipsburg, NJ: Presbyterian and Reformed, 2002), 3.

In *Ethics for a Brave New World*, Feinberg and Feinberg promote a “modified form of the divine command theory” of biblical ethics.<sup>59</sup> Yet, they too recognize the inward nature of Christian morality. In Romans 14:14, Paul adds that some acts are morally neutral under divine command theory, but if an individual believes them sinful then these acts become sin for him or her. How is one to act when Scripture implies the act is neutral, but the heart remains convicted? Feinberg and Feinberg suggest examining the act by asking eight questions to discern its morality in a given situation. They propose, “A final test is, *does it bring glory to God?* . . . scripture distinguishes between actions covered by moral absolutes and those that are not. Believers must make up their own minds (under the Holy Spirit’s leading) on what to do in matters of Christian liberty.”<sup>60</sup>

The attitude which seeks to bring glory to God may be called *reverence*. Reverence is usually defined as deep respect, honor, or deference toward God.<sup>61</sup> Humility reorders the mind’s attitude toward surrendering rightful prerogatives, compassion reorders the heart to serve others, but reverence provides the final criteria to ensure that humility and compassion remain properly aimed at the ultimate human telos, *solī Deo gloria*, for the glory of God alone. Reverence ensures the proper motivation for humility and compassion. For example, a police officer might humbly visit a convict she helped incarcerate, and in compassion promise to help support his family. Yet, her motivation could include any number of selfish aims: to alleviate her guilt in the matter, to satisfy her desire for accolades, or to recruit an informant to advance her career. These motivations corrupt the attitudes of humility and compassion by converting them to serve one’s self,

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<sup>59</sup> John S. Feinberg and Paul D. Feinberg, *Ethics for a Brave New World* (Wheaton, IL: Crossway, 2010), 37.

<sup>60</sup> Feinberg and Feinberg, *Ethics for a Brave New World*, 55, emphasis original.

<sup>61</sup> Unbelievers might feel that they too manifest an attitude of reverence when encountering a beautiful work of art, some natural wonder, or any number of other sublime events, but the definition of *reverence* in this dissertation requires that the object of reverence is God alone. Bromiley, *The International Standard Bible Encyclopedia*, 4:177.

rather than God. Reverence is the necessary final criteria for discerning the morality of humble acts of compassion. Humility and compassion are the penultimate attitudes of true humanity modeled by Christ; reverence is the ultimate attitude.

Philippians 2:8 says, “He humbled Himself by becoming obedient to the point of death, even death on a cross.” The crucifixion is presented as the ultimate expression of glorifying the Father. Despite foreknowledge of the passion to come, Jesus glorifies the Father: “What shall I say, ‘Father, save Me from this hour ‘? But for this purpose I came to this hour. Father, glorify Your name” (John 12:27-28). In fulfilling the Father’s purpose in Christ, Jesus glorifies the Father. In fulfilling the God’s purpose in humans, humans glorify God. Jesus humbles Himself as a man. Jesus’ compassion brings Him to the cross. Yet, the highest expression of humility and compassion occurs in the submission of Jesus to the purposes of the Father. When humility and compassion serve the purposes of the God, God is glorified.

### **Objections to Kenotic Christology**

Thus far, this chapter has argued that kenotic Christology can identify the human attitudes of Jesus to guide the human enhancement project. However, notable objections to kenotic Christology ought to be addressed. Most of these objections can be categorized into four criticisms: (1) kenotic Christology is a heterodox departure from Chalcedon, (2) kenotic Christology is incompatible with natural theology, (3) the kenosis of Jesus’ divine attributes threatens the immutability of God, and (4) kenosis relies too heavily upon one pericope to the exclusion of the rest of Scripture.

The first objection is that kenotic Christology is incompatible with the orthodoxy demanded by the Nicaean creed (AD 325) and the Chalcedon creed (AD 451). Sarah Coakley points out that terms like *δύο φύσεων* and *ὑπόστασις* were deliberately left undefined and open-ended. She argues that Chalcedon did not “intend to provide a full systematic account of Christology, and even less a complete and precise metaphysics of

Christ's make-up. Rather, it sets a 'boundary' on what can, and cannot be said."<sup>62</sup>

Chalcedon was inspired to deal with three clear heresies: Apollinarianism, Eutychianism, and Nestorianism. These heresies are equally repudiated by kenotic Christology. Stephen Davis concludes, "the Chalcedonic definition does not rule out kenosis . . . kenosis is orthodox."<sup>63</sup>

The second objection to kenotic Christology is that kenosis is incompatible with natural theology, in particular, that it blunts the power of the cosmological arguments for God.<sup>64</sup> Richard Swinburne is concerned that the Scriptures which proclaim Jesus as Creator are contradicted by kenotic Christology.<sup>65</sup> For instance, John 1:3 says, "All things came into being through Him, and apart from Him nothing came into being that has come into being."<sup>66</sup> Therefore, Swinburne insists that Jesus must always possess complete omniscience and omnipotence, and any Christology in which Jesus self-limits His knowledge or power necessarily rejects Jesus as Creator. Swinburne criticizes kenotic Christology, explaining,

The difficulty with such a theory [kenosis] is that all the arguments to the existence of God are arguments to a simple source of all . . . to whom omnipotence and omniscience belong essentially; and any being who was divine would have to have

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<sup>62</sup> Sarah Coakley, "What Does Chalcedon Solve and What Does It Not? Some Reflections on the Status and Meaning of the Chalcedonic 'Definition,'" in *The Incarnation: An Interdisciplinary Symposium on the Incarnation of the Son of God*, ed. Stephen T. Davis, Daniel Kendall, and Gerald O'Collins (Oxford: Oxford University Press, 2002), 161.

<sup>63</sup> Davis, "Is Kenosis Orthodox?," 135.

<sup>64</sup> Aquinas is credited with the first complete articulation of the five classical cosmological arguments for God. The arguments begin with what is apparent about the world (natural theology) and proceed to infer God as either the Unmoved Mover, First Cause, Necessary Being, Pure Goodness, and/or Final Cause. Aquinas, *Summa Theologica*, I.Q2.A3, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>65</sup> Richard Swinburne, *The Christian God* (Oxford: Clarendon Press, 1994), 232.

<sup>66</sup> See also Col 1:16, 1 Cor 8:6, and John 1:10.

these same essential properties as such a creator—otherwise he would be less than the creator source of all, and there would be no Incarnation of God.<sup>67</sup>

Ronald Feestra addresses this objection by revising Thomas Morris’s “omniscient-unless-freely-and-temporarily-choosing-to-be-otherwise” explanation to suppose “omniscience-unless-kenotically-incarnate.”<sup>68</sup> In other words, Jesus is not Creator while incarnate. Yet, this seems unsatisfactory given that Jesus incarnate can calm storms, heal leprosy, and raise the dead—feats that can only be explained by One who retains ultimate creative control over the universe.<sup>69</sup> Swinburne’s objection is the result of interpreting kenosis as an emptying of attributes, such as omniscience and omnipotence. If kenosis is taken as a metonymy for Jesus’ attitude of humility, which might entail a *reluctance* to employ divine attributes, then Swinburne’s objection evaporates.<sup>70</sup> Jesus remains omniscient and omnipotent Creator despite refusing at times to express these attributes.

A third objection is that kenotic Christology jettisons Jesus’ divine attributes in His incarnation, which threatens God’s immutability. Berkhof defines immutability as “that perfection of God by which He is devoid of all change, not only in His Being, but also in His perfections, and in His purposes and promises.”<sup>71</sup> Accordingly, a strong immutability would reject any kenotic Christology which implied that God incarnate did not fully possess all the attributes of the Godhead, especially omniscience, omnipotence,

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<sup>67</sup> Swinburne, *The Christian God*, 232.

<sup>68</sup> Feenstra, “A Kenotic Christology,” 153.

<sup>69</sup> Matt 8:23-27; Mark 4:35-41, 5:21-43; Luke 7:11-15, 8:22-25, 17:11-19.

<sup>70</sup> Gordon Fee calls ἐκένωσεν a “very powerful metaphor,” whereas in this dissertation ἐκένωσεν is considered to be a metonymy. A metaphor points to a similarity between two concepts. “Emptying” points to the voluntary “self-limiting” of divine attributes. In contrast, I believe ἐκένωσεν is better understood as a metonymy. A metonymy uses a single characteristic for the identification of a complex concept. “Emptying” points to the complex of attitudes that Jesus models for human imitation and character formation. Gordon D. Fee, “The New Testament and Kenosis Christology,” in Evans, *Exploring Kenotic Christology*, 33.

<sup>71</sup> Berkhof, *Systematic Theology*, 37.

and omnipresence, attributes which Jesus appears to self-limit by classical kenotic models.

In response, Stephen Davis offers a “soft immutability” in which “God’s holy and benevolent nature remains ever and eternally the same,” even as Jesus temporarily self-limits particular divine attributes in particular circumstances.<sup>72</sup> Yet, immutability is not challenged by an interpretation of Jesus’ kenosis as a metonymy for divine attitudes, rather than as a surrender of divine attributes. Jesus remains in possession of such attributes but self-restrains their employment in order to demonstrate the particular attitudes of humility, compassion, and reverence.

The fourth objection to kenotic Christology is that it relies too heavily upon one pericope (Phil 2:1-9) to the exclusion of the rest of Scripture. Certainly, Philippians 2 offers the clearest exposition of kenotic Christology, but many other scriptures lend support. Paul writes, “For you know the grace of our Lord Jesus Christ, that though He was rich, yet for your sake He became poor, so that you through His poverty might become rich” (2 Cor 8:9). Thomas Constable explains, “The incarnation of Jesus Christ is the greatest example of self-sacrificing generosity. He gave up the riches of glory in heaven, when He became a man and died on the cross, so that we might share His riches of glory in heaven (cf. Phil. 2:1-11).”<sup>73</sup> Jesus says, “Now, Father, glorify Me together with Yourself, with the glory which I had with You before the world was” (John 17:5). Jesus anticipates His return to the status and position in which He existed “with” the Father “before” the incarnation. The writer of Hebrews explains, “For we do not have a high priest who cannot sympathize with our weaknesses, but One who has been tempted in all things as we are, yet without sin” (Heb 4:15). Leon Morris argues, “Nobody insists

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<sup>72</sup> Davis, “Is Kenosis Orthodox,” 135.

<sup>73</sup> Thomas Constable, “Notes on 2 Corinthians: 2017 Edition,” accessed May 28, 2018, <https://www.planobiblechapel.org/tcon/notes/html/nt/2corinthians/2corinthians.htm>, 86.

on the limitations of Jesus' human frame as does the writer of Hebrews."<sup>74</sup> Many scriptures concerning Christ refer to His incarnation in terms that He somehow gave up something important to become human. Stephen Evans summarizes, "Although the term 'kenotic' is suggested by this Philippians passage, kenotic Christology is rooted not in this one Biblical passage, but enjoys widespread support from the New Testament, particularly from Hebrews and the Synoptic Gospels."<sup>75</sup> Philippians is not a proof-text for kenotic Christology; it is the visible peak of the entire mountain range of Scripture supporting kenosis.

### **Kenotic Attitudes as Virtues**

The kenosis passages of Philippians identify the key human attitudes of Christ that humans are to image: humility, compassion, and reverence. Humility is a voluntary hierarchical reordering within the horizontal dimension by placing others before one's self. Compassion provides the penultimate *telos* for humility within the horizontal dimension because humility is not an end itself; humility is to be directed to serving others. Reverence provides the ultimate *telos* for compassion within the vertical dimension because serving others is loving God.

Since these kenotic attitudes are characteristics within the moral agent, rather than in moral acts (deontology) or moral consequences (consequentialism), these attitudes are better understood as virtues. Therefore, Christ's kenotic attitudes defining true humanity are a form of virtue ethics. Virtue ethics describes the disposition of one's character to act for the good—to "do the right thing" in any given moral situation.<sup>76</sup> A

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<sup>74</sup> Leon Morris, *Hebrews*, in vol. 12, *The Expositor's Bible Commentary*, ed. Tremper Longman III and David E. Garland (Grand Rapids: Zondervan, 2012), 17.

<sup>75</sup> Evans, *Exploring Kenotic Christology*, 4.

<sup>76</sup> There is an important distinction between virtue ethics and virtue theories. Virtue ethics is the prescriptive system as distinct from deontology and consequentialism. Virtue theories are concepts that attempt to incorporate virtues into deontology or consequentialism. This thesis focuses upon virtue ethics as



vernacular understanding of virtue might imagine that the virtuous person is motivated by emotions or psychological states, such as compassion or courage, but this would be a misunderstanding. For example, compassion could drive someone to do the wrong thing. The first liberators of the Nazi concentration camps unintentionally overfed the emaciated prisoners, literally killing them with kindness.<sup>77</sup> Also, a courageous thief might make for a more successful criminal. Therefore, virtue alone, or virtue motivated by emotion rather than reason, cannot provide an adequate moral system. What is lacking is *phronesis*—a practical wisdom that can distinguish between beneficial and harmful actions within a given moral situation.

Finally, armed with virtue and *phronesis*, what the virtuous persons still lacks is a clear goal or *telos* to direct virtuous actions. In general, two concepts help to properly direct virtuous acts toward their proper *telos*: eudaimonia and exemplarism.<sup>78</sup>

## Eudaimonia and Virtue

Eudaemonist virtue ethics defines the virtues by their ability to contribute to *eudaimonia*, usually defined as happiness, well-being, or flourishing.<sup>79</sup> Happiness is the

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a separate system while still appreciating the value of virtues as a prerequisite to appreciating the good within deontological or consequentialist systems.

<sup>77</sup> The American soldiers who first encountered the emaciated Holocaust victims in Nazi concentration camps desperately fed the prisoners whatever food they could, including chocolate rations. But the prisoner's metabolism could not assimilate large quantities of food after starvation, a condition known today as Refeeding Syndrome. Hundreds of prisoners quickly died as a result of uninformed compassion. Walter Laqueur, ed., *The Holocaust Encyclopedia* (New Haven, CT: Yale University Press, 2001), 395.

<sup>78</sup> Some virtue ethicists identify two additional virtue ethics variations: target-centered virtue ethics and Platonic virtue ethics. Target-centered virtue theory was first developed by Christine Swanton in 2003 and is concerned with the individual field in which each virtue operates and how to apply virtues when a moral situation involves competing or overlapping fields. Christine Swanton, *Virtue Ethics: A Pluralistic View* (Oxford: Oxford University Press, 2003). Platonic virtue theory sees virtues as a methodology to counter selfishness and discern the "form of the good." For Platonic virtue ethicists like Robert Adams, the "good" can only be "God." Robert Merrihew Adams, *Finite and Infinite Goods* (New York: Oxford University Press, 1999), 14.

<sup>79</sup> Rosalind Hursthouse and Glen Pettigrove, "Virtue Ethics," in *The Stanford Encyclopedia of Philosophy*, December 8, 2016, accessed May 19, 2018, <https://plato.stanford.edu/entries/ethics-virtue/>.

most problematic definition since many philosophers consider happiness to be a temporary psychological state of mind that is entirely subjective.<sup>80</sup> If wealth makes one happy, then greed might become a virtue. Well-being is problematic also. Well-being, in the familiar colloquial interpretation, conveys a sense of subjective tranquility or contentment. If one is content to play video games all day, then sloth might become viewed as a virtue. The most common definition of *eudaimonia* today is human flourishing, which can be similarly vague. Is *eudaimonia* subjective—does the individual decide for herself if she is flourishing, or is *eudaimonia* objectively determined by her culture or the society in which she lives? If flourishing is objective, is it defined by meaningful work,<sup>81</sup> economic success,<sup>82</sup> or social relations?<sup>83</sup>

Aristotle was the first to fully articulate the concept of *eudaimonia*. For Aristotle, *eudaimonia* is the “chief good” of man, the *summa bonum* of life, a consequence of individual fulfillment of intended design.<sup>84</sup> Therefore, *eudaimonia* is preeminently a teleological concept. Aristotle explains, “To say that happiness [*eudaimonia*] is the chief good seems a platitude, and a clearer account of what it is is still desired [*sic*]. This might

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<sup>80</sup> *The Encyclopedia of Philosophy* bluntly concludes, “The questions of what conditions are necessary for happiness is manifestly a question for scientific psychology.” Richard B. Brandt, “Happiness,” in *The Encyclopedia of Philosophy* (New York: Macmillan, 1972), 4:413-14.

<sup>81</sup> Geoffrey Hinchliffe, “Work and Human Flourishing,” *Educational Philosophy and Theory* 36, no. 5 (November 2004): 543.

<sup>82</sup> Luigino Bruni, *Civil Happiness: Economics and Human Flourishing in Historical Perspective* (London: Routledge, 2006), 1.

<sup>83</sup> The “Five Paths to Wellbeing” are to “connect, be active, take notice, keep learning, and give.” Peter R. Wright and Robin Pascoe, “Eudaimonia and Creativity: The Art of Human Flourishing,” *Cambridge Journal of Education* 45, no. 3 (2014): 296-97.

<sup>84</sup> There were other non-Aristotelian Greek concepts of *eudaimonia*. For instance, the Epicureans defined *eudaimonia* in terms of experiencing pleasures and avoiding pain. But few today view hedonism as a virtue. Alternatively, the stoics viewed *eudaimonia* as the possession of the virtues *simpliciter*, content with possessing a rational disposition that is not required to *act* virtuously. While these alternative views are interesting, they fall short of the full treatise provided by Aristotle in his *Nicomachean Ethics*.

perhaps be given, if we could first ascertain the function of man.”<sup>85</sup> For Aristotle, “the function of man is an activity of soul which follows or implies a rational principle . . . an activity of soul in accordance with virtue.”<sup>86</sup> *Eudaimonia* describes a life of rational actions guided by virtues. Yet, lacking any transcendent referent for man’s purpose or the goodness of virtues, Aristotelian *eudaimonia* remains essentially a subjective humanistic enterprise.

According to Jonathan Pennington, modern notions of *eudaimonia* have, indeed, devolved into “humanism in full bloom,” an entirely subjective enterprise “understood as the individual’s *experiential satisfaction*.”<sup>87</sup> When *eudaimonia* becomes completely subjective, then the virtues themselves become selfishly directed for self-satisfaction. Henry Miller defines modern flourishing as “self-reported subjective well-being.”<sup>88</sup> As Charles Taylor points out, without a transcendent referent for *eudaimonia*, human flourishing becomes a purely individual pursuit, without any moral obligation to the flourishing of others.<sup>89</sup> C. S. Lewis observed,

If you asked twenty good men today what they thought the highest of the virtues, nineteen of them would reply, Unselfishness. But if you had asked almost any of the great Christians of old, he would have replied, Love. You see what has happened? A negative term has been substituted for a positive, and this is of more than philological importance. The negative idea of Unselfishness carries with it the suggestion not primarily of securing good things for others, but of going without them ourselves, as if our abstinence and not their happiness was the important point.<sup>90</sup>

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<sup>85</sup> Aristotle, *Nicomachean Ethics*, I.7.25, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 942.

<sup>86</sup> Aristotle, *Nicomachean*, I.7.7-17.

<sup>87</sup> Jonathan Pennington, “A Biblical Theology of Human Flourishing,” Institute for Faith, Work, and Economics, March 4, 2015, accessed December 5, 2018, <https://tifwe.org/resource/a-biblical-theology-of-human-flourishing-2/>, emphasis original.

<sup>88</sup> Henry S. Miller, *The Serious Pursuit of Happiness: Everything You Need to Know to Flourish and Thrive* (Los Gatos, CA: Wisdom House Media, 2013), 12.

<sup>89</sup> Charles Taylor, *A Secular Age* (Cambridge, MA: Harvard University Press, 2007), 247ff.

<sup>90</sup> C. S. Lewis, “The Weight of Glory,” in *A Chorus of Witnesses: Model Sermons for Today’s Preacher*, ed. Thomas G. Long and Cornelius Plantinga, Jr. (Grand Rapids: Eerdmans, 1994), 82.

For Christians, however, *eudaimonia* aspires for more than mere subjective psychological contentment; Christians claim that an objective transcendent referent for human fulfillment is located solely within the divine. Augustine diagnosed, “Our heart is restless until it rests in You.”<sup>91</sup> Aquinas determined that *eudaimonia* “can consist in nothing else than the vision of the Divine Essence.”<sup>92</sup> There can be no *eudaimonia* without God.

Although virtuous behavior may deliver *eudaimonia* to the agent, the Christian virtues were always intended to be directed toward the well-being of others.<sup>93</sup> Pennington reminds, “God cares about our happiness and flourishing; indeed, his saving work in us entails properly pursuing life and flourishing and being instruments of the same to others, which is part of our own flourishing and healing.”<sup>94</sup> People flourish when people help others to flourish.

Ellen Charry says that one failure of the church has been to postpone *eudaimonia* until the eschaton, leaving Christians without a hope of flourishing in the here and now.<sup>95</sup> While this might be true for some Christians, the overarching message of Jesus is, “I came that they may have life, and have it abundantly” (John 10:10). In the Scriptures, joy is most frequently the result of God’s grace. Indeed, *χαρά* (joy) is a cognate

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<sup>91</sup> Augustine, *Confessions*, trans. Henry Chadwick (Oxford: Oxford University Press, 2008), 3.

<sup>92</sup> Aquinas, *Summa Theologica*, II.Q3.A8, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>93</sup> Indeed, the Psalmist promises, “Good will come to those who are generous” (Ps 112:5) and Proverbs says, “The one whose walk is blameless will be kept safe” (Prov 28:18). Yet, the preponderance of the Bible exhorts believers to see to the needs of others: Prov 19:17, 21:13, 28:27; Matt 25:40; John 13:34-35; Gal 2:10, 6:2, 9-10; Rom 12:10; 1 Tim 5:8; Jas 1:27; Eph 4:32; 1 Thess 5:11; Col 3:12; 1 John 3:17-18.

<sup>94</sup> Pennington, “Biblical Theology of Human Flourishing.”

<sup>95</sup> Charry draws this conclusion mostly from Augustine. She writes, “Augustine becomes more eschatological in order to avoid offering false hope of temporal happiness.” Ellen Charry, *God and the Art of Happiness* (Grand Rapids: Eerdmans, 2010), 58.

of *χάρις* (grace).<sup>96</sup> This joy is not reserved only for the eschaton. Peter says, “Though you have not seen Him, you love Him, and though you do not see Him now, but believe in Him, you greatly rejoice with joy inexpressible and full of glory” (1 Pet 1:8). Christian *eudaimonia*, fulfillment, and joy are made available by God for this life.

When *eudaimonia* is allowed to be defined by God, the virtues of humility, compassion, and reverence regain their transcendent objectivity and divine *telos*, restoring *eudaimonia* ethics into a useful moral guide for human enhancement. The agent who technologically enhances himself in order to enhance the *eudaimonia* of other persons is applying such technology in a moral manner, and indirectly enhances his or her own flourishing.

### **Exemplarism and Virtue**

Exemplarism is another important concept within virtue ethics that complements *eudaimonia*. Where *eudaimonia* guides the virtues toward a teleological fulfillment in human flourishing, exemplarism provides a model of the virtues displayed within an archetypal agent. Where *eudaimonia* is concerned with the good results of a moral act (human flourishing), exemplarism is concerned with the right motivations within the moral agent. The agent-based ethicist Michael Slote explains, “Agent-based virtue ethics . . . understands rightness in terms of good motivations and wrongness in terms of having bad (or insufficiently good) motives.”<sup>97</sup> Slote sees the value of *eudaimonia* in terms of the motivations and dispositions of moral agents.<sup>98</sup>

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<sup>96</sup> Gerhard Friedrich and Geoffrey W. Bromiley, eds., *Theological Dictionary of the New Testament* (Grand Rapids: Eerdmans, 1947), 9:359, 60.

<sup>97</sup> Michael Slote, *Morals from Motives* (Oxford: Oxford University Press, 2001), 14.

<sup>98</sup> Slote, *Morals from Motives*, 99-100.

Similarly, Linda Zagzebski defines a wrong act as something that an exemplary agent “would characteristically not do . . . and would feel guilty if he did.”<sup>99</sup> Performing the right action is insufficient—it must be done for the right reason. The correct motivations, Zagzebski insists, are learned by observing desirable motivations in others: “We do not have criteria for goodness in advance of identifying the exemplars of goodness.”<sup>100</sup> The exemplars present to the community as individuals who people desire to imitate on some primitive level.<sup>101</sup> In Zagzebski’s exemplarist theory, “concepts of a duty and of a good life, are defined by reference to exemplars, identified directly through the emotion of admiration, not through a description.”<sup>102</sup> In other words, deontology and *eudaimonia* are epistemically subordinate to exemplarism. Slote and Zagzebski are not theologians, so they are content to allow individuals to select their own exemplars. Christians, however, are provided the perfected moral exemplar in Christ.

Aquinas declares, “Christ offers himself to us as the perfect model of all the virtues.”<sup>103</sup> Thomist ethicist Patrick Clark explains, “We cannot gain access to the concept ‘virtuous human being’ or ‘good human life’ before we have some direct experience of virtuous individuals and good lives as mediated through the sensorium.”<sup>104</sup> In other words,

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<sup>99</sup> Zagzebski’s moral system is grounded upon the subjective emotions of guilt-shame despite her attempts to claim otherwise. She writes, “I propose that the objectivity of obligation can be explained in terms of the appropriateness of the emotion of guilt or shame. The sense of the obligation is the emotion one has when one considers a potential act (or omission) by oneself that would be an attack on the self.” Linda Zagzebski, *Divine Motivation Theory* (New York: Cambridge University Press, 2004), 159-60.

<sup>100</sup> Zagzebski, *Divine Motivation Theory*, 41.

<sup>101</sup> Zagzebski, *Divine Motivation Theory*, 53.

<sup>102</sup> Linda Zagzebski, “Exemplarist Virtue Theory,” *Metaphilosophy* 41, nos. 1/2 (January 2010): 41.

<sup>103</sup> Aquinas, *Summa Theologica*, I-II. Q46, A3, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>104</sup> Patrick M. Clark, “The Case for an Exemplarist Approach to Virtue in Catholic Moral Theology,” *Journal of Moral Theology* 3, no. 1 (2014): 68.

when people observe the Jesus of Scripture, each person learns how to become virtuous and how to achieve Christian *eudaimonia*. When the Christian encounters Jesus, admiration grows to adoration. Jesus' attitudes of humility, compassion, and reverence become virtues to imitate. Through these virtues, the goodness of God and the *eudaimonia* of human life are revealed and amplified, which motivates a life of intention toward the holy; a life of transformation from mere human to fully human. Anglican theologian Jeremy Taylor summarizes,

The journey of faith is the experience of holiness in the transformation of intent. Initiated by Christ, this begins in baptism as the covenant of the gospel and is realized in the life that follows, as witnessed in the gospel stories of those who turn to Christ and in his teachings, especially as given in the Beatitudes, the Ten Commandments, and the Lord's Prayer. The shape of this life is fully realized and revealed in Jesus' passion, death, and resurrection. In our lives, this is celebrated and effected in Holy Communion. The shape of this life—its form or end—is *kenotic*. Life in God is given in adoration and joy, thankfulness and acceptance, humility and obedience.<sup>105</sup>

### Conclusions

In the previous chapter, Jesus was presented as the archetype of true humanity to which the human enhancement projection ought to be aimed. In this chapter, the kenosis of Christ was examined to identify the aretaic attitudes which Jesus exemplifies for all humans to emulate. Here *κενόω* is not being applied as a procedure by which divine attributes are surrendered to become human, or as a voluntary suspension of divine prerogatives. Rather, *κενόω* is a metonymy describing a state of affairs: the attitude of humility. In His *κενόω*, Jesus *reorders* Himself from master to slave, demonstrating the true form of man which is slavish humility before God and toward each other. In short, the incarnation is neither an assumption of human attributes, nor an emptying of divine attributes; it is an exhibition of proper human attitude, an attitude of humility wherein God serves man, as each man ought to serve one another.

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<sup>105</sup> Timothy F. Sedgwick, "The Anglican Exemplary Tradition," *Anglican Theological Review* 94, no. 2 (Spring 2012): 214, emphasis original.

These Christological attitudes of humility, compassion, and reverence are the Christian virtues that provide boundaries for the moral life. Humility is the virtue of mind that renounces rightful prerogatives and reorders the self below others, to serve others. Compassion is the virtue of heart that orients service to others for the sake of other, not for the sake of self. Reverence provides the final check on the corruption of humility and compassion toward selfish aims by asking of any given act, in any given situation, “Does it bring glory to God?”

The argument thus far is that the morality of human enhancement ought to be evaluated by its fulfillment of the human *telos* as given in the *imago Dei*. The divine purpose of the *imago Dei* is to participate with Christ in the reordering of creation. This participation is achieved by practicing the virtues of Jesus: humility, compassion, and reverence to God. This broad and somewhat abstract moral map must now be focused upon the human enhancement project in order to adjudicate the morality of particular enhancement technologies within particular situations. The next chapter proposes five criteria which any human enhancement technology ought to meet if it is truly aimed at fulfilling the *telos* of man revealed in Christ.



## CHAPTER 6

### MORAL CRITERIA FOR ETHICAL ENHANCEMENT

#### **Introduction**

Thus far, this dissertation has laid the philosophical and theological groundwork for an ethic to guide human enhancement. Chapter 1 introduced the topic of human enhancement by exploring the growing abuse of cognitive medications by healthy persons. A thesis was offered that human enhancement is moral when it aims to fulfill the *telos* of humanity given in the *imago Dei* and revealed in the human exemplar Jesus Christ. This human *telos* is the restoration of the created order by participation in Christ's kenotic virtues of humility, compassion, and reverence.

Chapter 2 reviewed the major ethical positions concerning human enhancement concluding that they share a common presupposition that embodiment and finitude are inherent deficiencies of the human condition which can be technologically overcome. Chapter 3 countered this presupposition by presenting the benefits that embodiment and finitude afford to human freedom, dignity, and authenticity.

Chapter 4 argued that the *telos* for humanity is located in the *imago Dei*, but that the fall has obscured human discernment of humanity's purpose. In the incarnation, the image of God is presented within Jesus, the perfected human archetype. The divine *telos* for humanity is one's participation "in Christ" with the reordering of creation through properly reordered love. Chapter 5 defined this love as the practice of the virtues displayed by Christ in His kenosis: humility, compassion and reverence. What remains now is to extract from these virtues a set of practical criteria to apply to specific human enhancement technologies in order to adjudicate the morality of their application in specific circumstances.

This chapter will clarify the proper application of Christian virtues for behavior by describing the importance of emotion and *phronesis* to guide virtues for the good. Emotion motivates virtue to action and *phronesis* deliberates between acts. It will be argued that the *phronesis* for human enhancement is best governed by the precautionary principle where (1) the morality of a prospective enhancement technology is adjudicated before implementation, (2) the burden of proving the morality of the application falls on the proponent, and (3) this proof of moral application consists in satisfying a set of moral criteria. In chapter 7, a Christian moral precautionary principle is offered, which yields five criteria for determining the morality of any new enhancement technology: (1) just cause, (2) transparency, (3) temporality, (4) proportionality, and (5) reverence.

### **Virtue, Emotion, and Phronesis**

A virtue is a disposition, attitude, or capacity to act for the good.<sup>1</sup> Most Christians would agree that humility, compassion, and reverence are biblical virtues which ought to apply in some way to nearly every moral decision. Yet, certain distinctively unvirtuous dispositions might disguise as virtues. For example, it has been argued herein, humility properly seeks to voluntarily reorder one's rightful status to beneath other people in order to serve them. Psychologist Aqualus Gordon observes that pride can mask as humility, as when one "fishes for compliments via self-deprecation (humble-bragging) or portrays helplessness during situations in which [one] has power . . . in order to promote self-importance."<sup>2</sup> Apparently, the virtue of humility can sometimes be very prideful. In a

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<sup>1</sup> Virtues are merely capacities to act, potentialities. Frederick Copleston explains, "Virtue itself is a disposition which has been developed out of a capacity by the proper exercise of that capacity." When virtues are exercised by action, these virtues become fortified and consolidated into the agent's character. Frederick Copleston, *A History of Philosophy*, vol. 1, *Greece and Rome from the Pre-Socratics to Plotinus* (New York: Doubleday, 1993), 337.

<sup>2</sup> Aqualus Gordon, "False Humility: Why Your Feelings of Inferiority Are Really All about You," *Psychology Today*, January 19, 2018, accessed June 1, 2018, <https://www.psychologytoday.com/us/blog/my-brothers-keeper/201801/false-humility>. Psychologist Aqualus Gordon explains, "In a society that, on the one hand, espouses the virtues of humility while also promoting self-importance, the inferiority complex emerges as one way that we try to reconcile these two disparate ideals. The problem is that this

similar way, one might express compassion by providing sustenance to the dying, but a false compassion has been evoked to justify withholding food and water from the terminally ill.<sup>3</sup>

How can virtues, which are considered dispositions to act for the *good*, produce paradoxically opposite behaviors? Apparently, virtues such as humility and compassion can also be faults in some circumstances. Therefore, for some persons, virtues *alone* appear too vague and undefined, potentially rendering them erratic in application. Virtues apparently need something more to guide their moral application. Two commonly offered candidates to guide the virtues in application are emotion and reason.

### **Virtue and Emotion**

In vernacular usage, virtues are frequently conflated with emotions. The compassionate agent is assumed to be a loving person who desires to alleviate the suffering of other people. The courageous agent might be motivated by anger against injustice. Because love and anger are emotions, some might believe that emotions are sufficient guides for virtues. Yet, virtues can go awry specifically because they are motivated by emotions. For example, one might be moved by love to give money to a homeless addict, resulting in perpetuating his addiction and misery. The truly loving act

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complex, which at first glance may appear to be aligned with humility, is primarily self-serving and has more to do with narcissism than with true humility.” Aristotle might explain pride masking as humility as “falling off the mean.” He viewed virtue as a mean between two vices, one vice is excess and the other the vice is deficiency. Accordingly, if proper humility is the mean, then one vice is no humility (pride) and the other is too much humility (low self-esteem). Humility moves toward vice whenever the agent applies it improperly for action. For Aquinas, virtues are determined by their *telos*, purpose, or end. “Virtue denotes a certain perfection of a power. Now a thing’s perfection is considered chiefly in regard to its end.” Aquinas, *Summa Theologica*, I-II. Q55, A1, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>. If a virtue results in unvirtuous behavior, then it is no virtue at all. The important point is that virtues appear to lose their firm footing once acted upon.

<sup>3</sup> For instance, Oregon’s Death with Dignity Act even justifies physician-assisted suicide by “compassion and choice.” Oregon Revised Statute 127.800 to 127.897, accessed May 29, 2018, <http://www.oregon.gov/oha/ph/ProviderPartnerResources/EvaluationResearch/DeathwithDignityAct/Pages/ors.aspx>.

might require refusing to give money to the addict.<sup>4</sup> For another example, the 9-11 terrorists were thought by some to be courageous in destroying lives, and the firemen in the twin towers were thought by many to be courageous in saving the same lives. Both demonstrated duty and courage, one arguably motivated by anger and the other motivated by love. Theologian Robert Roberts agrees:

Anger sometimes moves us to acts of justice; gratitude likewise often accounts for morally worthwhile actions. Fear may motivate a sounder environmental policy . . . [but] I hardly need mention that unjust anger may motivate acts of injustice and cruelty, and fear may lead to all manner of morally inappropriate action. Even anger that is in one sense just may be inordinate, leading, if unchecked, to improper action.<sup>5</sup>

Thus, while emotions can be very motivating for urging virtuous dispositions toward action, emotions appear unable to inform the agent about which acts are actually virtuous. Virtue and emotion appear to require something more, a *practical wisdom* to guide their proper application in individual circumstances, a reasoning that the ancient Greeks called *phronesis*.

### **Virtue and Phronesis**

Aristotle described five intellectual virtues: *techne* (art), *episteme* (scientific knowledge), *phronesis* (practical wisdom), *sophia* (philosophical wisdom), and *nous* (intuitive reason).<sup>6</sup> While virtues are oriented toward the good, *phronesis* describes the deliberations about judging which actions will achieve that good. Aristotle explains, “The

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<sup>4</sup> Many US cities have installed donation meters in areas where homeless persons frequently pan-handle. These donations support local drug and alcohol rehabilitation centers and homeless shelters. Meters in New Haven, CT, state, “Please be aware that money given on the street is not going to end hunger and homelessness . . . instead give responsibly.” Harriet Jones, “Donation Meters Seek to Curb Panhandling in New Haven,” Connecticut Public Radio, January 17, 2017, accessed June 1, 2018, <http://wnpr.org/post/donation-meters-seek-curb-panhandling-new-haven>.

<sup>5</sup> Robert C. Roberts, “Emotions among the Virtues of the Christian Life,” *Journal of Religious Ethics* 20, no. 1 (Spring 1992): 38.

<sup>6</sup> Aristotle, *Nicomachean Ethics*, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 1024 (Bk IV, Ch 3, 1139b15). The English translations of these Greek terms are disputed. For instance, *episteme* pre-dates scientific experimentation and better translates as “scientific axioms” or some other term to denote deductive knowledge like geometry.

man who is without qualification good at deliberating is the man who is capable of aiming in accordance with calculation at the best for man of things attainable by action.”<sup>7</sup>

*Techne* is a procedural knowledge for crafting artifacts, *episteme* is a deductive knowledge that builds from *a priori* axioms, but *phronesis* is an empirical *a posteriori* knowledge that builds upon observations of the natural world—effectively learned by trial and error. The accumulated experiences of applying virtues to achieve a desired good yields knowledge about which acts are most effective for a given circumstance.

For example, I might observe that whenever I give money to homeless alcoholic, he buys more alcohol which perpetuates his addiction and homelessness. So, I try other strategies to serve the homeless: I buy the homeless man a meal, I donate to the homeless shelter, or I engage the homeless man to learn more about his situation. From these experiences I learn which actions most effectively alleviate his suffering. With each encounter, practical wisdom grows beyond universal knowledge toward an appreciation for the particular circumstances in each instance. As Aristotle explained, “Nor is practical wisdom concerned with universals only—it must also recognize the particulars; for it is practical, and practice is concerned with particulars.”<sup>8</sup>

*Phronesis* concerns particulars because each moral situation entails unique circumstances that influence which actions can be expected to most efficaciously deliver a moral good. In short, *phronesis* is a practical wisdom for guidance in unique and unforeseen situations. Alasdair MacIntyre explains,

It is for the sake of achieving this latter good that we practice the virtues and we do so by making choices about means to achieve that end, means in both senses characterized earlier. Such choices demand judgment and the exercise of the virtues requires therefore a capacity to judge and to do the right thing in the right place at the right time in the right way.<sup>9</sup>

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<sup>7</sup> Aristotle, *Nicomachean Ethics*, Bk VI, Ch7, 1141b9.

<sup>8</sup> Aristotle, *Nicomachean Ethics*, Bk VI, Ch7, 1141b9.

<sup>9</sup> Alasdair MacIntyre, *After Virtue* (Notre Dame: University of Notre Dame, 1984), 150.

For Aristotle, the highest end of man is the rational activity of speculative thought about “honorable divine subjects.”<sup>10</sup> This is a subjective end that reason identifies within itself. Aquinas insisted that divine subjects like truth and good are objective ends given by God and evident within the created order. *Phronesis* informs the Christian how to properly participate in the created order by identifying the acts which conform to the natural law. Aquinas explains that *phronesis* builds from natural law principles:

Accordingly we conclude that just as, in the speculative reason, from naturally known indemonstrable principles, we draw the conclusions of the various sciences, the knowledge of which is not imparted to us by nature, but acquired by the efforts of reason, so too it is from the precepts of the natural law, as from general and indemonstrable principles, that the human reason needs to proceed to the more particular determination of certain matters.<sup>11</sup>

In the development of *phronesis*, the individual is not alone, she has access to her community and its collective moral wisdom embodied within church teachings and traditions. Nigel Rooms observes, “There is one final point to be made about the development of *phronesis* in that it requires a set of habits within a community for it to occur faithfully, it is not simply something that the individual does alone.”<sup>12</sup> Elaine Graham calls this a “shared practical sensibility.”<sup>13</sup> Stanley Hauerwas explains that virtues are infused in a “special act of God” through “participation in the body of Christ” by “immersion in the daily practices of the Christian church.”<sup>14</sup>

*Phronesis* joins emotion and virtue to form an ethical triad for moral action. Virtues are dispositions, which are compelled into action by emotions, and directed toward

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<sup>10</sup> Aristotle, *Nicomachean Ethics*, X. vii. 10.

<sup>11</sup> Aquinas, *Summa Theologica*, I–II, Q91, A3, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>12</sup> Nigel Rooms, “Paul as Practical Theologian: *Phronesis* in Philippians,” *Practical Theology* 5, no. 1 (2012): 84.

<sup>13</sup> Elaine Graham, Heather Walton, and Frances Ward, *Theological Reflection: Methods* (London: SCM Press, 2005), 194.

<sup>14</sup> Stanley Hauerwas and Charles Pinches, *Christians among the Virtues: Theological Conversations with Ancient and Modern Ethics* (Notre Dame, IN: University of Notre Dame Press, 1997), 69.

the good by *phronesis*. For instance, the virtue of compassion may not be compelled into action without the emotion of love. Compassion moved to action by love might act in a foolish or counterproductive manner. Yet, compassion moved into action by love, a love that acts according to *phronesis*, can achieve the good.

### ***Phronesis and Technology***

Returning to the theme of human enhancement, how does the virtue-emotion-*phronesis* triad inform the morality of technology? The answer, for the most part, is that technology is a tool available to *phronesis*. The calculator aids reasoning, the internet provides information, and telecommunication spreads knowledge. These technologies stand outside the agent, equipping the agent for virtuous actions. The moral status of these technologies is not located within the device or procedure itself; the morality of technology lies within its application toward an intended end.

For example, electroshock weapons like the Taser were developed as a non-lethal alternative to firearms for law enforcement. The Taser can be used by the police to defend an innocent person against attack or used by criminals to attack an innocent person. Electroshock weapons are morally neutral; the morality of a technological device is determined by the intended end of its application by the agent. Thus, most technology is morally neutral since it can be applied in either a moral and immoral manner.

Technological procedures, like devices, are also morally neutral. Even procedures that are overwhelming applied for immoral ends frequently retain some moral applications. For instance, mustard gas is both a deadly poison and life-sustaining medication.<sup>15</sup> Electrical capacitors can stop a heart or restart a heart.<sup>16</sup> The point is that

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<sup>15</sup> Mustard gas was originally developed as a chemical weapon in the First World War where it killed tens of thousands of soldiers. Survivors were discovered to have reduced white blood cells leading to the chemical's successful application as a chemotherapy for white blood cell cancers like leukemia, ultimately saving tens of thousands of lives. Sarah Constantin, "When Caner Was Conquerable," *Reason* 50, no. 2 (June 2018): 34-39.

<sup>16</sup> High voltage capacitors provide the power needed to operate both the electric chair and the

the morality of a technology is not within the device or procedure, it is within its application. Yet, despite the apparent moral neutrality of technology, particular technologies appear to only produce moral ends.

### ***Prima Facie* Morality of Technology**

If technology is morally neutral, why do some technologies appear *prima facie* moral. For example, antibiotics are organic compounds which aid the body to rid itself of harmful bacteria. The pharmacology of antibiotics restricts their effects to killing the bacteria that cause disease, a *prima facie* good.<sup>17</sup> While it is conceivable that a maleficent agent might intentionally and clandestinely prescribe a massive overdose of antibiotics intending to harm someone, there are so many more efficient poisons that this misuse of antibiotic technology appears quite remote. Therefore, one might subsume the morality of antibiotic application into the technology itself, rightly judging antibiotics to be a *prima facie* moral technology.

Alternatively, a technology might appear to have only immoral applications. For example, the neutron bomb is a thermonuclear device that produces deadly radiation without heat or blast destruction. Its only known application is to destroy all life in the affected area by radiation poisoning, leaving buildings intact for the victor's occupation forces. Because it kills soldiers, civilians, livestock, and crops indiscriminately, it is considered immoral by just war theory and is internationally banned.<sup>18</sup> For another more

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defibrillator. Stephen J. Hahn, John E. Heil, and Douglas J. Lang, "Large Capacitor Defibrillation Waveform Reduces Peak Voltages Without Increasing Energies," *Pacing & Clinical Electrophysiology* 18, no. 1 (January 1995): 203-7.

<sup>17</sup> One rare exception is when antibiotics unintentionally destroy "good" bacteria, mutualistic or commensal bacteria which normally inhabit the human body and aid digestion, synthesize important nutrients, or ward off other harmful bacteria. The prescribing of antibiotics for treatment of disease that subsequently produces an undesirable side-effect is not immoral because the intent of the physician was not to produce the deleterious side-effect.

<sup>18</sup> Kathleen A. Tobin, "People, Not Property: Population Issues and the Neutron Bomb," *Cold War History* 16, no. 3 (August 2016): 307-25.



controversial example, surgically altering a biological male into a physical facsimile of a female by amputating genitalia appears to violate God's intended *telos* for humans for sexuality, especially when it is motivated by disordered desires. Since there is no clear moral application for neutron bombs or emasculation, one might subsume the morality of its application into the technology itself, rightly judging these technologies to be *prima facie* immoral. Theologian John Langan explains,

[Sometimes] we are not dealing with a class of indifferent actions, which a moral agent is free to perform or not without making himself or herself liable to moral criticism or blame, but rather with actions which are *prima facie* wrong, at least to the extent that there is some burden of justification to be carried by the person who would perform them.<sup>19</sup>

Despite the fact that some technologies might appear *prima facie* moral or immoral, technology actually remains a morally neutral tool that can be applied for either moral or immoral ends. The deliberations of *phronesis* help to determine which technologies can be applied, to which situations, to achieve the moral ends that virtue demands.

### **Cognitive Enhancement is *Sui Generis***

Technology is morally neutral because it stands outside the agent, as equipment for both moral and immoral actions by the agent. Human enhancement technology appears *sui generis* because it is not an *external* equipping, but an *internal* modification of the agent himself. Where technology might help build a better racing bicycle, human enhancement technology intends to build a better cyclist. The former might entail TIG welding, the latter might entail CRISPR gene splicing.<sup>20</sup> The internalization of the

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<sup>19</sup> John Langan, "The Elements of St. Augustine's Just War Theory," *Journal of Religious Ethics* 12, no. 1 (Spring 1984): 19-38.

<sup>20</sup> TIG is an acronym for Tungsten Inert Gas, a method of achieving the very high temperatures needed for liquefying titanium, an exceptionally strong and light material used for constructing racing bicycles. CRISPR is an acronym for Clustered Regularly Interspaced Short Palindromic Repeats with applications in gene splicing for the insertion of selected DNA to treat genetic diseases or, for example, to enhance human muscle physiology at the molecular level.

technology is not where the distinction lies. Pacemakers or artificial knees are merely external technologies that have been physically internalized by implantation into the body. The basic design is unchanged, only miniaturized and rendered biocompatible. External technology which is relocated internally retains all the moral neutrality of any other equipping, its moral status resides within the intended ends of its application.

Cognitive enhancement appears different because the biochemistry of the brain is being altered. If cognitive enhancement entailed implanting an internet connection into the brain, this would still qualify as an internalization of an external technology. By contrast, a cognitive enhancing medication like Adderall is not a device implanted into the brain, which rests alongside the brain as a tool for cognition. Rather, Adderall alters the brain itself, potentially effecting the very *phronesis* which judges the morality of using Adderall. Cognitive enhancement represents a type of jury-tampering within the court of moral adjudication.

### ***Phronesis* Compromised**

If there is any physical location of the mind, it is the brain.<sup>21</sup> Changes to the brain's inherent neural circuitry and biochemical transmitters threaten to alter the mind in unknown ways with unknown consequences. Concepts like neuroplasticity predict that even temporary pharmacological enhancements of the brain could make these changes long-lasting, if not permanent. Most importantly, pharmacological changes in the brain can permanently alter personality and judgement.

A prime example of these risks is evident with drugs like cocaine, where even a single ingestion can permanently alter brain physiology to induce biochemical

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<sup>21</sup> A popular contemporary understanding of the mind is physicalism (mind/brain identity) which locates all the non-extended processes of cognition to the material brain (the mind supervenes on the brain).

dependence and physical illness upon withdrawal.<sup>22</sup> The associated neurological changes from such addiction include diminished self-control, increased risky behavior, social impairment, and personality changes. According to Christine English, “Addiction is the drugging of particular parts of the personality.”<sup>23</sup> Since Adderall shares a similar dopaminergic mechanism of action with cocaine, Adderall too risks addiction, personality changes, and rational impairment.<sup>24</sup>

Impaired reason corrupts *phronesis* and changes to personality threaten identity and authenticity. Clearly, the risks presented by cognitive enhancement are enormous and the uncertainty of Adderall’s long-term effects are great. Whenever a scientific endeavor entails high risk and high uncertainty, implementation demands caution. Leon Kass observes, “Over the past decades, environmentalists, forcefully making the case for respecting Mother Nature, have urged upon us a ‘precautionary principle’ regarding all our interventions into the natural world. Go slowly, they say, you could ruin everything.”<sup>25</sup> It would appear prudent to apply a similar precautionary principle regarding technologies aimed at altering human cognition.

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<sup>22</sup> M. A. Ungless et al., “Single Cocaine Exposure *In vivo* Induces Long-Term Potentiation in Dopamine Neurons,” *Nature* 411 (May 2001): 583-87.

<sup>23</sup> Christine English, “The Regulatory Function of Addiction: Maintaining Internal Cohesion by the Drugging of Parts of the Personality,” *Psychodynamic Practice* 14, no. 4 (November 2009): 342.

<sup>24</sup> Cocaine binds to dopamine, serotonin, and norepinephrine transport proteins preventing their re-uptake, thereby increasing dopamine levels. Amphetamines also block transport proteins, in addition to facilitating dopamine release out of neural vesicles and into the cytoplasm. Erin S. Calipari and Mark J. Ferris, “Amphetamine Mechanism and Actions at the Dopamine Terminal Revisited,” *Journal of Neuroscience* 33, no. 21 (May 2013): 8923-25. M. Hummel and E. M. Unterwald, “D1 Dopamine Receptor: A Putative Neurochemical and Behavioral Link to Cocaine Action,” *Journal of Cell Physiology* 19, no. 1 (April 2002): 17-27. Addiction expert E. J. Eysenck observes, “Drugs often associated with abuse and addiction characteristically share the feature of being able to *increase neurotransmission in the mesolimbic dopamine system.*” E. J. Eysenck, “Addiction, Personality and Motivation,” *Human Psychopharmacology*, 12 (1997): S82, emphasis original.

<sup>25</sup> The President’s Council on Bioethics, Leon R. Kass, Chairman, *Beyond Therapy: Biotechnology and the Pursuit of Happiness* (New York: Harper Perennial, 2003), 287.

## Precautionary Principle

The precautionary principle traces its roots to the German environmental laws of the 1970s founded upon *Vorsorgeprinzip*<sup>26</sup> The precautionary principle describes a general attitude of foresight and prudence for the evaluation of any new technology. James Cameron explains, “The precautionary principle is a *guiding* principle. Its purpose is to encourage—perhaps even oblige—decision makers to consider the likely harmful effects of their activities on the environment before they pursue those activities.”<sup>27</sup> The precautionary principle especially applies to new technology where the ultimate effects are disputed or unknown. Terje Aven notes, “Almost all definitions of the precautionary principle identify ‘scientific uncertainties’ as the trigger or criterion for its invocation.”<sup>28</sup> Since the precautionary principle only outlines an attitude, it requires adaptation and specification for application to particular areas of inquiry. Philosopher Per Sandin lists more than 20 different customized formulations for the precautionary principle.<sup>29</sup>

Currently, the most common application of the precautionary principle is in the area of environmental protection against new technologies such as genetically modified organisms (GMO) and hydraulic fracturing to extract petroleum (fracking). The precautionary principle has been subsequently applied to ozone depletion, climate change,

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<sup>26</sup> Owen McIntyre and Thomas Mosedale, “The Precautionary Principle as a Norm of Customary International Law,” *Journal of Environmental Law* 9, no. 2 (January 1997): 221.

<sup>27</sup> James Cameron and Juli Abouchar, “The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment,” *Boston College International and Comparative Law Review* 14, no. 1 (December 1991): 2, emphasis original.

<sup>28</sup> Terje Aven, “On Different Types of Uncertainties in the Context of the Precautionary Principle,” *Risk Analysis* 31, no. 10 (2011): 1515.

<sup>29</sup> Per Sandin, “Dimensions of the Precautionary Principle,” *Human and Ecological Risk Assessment* 5 (1999): 889-907.

biodiversity, pollution, and other concerns.<sup>30</sup> More recently, the precautionary principle has been extended into medicine, human enhancement, and even space exploration.<sup>31</sup>

Each of these formulations states its own unique requirements which must be met before the precautionary principle may be evoked. According to philosopher Daniel Steel, the *general constraints* of the precautionary principle comprise the “soft” version.<sup>32</sup> For example, the Wingspread Conference on the Precautionary Principle declared, “When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically.”<sup>33</sup> This view represents a “soft” precautionary principle, a general guide without specifying the threat or the countermeasures.

Conversely, Sandin proposes a *hard* precautionary principle by mandating reaction: whenever there is “(1) a threat, which is (2) uncertain, then (3) some kind of action (4) is necessary.”<sup>34</sup> Notice the contemporary shift from a soft “measure *should* be taken” in the Wingspread Conference to hard “action is necessary” in more contemporary

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<sup>30</sup> Montreal Protocol on Substances that Deplete the Ozone Layer, 1987. United Nations Framework on Climate Change, 1992. Convention on Biological Diversity, 1992. Maastricht Treaty of European Union, 1992. Cartagena Protocol on Bio-safety, 2000. Stockholm Convention on Persistent Organic Pollutants (POPs), 2001.

<sup>31</sup> Maxime Gignon et al., “The Precautionary Principle: Is It Safe,” *European Journal of Health Law* 20, no. 3 (June 2013): 261-70. Claudia Cinelli and Katarzyna Pogorzelska, “The Current International Legal Setting for the Protection of the Outer Space Environment: The Precautionary Principle *Avant La Lettre*,” *Review of European Community & International Environmental Law* 22, no. 2 (2013): 186-201.

<sup>32</sup> Daniel Steel, “Philosophy and the Precautionary Principle: Science, Evidence, and Environmental Policy,” *British Journal of Philosophy and Science* 67 (2016): 1196.

<sup>33</sup> The Wingspread Conference on the Precautionary Principle was an academic meeting held in Racine, WI, in 1998, to address environmental ethics, but its definition of the precautionary principle has been adopted by European Commission Communication on the Precautionary Principle in 2000, and Cartagena Protocol on Biosafety in 2000. Science and Environmental Health Network, “The Wingspread Consensus Statement on the Precautionary Principle,” January 26, 1998, accessed June 1, 2018, <https://sehn.org/wingspread-conference-on-the-precautionary-principle/>.

<sup>34</sup> Per Sandin, “The Precautionary Principle and the Concept of Precaution,” *Environmental Values* 13, no. 4 (November 2004): 461-75.

affirmations. In its original form, the precautionary principle was applied to *slow* new technologies from implementation (fracking); now it is increasingly applied to *prohibit* existing technologies (nuclear power) or to *speed* newer alternatives (fuel cells). Alex Stevens observes, “The precautionary principle is used by politicians as a justification for generic controls on . . . [technologies] which are not yet producing significant harm.”<sup>35</sup>

Further, the precautionary principle is increasingly evoked to support actions which are themselves based upon uncertain science. The 1992 Rio Declaration argues, “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures.”<sup>36</sup> In other words, a technology with unknown risks demands solutions with unknown benefits. The soft version risks vacuity; the hard version risks incoherence. Indeed, philosopher Martin Peterson argues, “Yes, the uncertainty principle is incoherent,” if it is being used as a “decision rule” for adjudicating which technologies ought to be pursued.<sup>37</sup>

Another argument against the precautionary principle is that it is selective; precaution should also apply to the risks of maintaining the status quo. John Harris observes, “It is unclear why a precautionary approach should apply only to proposed changes rather than to the status quo. In the absence of reliable predictive knowledge as to how dangerous leaving things alone may prove, we have no rational basis for a precautionary approach which prioritizes the status quo.”<sup>38</sup> F. M. Cornford mocks the

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<sup>35</sup> Alex Stevens and Fiona Measham, “The ‘Drug Policy Ratchet’: Why Do Sanctions for New Psychoactive Drugs Typically Only Go Up?” *Addiction* 109 (2014): 1230.

<sup>36</sup> United Nations General Assembly, “Rio Declaration on Environment and Development,” *Report of the United Nations Conference on Environment and Development*, Rio de Janeiro, June 3-14, 1992, accessed December 6, 2018, <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>.

<sup>37</sup> Martin Peterson, “Yes, The Precautionary Principle Is Incoherent,” *Risk Analysis* 37, no. 11 (2017): 2035.

<sup>38</sup> John Harris, *Enhancing Evolution: The Ethical Case for making Better People* (Princeton, NJ: Princeton University Press, 2007), 34.

precautionary principle as “The Principle of Dangerous Precedent that you should not now do an admittedly right action for fear. It follows that nothing should ever be done for the first time.”<sup>39</sup>

Yet, it is argued herein that a survey of the various formulations of the precautionary principle offers three potentially useful features to address human enhancement technology: (1) proactivity, (2) responsibility, and (3) objectivity. Even though no current formulation of the precautionary principle explicitly elucidates these features, they are implicit in many versions.

First, the precautionary principle is proactive since it would require the morality of a technology to be considered up front, *before* the technology is implemented. The alternative view is reactive, allowing a technology to be implemented and subsequently attempting to mitigate the unintended consequences after they manifest.

Second, the precautionary principle assigns responsibility. It shifts the burden of the safety analysis of a new technology onto the proponent, rather than relegating this burden on the public or a designated government agency. The Wingspread Conference argues, “The proponent of an activity . . . should bear the burden of proof.”<sup>40</sup> Tim O’Riordan and James Cameron argue that it “shifts the duty of care (or ‘burden of proof’) on to those who are proposing changes or new developments.”<sup>41</sup>

Third, the precautionary principle encourages objectivity. The analysis of a new technology’s risk-to-benefit ratio ought to be objectively defined through the development of a set of criteria to adjudicate the safety of a prospective enhancement technology. Before proceeding to explore how the precautionary principle might be

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<sup>39</sup> Francis M. Cornford, *Microcosmographia Academica: Being a Guide for the Young Academic Politician* (Cambridge: Bowes and Bowes, 1908), 28.

<sup>40</sup> Science and Environmental Health Network, “The Wingspread Consensus Statement.”

<sup>41</sup> R. J. Berry, “Fabricated Nature: Where Are the Boundaries?” *Ecotheology* 11, no. 1 (March 2006): 18.

applied to cognitive enhancement, it might be beneficial to address some frequent criticisms.

### **Objections to Precautionary Principle for Biotechnology**

Despite the growing scholarship in support of the precautionary principle for new biotechnologies, there are important objections. The four most common criticisms are that the precautionary principle is (1) unscientifically emotivist, (2) rigidly absolutist, (3) subjectively vague, and (4) paradoxically dangerous.

**Unscientific emotivism.** Some scientists believe the Precautionary Principle “marginalizes the role of science” and inevitably hobbles scientific inquiry.<sup>42</sup> Biologist J. Gray argues, “The Precautionary Principle needs to be more firmly based on science rather than on unsubstantiated perceptions or ‘gut feelings’ that something might have an effect.”<sup>43</sup> Others dismiss the precautionary principle as merely an emotive utterance, something similar to “boo on designer children, genetic technology is wrong.”<sup>44</sup> Christian Munthe observes, “It has even been claimed that the general idea of PP (Precautionary Principle) should be dismissed on the basis that it is mainly an expression of irrational fear.”<sup>45</sup> Sandin observes,

It is claimed that the precautionary principle merely expresses a subjective attitude of fear against risk taking, and therefore can neither be confirmed nor falsified by scientific studies. Since science only deals with factual truths, not subjective

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<sup>42</sup> J. S. Gray and M. Bewers, “Towards a Scientific Definition of the Precautionary Principle,” *Marine Pollution Bulletin* 32 (1996): 768.

<sup>43</sup> Gray and Bewers, “Towards a Scientific Definition,” 770.

<sup>44</sup> Approaching from the risk analysis perspective, Law Professor Cass Sunstein argues that the precautionary principle is incoherent because it is captive to subjective fears spread by social influences and peer pressures, rather than scientifically informed objective risks. Cass Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (Cambridge: Cambridge University Press, 2005).

<sup>45</sup> Christian Munthe, *The Price of Precaution and the Ethics of Risk* (New York: Springer, 2011), 5.



attitudes towards risk taking, the precautionary principle simply leaves no room for a scientific approach to risk analysis.<sup>46</sup>

But a fear of the unknown deleterious consequences of a nascent technology is not simply a fear of risk-taking; it is a fear which has been informed by a long unfortunate history of technologies that turned on humanity. The difference between a scientific discovery and its future application can be the distinction between fission and Hiroshima. For example, thalidomide was developed to relieve the nausea of pregnancy, but ultimately its use resulted in thousands of babies without arms or legs.<sup>47</sup> The luminous paint developed for watches soon started killing the women who painted the dials.<sup>48</sup> Fear of unintended consequences is not irrational; the precautionary principle might be motivated by fear, but it is not inherently irrational or emotive.

**Rigid absolutism.** A second criticism of the precautionary principle is that it is “overly rigid” absolutism.<sup>49</sup> Nollkaemper complains, “The precautionary principle is formulated in absolutist terms. It stipulates that once a risk of a certain magnitude is identified, preventive measures to erase that risk are mandatory.”<sup>50</sup> This criticism is mistaken; the precautionary principle simply argues that a moral cost-benefit analysis ought to be included as part of the decision to proceed with the development of any new technology. Critics counter that “‘absolutist’ here means, roughly, that the precautionary

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<sup>46</sup> Per Sandin et al., “Five Charges against the Precautionary Principle,” *Journal of Risk Research* 5, no. 4 (2002): 294.

<sup>47</sup> Mark Greener declares, “Thalidomide remains, arguably, the greatest disaster in medical history.” Mark Greener, “Thalidomide’s Shadow: Drug-Induced Teratogenicity,” *Nurse Prescribing* 9, no. 5 (May 2011): 228.

<sup>48</sup> Kate Moore, *The Radium Girls: The Dark Story of America’s Shining Women* (Naperville, IL: Sourcebooks, 2017).

<sup>49</sup> Daniel Bodansky, “Commentary: The Precautionary Principle,” *Environment* 34 (1992): 4-5.

<sup>50</sup> Andre Nollkaemper, “‘What You Risk Reveals What You Value,’ and Other Dilemmas Encountered in the Legal Assaults on Risks,” in *The Precautionary Principle and International Law: The Challenge of Implementation*, ed. D. Freestone and E. Hey (n.p.: Kluwer Law International, 1996), 73-94.

principle forces decision-makers to pay unreasonable attention to extremely unlikely scenarios . . . the precautionary principle would require us to prohibit everything that might be dangerous.”<sup>51</sup> Again, they are mistaken; it is not the likelihood of the risk alone that is weighed but the magnitude of the risk as well. Research involving stored samples of smallpox virus is banned in the US, despite the very remote risk that it could escape from a laboratory, because a pandemic would kill an estimated 500 million people.<sup>52</sup> Precaution becomes absolutist only when the risk is absolutely unacceptable.

**Vague and undefined.** A third objection to the Precautionary Principle is that it is too vague and undefined to provide any practical criteria for adjudicating the implementation of a technology. Law professor Daniel Bodansky complains that the precautionary principle “is too vague to serve as a regulatory standard.”<sup>53</sup> Miller and Conko comment, “The precautionary principle [is] a neologism coined by opponents of technology who wish to rationalize banning or over-regulating things they don’t like.”<sup>54</sup> Indeed, some formulations of the precautionary principle appear vague, but this could be a strength of the concept since its minimal expression offers opportunities to tailor the concept for different scientific endeavors.

In some formulations, the precautionary principle is acting as an epistemic boundary on the debate concerning a future technology. For example, the 1993 Rio Declaration affirms, “The lack of full scientific certainty shall not be used as a reason for

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<sup>51</sup> Sandin et al., “Five Charges,” 290-91.

<sup>52</sup> Melinda Wenner, “Five Diseases You Should Worry About,” *Popular Science* 273, no. 4 (October 2008): 59.

<sup>53</sup> Daniel Bodansky, “Scientific Uncertainty and the Precautionary Principle,” *Environment* 33, nos. 4/5 (1991): 43-44.

<sup>54</sup> H. I. Miller and G. Conko, “Genetically Modified Fear and the International Regulation of Biotechnology,” in *Rethinking Risk and the Precautionary Principle*, ed. J. Morris (Oxford: Butterworth-Heinemann, 2000), 95.

postponing cost-effective measures.”<sup>55</sup> Sandin explains, “It [Rio] is not a substantial principle for decisions, but a principle for what arguments are valid, i.e. a restriction on dialogue. In essence it says little more than that arguments from ignorance should not be used.”<sup>56</sup> Therefore, some formulations of the precautionary principle appear vague about the criteria for action because it is merely providing criteria for discussion.

**Increases risk.** A few ethicists have argued that the precautionary principle might paradoxically increase the risks of a new technology. For example, cautionary restrictions on the testing of prospective medications upon human subjects in the United States has driven many companies to move their human drug trials overseas, where subjects might be exposed to even greater risks because there is less oversight. In 1991, only 10 percent of human clinical trials were conducted in developing countries. By 2006, overseas trials of new medications on humans had increased to 50-70 percent. Adriana Petryna laments, “Some of these operations are empirically accessible, while others are proprietary and part of the pharmaceutical black box.”<sup>57</sup> The precautionary principle may simply drive some technology underground.

If technology moves underground to avoid cautionary scrutiny, those pursuing such technology may follow it there. For example, a Miami woman traveled to Bogota, Columbia, to obtain surgery to enhance her eye color because the procedure is not approved in the US, only to lose her vision due to complications.<sup>58</sup> D. H. Gieringer estimates, “[T]he benefits of FDA regulation relative to that in foreign countries could

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<sup>55</sup>United Nations General Assembly, “Rio Declaration,” Principle 15.

<sup>56</sup> Sandin et al., “Five Charges,” 289.

<sup>57</sup> Adriana Petryna, *When Experiments Travel: Clinical Trials and the Global Search for Human Subjects* (Princeton, NJ: Princeton University Press, 2009), 14.

<sup>58</sup> Sonia Onorio, “This Argentine Model Wanted Gray Eyes. Now She Has the Vision of a 90-Year-Old,” *Miami Herald*, April 20, 2018, accessed June 2, 2018, <http://www.miamiherald.com/news/nation-world/world/americas/article209429989.html#storylink=cpy>.

reasonably be put at some 5,000 casualties per decade or 10,000 per decade for worst-case scenarios. In comparison, it has been argued above that the cost of FDA delay can be estimated at anywhere from 21,000 to 120,000 lives per decade.”<sup>59</sup> Apparently, too much precaution entails risks as well.

These criticisms of the precautionary principle are valid, but they should also be viewed against the risks of *not* implementing a new technology. For example, the risks of developing genetically modified crops ought to be weighed against the risk of famine in the developing countries which would benefit from this technology.<sup>60</sup> Precaution is not obstruction, it is prudent deliberation.

### **Precautionary Principle and Enhancement Technology**

At first glance, human enhancement would certainly appear to fall under the auspices of the precautionary principle. Enhancement technology is a (1) a new technology, (2) with uncertain risks, (3) of potentially severe deleterious consequences. Some of the risks of cognitive enhancement are just coming to light. For instance, there is increasing evidence that cognitive enhancing medication may exploit a zero-sum game concerning the limited capacity of the brain; whenever cognition and memory are enhanced, perhaps creativity and sociability are depressed.<sup>61</sup> There is an increasing frequency of emergency room visits for cognitive medicine overdoses. Concerns over addiction continue to prohibit many cognitive medications from being legally prescribed. Given these concerns, application of the precautionary principle would seem appropriate for cognitive enhancement technology.

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<sup>59</sup> D. H. Gieringer, “The Safety and Efficacy of New Drug Approval,” *Cato Journal* 5, no. 1 (1985): 177-201.

<sup>60</sup> Genetically modified organisms (GMO) include crops that are genetically engineered to be insect resistant and grow in arid environments that would require less insecticides, fertilizers or water.

<sup>61</sup> Martha J. Farah et al., “When We Enhance Cognition with Adderall, Do We Sacrifice Creativity? A Preliminary Study,” *Psychopharmacology* 202 (2009): 541-47.

The precautionary principle would require that (1) the risks of undesirable consequences of cognitive enhancing medications be evaluated prior to their public availability, (2) the costs for an independent evaluation and public disclosure of these undesirable risks fall to the developers and proponents of the medication, and (3) there be some agreed criteria for when these risks are suitably addressed and mitigated. Such criteria have been well studied and codified by government bodies like the US Food and Drug administration (FDA) employing statistical criteria for a risk-benefit ratio that includes such features as the incidence, prevalence, and severity of side-effects.

Notice that this application of the precautionary principle is grounded in science, probability, and the desire to preserve health. Since these are not inherently *moral* criteria, the precautionary principle does not explicitly address moral precautions. For example, if human growth hormone could be shown to be efficacious and free of side effects, the precautionary principle might be satisfied upon scientific, probabilistic, and medical grounds. This determination is unaffected by whether growth hormone is treating a pituitary tumor or doping a professional athlete. Certainly, there is a point of contact between scientific criteria for medical safety and the moral responsibility for protecting public health. Yet, the question remains, can the precautionary principle apply specifically to *moral* issues?

This dissertation argues that the three features of the precautionary principle outlined can provide useful guidance for the moral application of technology for Christians. A Christian moral precautionary principle (CMPP) would require that (1) the moral status of the possible applications of an enhancement technology be sufficiently evaluated before it is widely implemented, (2) whenever possible the costs of an independent evaluation and public disclosure of the risks should fall to the advocates of the technology, and (3) a biblical Christocentric criteria for this evaluation ought to be developed and employed.

## **Christian Moral Precautionary Principle**

The precautionary principle is not a modern product of a technological worldview. Philippe Martin writes, “The precautionary principle is an age-old concept. Unambiguous reference to precaution as a management guideline is found in the millennial oral tradition of Indigenous People of Eurasia, Africa, the Americas, Oceania and Australia.”<sup>62</sup> A moral precautionary principle is equally as old. Martin identifies an element of precaution in many religions. Christianity also entails a precautionary approach toward deliberating righteous acts from sinful acts.

“The wise man is cautious,” says the Lord (Prov 14:6a). The Bible instructs Christians to be careful in how they shepherd others, since they will be held accountable by “the Chief Shepherd” (1 Pet 5:1-4). Church leaders are to be “sensible” in their stewardship for God (Titus 1:7-9). Jesus tells His disciples to be “shrewd” in their dealings with men, describing an attitude of caution when “in the midst of wolves” (Matt 10:16). Christians are to “avoid evil” as a precaution against doing evil.<sup>63</sup> Jack Sanders explains that for early rabbinic scholars “the fear of Yahweh is identified with sage caution. The root problem which leads to sin can therefore be described as a lack of proper caution.”<sup>64</sup>

The entire corpus of Scripture warns against the danger of sin and the extreme cautions that must be taken. “If your eye causes you to stumble, pluck it out and throw it from you. It is better for you to enter life with one eye, than to have two eyes and be cast into the fiery hell” (Matt 18:9). Scripture is infused with an attitude of moral precaution involving human behavior. Yet, despite this biblical evidence for caution, there are several objections.

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<sup>62</sup> Philippe Martin, “If You Don’t Know How to Fix It, Please Stop Breaking It!” *Foundations of Science* 2 (1997): 276.

<sup>63</sup> Prov 4:15; Rom 16:17; 1 Tim 6:20; 2 Tim 2:16; Titus 3:9; 1 Thess 5:22.

<sup>64</sup> Jack T. Sanders, “Ben Sira’s Ethics of Caution,” *Hebrew Union College Annual* 50 (1979): 76.

**Objections to a Christian precautionary principle.** Most objections to a Christian precautionary principle argue that it is either non-biblical, parochial, or consequentialist. The first objection to the precautionary principle is that it emphasizes human discernment over scripture. Proverbs warns, “Trust in the LORD with all your heart and do not lean on your own understanding” (Prov 3:5). Paul advises, “Be anxious for nothing, but . . . let your requests be made known to God” (Phil 4:6). These verses could be interpreted as instructions to trust moral discernment to God, not to human reason. Elizabeth Anscombe observes, “The man who believes in divine laws will say perhaps, ‘It is forbidden, and however it looks, it cannot be to anyone’s profit to commit.’ . . . If he is a Jew or Christian, he need not have any very distinct notion: the way it will profit him to abstain from injustice is something that he leaves it to God to determine.”<sup>65</sup> For such Christians, moral precaution means cautiously following God’s commands.

Yet, Scripture also advises careful deliberations before acting. Such deliberations do not display a lack of faith in God; rather, they demonstrate diligence for acting in righteousness and holiness.<sup>66</sup> Proverbs insists that “wise people think before they act” (Prov 13:16 NLT). Paul explains that it is within the “renewing of your mind that you may prove what the will of God is, that which is good and acceptable and perfect” (Rom 12:2). Moral deliberation is not a rejection of God’s sovereignty; it is a supplication for divine illumination for discerning the morality of situations not explicitly commanded in scripture.<sup>67</sup>

The second common objection to the precautionary principle is that it is a parochial concept derived from Roman Catholicism. Catholic moral theology frequently

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<sup>65</sup> Elizabeth Anscombe, “Modern Moral Philosophy,” *Philosophy* 33, no. 124 (January 1958): 16.

<sup>66</sup> First Pet 1:16 says, “Because it is written, ‘You shall be holy, for I am holy.’”

<sup>67</sup> Jas 1:15 reads, “But if any of you lacks wisdom, let him ask of God, who gives to all generously and without reproach, and it will be given to him.”

assumes a precautionary stance to new biotechnologies. For example, *Dignitas Personae* concluded, “Because the risks connected to any genetic manipulation are considerable and as yet not fully controllable, in the present state of research, it is *not* morally permissible to act in a way that may cause possible harm to the resulting progeny.”<sup>68</sup>

Yet, Protestantism is equally cautious of new technology. The Conference of European Churches, Church and Society Commission agrees,

With some areas of technology, we might “get away with it”; for enhancing humans, the stakes are too high. Some manipulations of the human person would need to be of exceptional reliability not just of the device itself, but also the amazing human ability to mess things up. If we cannot design shower units without getting water on the floor, or reliable software to buy train tickets on-line, what makes us think we should redesign ourselves?<sup>69</sup>

A third common objection to the precautionary principle might be that it is too consequentialist to contribute to a Christian ethical system. Any moral precautionary principle is essentially a consequentialist ethic because the deleterious consequences of unproven technology are the central concern. Thomas Ogletree pronounces that there is a “virtual absence of consequentialism in the biblical material.”<sup>70</sup> Further, since the consequences are traditionally viewed with attention to health and safety (rather than right or wrong), the precautionary principle has been primarily employed as a tool for utilitarian ethics. For some theologians, utilitarianism is antithetical to any properly Christian moral perspective. Alistair MacIntyre insists that because Christians have, until recently,

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<sup>68</sup> Congregation for the Doctrine of the Faith, “Instruction *Dignitas Personae*: On Certain Bioethical Questions,” September 8, 2008, accessed December 6, 2019, [http://www.vatican.va/roman\\_curia/congregations/cfaith/documents/rc\\_con\\_cfaith\\_doc\\_20081208\\_dignitas-personae\\_en.html](http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_20081208_dignitas-personae_en.html).

<sup>69</sup> Conference of European Churches, Church and Society Commission, “Human Enhancement: A Discussion Document,” March 2010, accessed December 6, 2018, [http://www.ceceurope.org/wp-content/uploads/2015/12/Human\\_Enhancement\\_March\\_10.pdf](http://www.ceceurope.org/wp-content/uploads/2015/12/Human_Enhancement_March_10.pdf).

<sup>70</sup> Thomas Ogletree, *The Use of the Bible in Christian Ethics* (Louisville: Westminster John Knox, 2003), 204.



abandoned virtue ethics for utilitarianism and deontology that “we have—very largely if not entirely—lost our comprehension, both theoretical and practical, of morality.”<sup>71</sup>

Yet, the fact that the precautionary principle can serve utilitarianism does not eliminate its value for Christian ethics. The point is that the precautionary principle, despite its utilitarian heritage, may still afford application toward a biblical view of technology. What might a biblical view of technology look like?

### **Technology and the Bible**

God created a rational world governed by reliable scientific laws. Then God created man with a rational mind to discern these laws and apply them to bring order to creation. Bringing order to creation provides one biblical *telos* for technology. According to Denis Alexander, God is “the arch-technophile and the ultimate enabler of human technology.”<sup>72</sup> Alexander argues that God commanded three great technological projects: the ark, the tabernacle, and the temple. Yet, the Scriptures also warn that man can turn technology toward sinful and idolatrous pursuits; for example, the tower of Babel and the Golden Calf. Yet, even in the Bible, technology appears morally neutral, always depending upon the intention of its application and its foreseeable consequences to reveal its moral status. The Bible contains no explicit prohibitions on technology.

Therefore, there is no *prima facie* reason to reject the application of the precautionary principle to Christian ethics. The key difference is that the original secular application of the precautionary principle utilized scientific and mathematical tools for determining the potential deleterious consequences of a new technology. An application of the precautionary principle for Christian ethics would utilize biblical and theological

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<sup>71</sup> Alasdair MacIntyre, *After Virtue* (Notre Dame: University of Notre Dame, 1984), 2.

<sup>72</sup> Denis R. Alexander, “Worshipping God with technology,” *Cambridge Papers* 12, no. 4 (December 2003): 1, accessed June 1, 2018, <http://www.jubilee-centre.org/worshipping-god-with-technology-by-denis-alexander/>.

tools for determining the deleterious moral consequence of a new technology. The next chapter proposes five Christian moral criteria for cognitive enhancing technology.

CHAPTER 7  
MORAL CRITERIA FOR ETHICAL  
COGNITIVE ENHANCEMENT

**Introduction**

This dissertation began exploring the ethics of human enhancement using the example of cognitive enhancing medications because this technology is already in wide use, presents numerous moral hazards, and lacks a clear Christian ethic to guide its moral application. The body of the dissertation then pulled back from this narrow issue to examine the morality of human enhancement in broad perspective, laying a groundwork for a Christian teleological virtue ethic modeled by Jesus and supported by Scripture. This chapter again focus more narrowly on the subject of cognitive enhancing medications used by healthy persons.

Thus far, this dissertation has laid out a virtue ethic for the moral application of enhancement technology, acts which are motivated by emotions but informed by practical wisdom. It was argued that *phronesis* warrants the precautionary principle, which (1) requires the morality of a technology to be considered up-front, before the technology is implemented, (2) shifts the burden of demonstrating the morality of a technology's application to its proponents, and (3) requires the development of a set of criteria to adjudicate the morality of a prospective enhancement technology. This dissertation will now offer five such moral criteria constituting minimal requirements for the ethical application of new human enhancement technologies: (1) just cause, (2) transparency, (3) temporality, (4) proportionality, and (5) reverence.

As was developed in chapter 4, the moral life of the Christian entails participating with Christ in the perception, appreciation, and restoration of the created

order that became disordered after the fall. This participation is affected through the practice of Jesus' kenotic virtues of humility, compassion, and reverence. The entire thrust of the argument so far is that the morality of an act lies primarily within the intentions of the agent, not within the technology itself. It is a teleological argument that is less concerned with what the technology does, but demands to know to what ends the technology is aimed, or might come to be aimed in the future once it is implemented. Therefore, the intended *telos*, or final cause, for a particular technology within a particular application is the first criteria that must be met for the cognitive enhancement to be considered moral according to biblical and Christological measures.

### **Just Cause**

When the final cause, the purpose or *telos*, for the enhancement is directed by Christ's kenotic virtues for the restoration of the created order, then the cause is just and the application of the technology is *prima facie* moral. Kenotic humility is the voluntary reordering of the agent beneath other people so to serve other people. Kenotic compassion ensures that humble service is truly for the other person's benefit. Reverence as the ultimate *telos* verifies that humble compassionate service intends to glorify God. When the final cause is the service of others, for their benefit, for the glory of God, then the technology is *prima facie* moral. When the technology is aimed at positional advantage, illicit gain, or recreation, then the final cause is immoral.

### **Excursus on Medical Ends**

Although the definition of cognitive enhancement given in this dissertation is its use by healthy persons, cognitive health is expressed upon a continuum without strict delimitations between healthy persons and those with cognitive disabilities. For this reason, the just use of cognitive enhancement for the restoration of normal cognitive function ought to be briefly addressed. Currently, cognitive enhancing medications such as Adderall, Ritalin, and Provigil are indicated for the treatment of Attention Deficit

Hyperactivity Disorder (ADHD), and narcolepsy. Whenever these cognitive disorders can be established with reasonable objectivity by a qualified professional, then a prescription for a cognitive enhancing medication is a just cause and *prima facie* moral because it restores human cognition toward God’s intention for rational creatures.

The difficulty with diagnosing ADHD is that it is based upon symptoms observed by parents and teachers that are reported to physicians. The latest *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* recommends a diagnosis of ADHD when any six of nine “inattention” or “hyperactivity” symptoms are present for more than six months. These criteria are famously vague and subjective, such as “often has difficulty sustaining attention.” So, it is not surprising that millions of children are suspected of being misdiagnosed and overmedicated. The *DSM-5* admits, “No biological marker is diagnostic for ADHD.”<sup>1</sup> The same lack of objectivity complicates the diagnosis of narcolepsy.

Further, some persons may genuinely believe that their normal healthy cognition is somehow deficient. Neuroethicist Paul Wolpe comments, “Some top selling drugs in the world today are being used by patients who fit no traditional definition of pathology, yet still see in their own functioning a deficit that these drugs address.”<sup>2</sup> Therefore, just cause for restoration of normal cognitive function in these disorders must rest upon the opinion of licensed medical professions. Unfortunately, around 80 percent of students are self-diagnosing and self-medicating for ADHD.<sup>3</sup> Studies indicate that 16 to 29 percent of

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<sup>1</sup> The phrase “No biological marker” means that there is no blood test, brain imaging, or other objective diagnostic criteria for diagnosing ADHD. In a few extremely rare exceptions, genetic diseases appear linked to ADHD, such as Fragile X syndrome and 22q11 deletion syndrome. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. (Washington, DC: American Psychiatric Publishing, 2013), 61.

<sup>2</sup> Paul Root Wolpe, “Treatment, Enhancement, and the Ethics of Neurotherapeutics,” *Brain and Cognition* 50 (2002): 392.

<sup>3</sup> In a 2005 survey of 1,811 undergraduates at a “large, public, southeastern research university in the United States,” 34 percent admitted using neurostimulants but only 4 percent possessed a valid prescription. Of these students, 56 percent reported that it was “easy” to obtain illicit neurostimulants and

students with stimulant prescriptions give, sell, or trade their medications to other students without ADHD.<sup>4</sup> Pharmacological treatment of cognitive disorders that attempt to bypass professional evaluations ought to be rejected as *prima facie* immoral until such a professional opinion validates a cognitive disorder.

Additionally, cognitive enhancing medications have been used “off-label” to improve cognition, mood, appetite, and energy in persons with cancer, HIV, brain trauma, or stroke.<sup>5</sup> In other studies, elderly persons at risk for apathy, depression, or dementia who were treated with psychostimulants demonstrated improved cognition and function.<sup>6</sup> When such applications are generally recognized by the medical community and corroborated by peer-review literature, these causes may also be considered *prima facie* moral.

Further, cognitive enhancing technologies have been applied to elevate persons from below normal cognitive function toward the mean for cognitive functioning. These are persons who do not satisfy the medical criteria for any disease, but who nevertheless demonstrate cognitive disability based upon objective performance-based criteria compared to a population-normative cohort.<sup>7</sup> Norm Daniels objects to using medications intended to

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less than 1 percent thought it was “very difficult.” Alan D. DeSantis, Elizabeth M. Webb, and Seth M. Noar, “Illicit Use of Prescription ADHD Medications on a College Campus: A Multimethodological Approach,” *Journal of American College Health* 57, no. 3 (November-December 2008): 320.

<sup>4</sup> The term *diversion* describes the practice of patients with a valid prescription “diverting” their medications to other persons who lack a valid prescription. Timothy E. Wilens et al., “Misuse and Diversion of Stimulants Prescribed for ADHD: A Systematic Review of the Literature,” *Journal of the Academy of Child and Adolescent Psychiatry* 47 (2008): 21-31.

<sup>5</sup> *Off label* refers to the use of FDA approved medications for unapproved conditions. Thomas D. Challman and James J. Lipsky, “Methylphenidate: Its Pharmacology and Uses,” *Mayo Clinic Proceedings* 75, no. 7 (July 2000): 711-21.

<sup>6</sup> S. E. Kaplitz, “Withdrawn, Apathetic Geriatric Patients Responsive to Methylphenidate,” *Journal of the Geriatric Society* 23 (1975): 271-76; A. E. Wallace, L. L. Kofoed, and A. N. West, “Double-Blind, Placebo-Controlled Trial of Methylphenidate in Older, Depressed, Medically Ill Patients,” *American Journal of Psychiatry* 152 (1995): 929-31; I. Galynker et al., “Methylphenidate Treatment of Negative Symptoms in Patients with Dementia,” *Journal of Neuropsychiatric Clinical Neuroscience* 9 (1997): 231-39.

<sup>7</sup> Clinical tests of cognition are numerous and widely accepted. The Wechsler Adult Intelligence Scale, 4th ed. and the Wechsler Intelligence Scale for Children assess general function. Language function can be assessed by the Boston Naming Test, Controlled Oral Word Association, or the Clinical Evaluation

treat diseases or correct disabilities but are redirected to treat persons who are merely “unlucky” in natural performance or appearance.<sup>8</sup> Nevertheless, since the aim of such technology is the elevation of cognitive function from below normal toward normal, it aims to elevate others for their benefit, and can be viewed as another moral application of enhancement technology.

Objections to the use of cognitive enhancement medications for innate cognitive deficiencies usually argue that such applications will slowly increase the mean by elevating the lowest quartile. This would have the paradoxical effect of shifting previously cognitively normal persons into the lower quartiles as the mean is pushed higher, thereby progressively increasing the cumulative number of candidates who qualify for enhancement. Other authors object that since the bell curve distribution of cognitive abilities predicts that one half of the population will always fall below the cognitive mean, enhancement for this group appears to pathologize normal cognition. Notwithstanding these objections, the elevation of deficient cognitive functioning from subnormal toward normal by the administration of enhancing medications by a physician is a *prima facie* just cause when the physician is serving the needs of another person, for that person’s benefit. Such applications also glorify God when they are aimed to improve human flourishing, in fulfillment of God’s *telos* for humans as rational agents.

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of Language Fundamentals-4. Learning and memory are assessed by Wechsler Memory Scale, Wide Range Assessment of Memory and Learning Test, or the Rey-Osterrieth Complex Figure test. Attention and Vigilance is evaluated by the Conners Continuous Performance Test, the Digit Vigilance test, or the Paced Auditory Serial Addition Test. Processing speed can be separately evaluated by the Trail Making Test, Part A. There are even tests for executive functioning such as the Wisconsin Card Sorting Test and the Delis-Kaplan Executive Function System. All of these evaluations provide overlapping objective data to help establish if there is a valid diagnosis to support prescribing cognitive enhancing medications. National Academy of Sciences, Committee for Psychological Testing, *Psychological Testing in the Service of Disability Determination* (Washington, DC: National Academy Press, 2015), 5, accessed June 25, 2018, <https://www.ncbi.nlm.nih.gov/books/NBK305230/>.

<sup>8</sup> Daniels was particularly addressing the use of human growth hormone by persons of “short stature” expressing a normal healthy genetic phenotype. Normal Daniels, “Growth Hormone Therapy for Short Stature: Can We Support the Treatment Enhancement Distinction?” *Growth Genetics and Hormones* 8, S1 (1992): 46-48.

The above discussion concerning the enhancement of patients with established cognitive diagnoses, suspected cognitive disorders, or innate cognitive deficiencies concern the ethics for medical providers. The just cause criteria for healthy patients seeking enhancement appears quite different. A physician might be acting morally to provide cognitive medication to a patient with a documented diagnosis of ADHD, but the ADHD patient might be seeking cognitive enhancement for an immoral cause, such as selling her medication to other healthy students. Although medical providers ought to probe the reasons for which a patient might seek cognitive medication, the responsibility for immoral uses of such medication rests with the patient and not with the unsuspecting provider.

### **Unjust Cause**

Just causes for cognitive enhancement entail serving others, for their benefit, for the glory of God, because these criteria fulfill Christ's kenotic virtues of humility, compassion, and reverence. Yet, technology may also be aimed toward opposite values: the vices of pride, exploitation, and sinful disobedience. When cognitive enhancement is aimed to elevate one's self over others, to the detriment of others, in sinful violation of God's laws, such aims are *prima facie* unjust and immoral. Most immoral applications of cognitive enhancement entail positional advantage, illicit gain, or recreation.

**Positional advantage.** Positional advantage occurs whenever a cognitive enhancing technology is sought primarily to elevate one person's mental performance over another person's performance within a competitive milieu. One of the most common examples includes the clandestine use of cognitive enhancing medications by healthy students before college exams to achieve a higher score than students who do not have access to such technology.



The Substance Abuse Research Center confirmed that cognitive enhancing medication use by healthy students was greatest at the most competitive colleges.<sup>9</sup> According to one Harvard University student, “At Harvard, students take Adderall and Ritalin—I guess it’s more popular than pot. They take it right before a big paper is due, or if they have to cram for a final. There is academic pressure, but most of the pressure is self-inflicted— students procrastinate and need something to allow them to still get a good grade.”<sup>10</sup> A University of Kentucky study found the most common justification that healthy students give for using cognitive enhancing medication is to “promote a positive outcome, i.e., to get better grades.”<sup>11</sup> These studies suggest that within the competitive collegiate environment, cognitive enhancing technologies are primarily employed to achieve positional advantage over other students. Vivian Chau affirms, “This kind of pressure to perform competitively is not unlike that faced by professional athletes.”<sup>12</sup> Adderall for students and steroids for athletes are two sides of the same moral coin.

Many students in these studies claim that cognitive enhancing medications are merely “a study tool.”<sup>13</sup> Yet, these same students always employ such medications for better grades; no mention is made of using these drugs to learn anything that is not part of a graded curriculum. No student claimed to use cognitive medications to learn a new language, master a musical instrument, or understand some philosophical argument unless

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<sup>9</sup> The study postulated that the association of “higher rates of non-medical prescription stimulant use with more competitive standards as well as fraternity/sorority membership suggest these factors are serving collectively as a proxy for higher socio-economic status.” Sean Esteban McCabe et al., “Non-Medical Use of Prescription Stimulants among US College Students: Prevalence and Correlates from a National Survey,” *Addiction* 99 (2005) 96-106.

<sup>10</sup> Vivian Chau, “Popping Pills to Study: Neuroethics in Education,” *Stanford Journal of Neuroscience* 1 (Fall 2007): 19.

<sup>11</sup> Alan D. DeSantis and Audrey Curtis Hane, “‘Adderall Is Definitely Not a Drug’: Justifications for the Illegal Use of ADHD Stimulants,” *Substance Use & Misuse* 45 (2010): 35.

<sup>12</sup> Chau, “Popping Pills to Study,” 19.

<sup>13</sup> DeSantis and Hane, “Adderall Is Definitely Not a Drug,” 35.

it was a requirement for a graded course. Cognitive enhancing medications are rarely employed to better learn, rather, they are employed to acquire the grades that measure whether learning has been achieved. Such uses confuse product (grades) for process (learning).

As the popularity of cognitive enhancing medications spread outside colleges into other social milieus, some are concerned that only the wealthy will have access to cognitive enhancing technologies, further increasing their positional advantage over the less wealthy. Allen Buchanan writes, “If access to this ‘enhancement’ technology depended solely on ability to pay, then its use would exacerbate and perpetuate disadvantages already suffered by the poor and various minority groups, including disadvantages that are the result of past injustices.”<sup>14</sup> Francis Fukuyama worries, “If wealthy parents suddenly have open to them the opportunity to increase the intelligence of their children as well as that of all their subsequent descendants, then we have the makings not just of a moral dilemma but of a full-scale class war.”<sup>15</sup>

Yet, some dismiss any ethical concerns about the development of parallel populations, where one cohort has access to enhancement technology while another cohort lacks similar access. John Harris reasons,

While the creation of such parallel populations seems inherently undesirable and even unfair, it is not clear that we could, or even that we should, do anything about such a prospect for reasons of justice. . . . There will always be circumstances in which we cannot prevent harm or do good to everyone, but no one surely thinks that this affords us a reason to decline to prevent harm to anyone in particular.<sup>16</sup>

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<sup>14</sup> Allen Buchanan et al., *From Chance to Choice: Genetics & Justice* (Cambridge: Cambridge University Press, 2001), 97.

<sup>15</sup> Fukuyama was specifically addressing gene selection for cognitive enhancement, but his argument applies to non-genetic cognitive enhancements as well. Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York: Picador, 2002), 16.

<sup>16</sup> Harris was specifically addressing the potential unequal access to life-extension technologies, but his lack of concern for equal access to enhancing technologies would also apply to cognitive medications. John Harris, *Enhancing Evolution: The Ethical Case for Making Better People* (Princeton, NJ: Princeton University Press, 2007), 62.

Cognitive enhancement in the classroom, workplace, and in society at large usually aims to achieve a competitive advantage over others. Alan DeSantis acknowledges that people live in “a culture whose populace is constantly seeking a competitive advantage.”<sup>17</sup> Still, whenever cognitive enhancement aims to elevate the self, rather than to elevate others, then the kenotic virtue of humility has been supplanted by the sinful vice of pride. Consequently, the use of cognitive enhancing medications for positional advantage is *prima facie* immoral.

**Illicit gain.** Illicit gain most commonly describes monetary gain by illegal activity. More generally, illicit gain entails any benefit obtained through prohibited or illegal acts. The most commonly used cognitive enhancing drugs, methylphenidate (Ritalin) and amphetamine salts (Adderall), are controlled by the Drug Enforcement Agency (DEA) as schedule II substances. According to the DEA, “Schedule II drugs, substances, or chemicals are defined as drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous.”<sup>18</sup> Other schedule II drugs include cocaine, methamphetamine, and methadone. Possession of schedule II drugs without a valid prescription is a felony, punishable with fines and imprisonment. The Stanford Journal of Neuroscience notes, “When used illegally, Adderall, or amphetamine, has another name—speed. . . Street names for Ritalin, methylphenidate, include “kiddie coke,” “poor man’s cocaine,” and most tellingly, “study buddies.” Using cognitive enhancing medications without a valid prescription is illegal, so any resulting benefits qualify as illicit gain.

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<sup>17</sup> DeSantis and Hane, “Adderall Is Definitely Not a Drug,” 43.

<sup>18</sup> United States Drug Enforcement Agency, “Drug Scheduling,” accessed July 11, 2018, <https://www.dea.gov/druginfo/ds.shtml>.

In a survey of 1,811 college students, 35 percent admitted to using cognitive stimulants but only 4 percent possessed a valid prescription.<sup>19</sup> The students without prescriptions purchased their enhancement drugs from students who had prescriptions, at \$3 to \$10 dollars per pill.<sup>20</sup> In addition to illicit monetary gain, suppliers gained social status and popularity on campus. As one student admitted, “If I can help out some friends and make some beer money, life is good.”<sup>21</sup> Illicit gain remains a significant motivation for human enhancement.

**Recreation.** The most commonly used cognitive enhancing medications share a dopaminergic pharmacology, which can produce subjective states of euphoria, similar to cocaine and amphetamines. So, it is not surprising that cognitive medications can also be abused for recreational purposes. In a survey of students at the Massachusetts College of Liberal Arts, more than 16 percent reported they had tried methylphenidate “recreationally.”<sup>22</sup> In a 2005 study of 324 college students treated for ADHD, 25 percent reported ever using their medication to “get high.”<sup>23</sup> There are numerous reports of intranasal self-administration of methylphenidate to get high.<sup>24</sup> Anecdotal testimonies for the recreational abuse of cognitive medications abound. One user describes his experimentation with Ritalin:

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<sup>19</sup> DeSantis, Webb, and Noar, “Illicit Use of Prescription ADHD,” 320.

<sup>20</sup> DeSantis, Webb, and Noar, “Illicit Use of Prescription ADHD,” 321.

<sup>21</sup> DeSantis, Webb, and Noar, “Illicit Use of Prescription ADHD,” 321.

<sup>22</sup> Quinton Babcock and Tom Byrne, “Student Perceptions of Methylphenidate Abuse at a Public Liberal Arts College,” *Clinical & Program Notes* 49 (November 2000): 143.

<sup>23</sup> H. P. Upadhyaya et al., “Attention-Deficit/Hyperactivity Disorder, Medication Treatment, and Substance Use Patterns among Adolescents and Young Adults,” *Journal of Child Adolescent Psychopharmacology* 15 (2005): 799-809.

<sup>24</sup> M. Coetzee and A. Morales, “Megadose Intranasal Methylphenidate (Ritalin) Abuse in Adult Attention Deficit Hyperactivity Disorder,” *Substance Abuse* 23, no. 3 (2002): 165-69.

Without a pesky time released coating to get in the way, I took the same 60 mg dose as last time. I didn't expect the experience to be too much different, but I was certainly wrong. Since these pills were immediate release, the high hit me much harder. Within about a half hour, I felt an intense sense of euphoria unlike anything I thought the drug would provide.<sup>25</sup>

Other recreational uses for cognitive enhancing medications include being able to enjoy "marathon party sessions," "drink more [alcohol] over a long period and not get ridiculous," and become "just funner [sic] and funnier" in social settings.<sup>26</sup>

The recreation uses of cognitive enhancing medications to achieve a pharmacological euphoria distorts proper cognition, deceiving the mind by disfiguring reality. Such uses disrespect the intellect inherent within the *imago Dei* and serve the hedonistic desires of the self, rather than compassionately serving others for God. Therefore, the recreational use of cognitive enhancing medications is *prima facie* immoral because it fails the criterion of serving a just cause.

### Transparency

The second criterion for the moral use of cognitive enhancing medications is *transparency*. Herein, *moral transparency* describes the ability to see through an agent to her actions.<sup>27</sup> The opposite of moral transparency is *anonymity*, where an agent disguises

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<sup>25</sup> "Can You Get High on Methylphenidate?" *Corpina*, accessed July 11, 2018, <https://corpina.com/methylphenidate-high/>.

<sup>26</sup> DeSantis, Webb, and Noar, "Illicit Use of Prescription ADHD," 319.

<sup>27</sup> Transparency is a term used quite differently in different contexts. Transparency in business usually refers to public access to information on company operations to promote workplace safety, environmental protection, and honest transactions with consumers. Transparency in business is intended to prevent slander, fraud, and corruption by holding agents accountable for their actions. Transparency in politics promotes open and honest government, provides truthful information for citizen decisions, and improves the social and economic behavior of politicians. Non-transparency in politics contributes to conflicts of interest, corruption, and citizen apathy. Because transparency publicly links agents to their actions, transparency helps protect accountability, honesty, and truth. J. C. Sharman, "Shopping for Anonymous Shell Companies: An Audit Study of Anonymity and Crime in the International Financial System," *Journal of Economic Perspectives* 24, no. 4 (Fall 2010): 127. Manuel Castelo Branco and Catarina Delgado, "Business, Social Responsibility, and Corruption," *Journal of Public Affairs* 12, no. 4 (April 2012): 357. Philip Rocco, "Open Government and the Politics of Public Knowledge in the United States," *Public Administration* 94, no. 3 (2016): 846-53.

his actions from public view and thereby avoids accountability.<sup>28</sup> Moral transparency in the application of cognitive enhancing medications demands that agents disclose their use of such medications, enabling the community to adjudicate the morality of his or her intentions. Public scrutiny of agents and their behavior encourages honesty and moral accountability. Whenever agents are able to commit clandestine acts in anonymity, there is a temptation to deception and irresponsibility.

### **Transparency, Community, and Introspection**

Transparency encourages ethical behavior through two principle mechanisms: (1) enabling community evaluation of an agent's moral acts, thereby inviting community influence on the agent's moral deliberations; and (2) encouraging the agent's moral self-evaluation and personal accountability. In the first mechanism, public disclosure of actions invites public scrutiny of the agent's intentions. Jennifer Jacquet's research argues that transparency enables a shame and honor mechanism to influence an agent to act in a more "socially normative" manner. Participants in her experiment who knew their actions could be made public "contributed approximately 50 percent more to the public good, as compared with the control treatment in which all players retained their anonymity."<sup>29</sup> In

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<sup>28</sup> *Anonymity* is distinct from *privacy* and *confidentiality*. *Anonymity* concerns the actions of individuals within the public sphere wherein the identity of the agent is intentionally unknown or deliberately disguised. *Anonymity* serves moral purposes, for instance, in the collection of census data or the facilitation of charitable donations. *Anonymity* serves immoral purposes when it is employed to avoid culpability for criminal activity or other immoral behavior. In contrast, *privacy* describes the actions of individuals within the private sphere where there is a legal obligation or a societal expectation that the agent's actions will remain unavailable to other people. Examples of privacy protections include laws against unauthorized surveillance and voyeurism. *Confidentiality* entails the actions of individuals within either the private or public spheres which are to remain private except to authorized parties for authorized purposes. Examples include medical data, which are available to authorized healthcare professions for the purposes of treating the agent. Other examples of *confidentiality* might include attorney-client communication, grand jury testimony, and voter identification. *Privacy* and *confidentiality* are essential rights for individuals within a democratic free state.

<sup>29</sup> Jennifer Jacquet et al., "Could Shame and Honor Save Cooperation?" *Communicative & Integrative Biology* 5, no. 2 (Mar/Apr 2012): 209-13.

another study, moral anonymity actually contributed to anti-social behavior.<sup>30</sup>

Transparency encourages agents to act in a socially responsible manner.

In the use of cognitive enhancing medications, public disclosure of use would force the agent to ostensibly share credit for his academic achievement with the pharmacist. After all, if one might have earned a 90 percent on the exam without Adderall, but received a 100 percent using Adderall, it was the Adderall that achieved the last 10 percentage points. For students without access to Adderall, the positional advantage of illicitly using Adderall appears to be cheating.<sup>31</sup> Neuroscientist Vivian Chau concludes, “Athletes who take steroids to perform better in sports are stigmatized for their illicit drug use—so should students with stimulants. . . . Most importantly, a stimulant-taking student is cheating herself . . . perhaps losing ‘the love of learning.’”<sup>32</sup> Transparency exposes dishonesty and protects truth.

The other mechanism by which transparency encourages ethical behavior is by promoting moral self-evaluation and personal accountability. Moral self-deception is a well-established psychological and theological defense mechanism for unethical behavior.<sup>33</sup> From the psychological perspective, moral self-deception presents as a

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<sup>30</sup> Tatsuya Nogami, “Effects of Anonymity on Antisocial Behavior Committed by Individuals,” *Psychological Reports* 102, no. 1 (February 2008): 119-30.

<sup>31</sup> Duke University students received an email stating, “The unauthorized use of prescription medication to enhance academic performance has been added to the definition of cheating.” Shaheen E. Lakhan and Annette Kirchgessner, “Prescription Stimulants in Individuals with and without Attention Deficit Hyperactivity Disorder: Misuse, Cognitive Impact, and Adverse Effects,” *Brain and Behavior* 2, no. 5 (September 2012): 670.

<sup>32</sup> Chau, “Popping Pills to Study,” 20. Not everyone agrees. In the journal *Nature*, Henry Greely et al. argues that using cognitive enhancement is not like cheating in sports by using anabolic steroids because there are no formal academic rules to violate as there is in sports competitions. Henry Greely et al., “Towards Responsible Use of Cognitive-enhancing Drugs by the Healthy,” *Nature* 456 (December 2008): 702-5.

<sup>33</sup> Other popular terms equated with moral self-deception include self-serving bias, self-protective beliefs, positive illusions, or self-justification. Eric L. Johnson, “Protecting One’s Soul: A Christian Inquiry into Defensive Activity,” *Journal of Psychology and Theology* 28, no. 3 (2000): 175.

subconscious inhibition of the conscious awareness of some reality for the purpose of avoiding the shame associated with immoral behavior.<sup>34</sup> Psychologist Sarah Paul provides this example: “The man who systematically misplaces important messages for his wife and creates emergencies to force her to stay home does these things because he intends to undermine her professional career, although his shame prevents awareness of this intention.”<sup>35</sup> Transparency inspires moral introspection and promotes personal accountability.

### **Anonymity**

The opposite of moral transparency is anonymity. Anonymity remains a paradox to a free society. Anonymity can confer certain benefits to citizens in the voting booth, the jury room, or for whistle-blower testimony. Anonymity can also promote a charitable humility, for instance, by allowing for anonymous donations. These advantages notwithstanding, anonymity often inflicts far more damage on society, public security, and personal morality than is usually recognized. Many of the disadvantages of anonymity can be allocated to one of three categories of injuries: individual injustice, collective injustice, and identity instability.

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<sup>34</sup> Psychology generally accepts the Freudian tripartite psyche of id, ego, and superego, in which the true motivations for acts of the subconscious id may remain hidden from the moral evaluations of the superego. By contrast, philosophy remains more circumspect concerning the connections between intentions and actions. G. E. Moore postulated a transparent connection: intentions are self-intimating in the experience of the act. Alex Byrne contended that since beliefs give rise to intentions, and beliefs are transparent to the agent, then any intentions of the agent are also transparent to introspection. G. Ryle held that agents perceive their intentions from their actions, in the same way that agents deduce the intentions of other minds from their actions. All of these theories conclude that intentions are transparent to the agent. In contrast, Peter Carruthers insisted that intentions remain rather epistemically opaque to the agent. Philosopher Sarah Paul concludes, “Metaphysically economical, privileged, and first-personally unique access [to intentions] can and should lead us to embrace a view that most have thought is antithetical to transparency.” Sarah Paul, “The Transparency of Intention,” *Philosophical Studies* 172 (2015): 1532. The Bible appears to argue that one’s intentions remain available to deliberate introspection (2 Cor 13:5) but that sin so obscures the view that intentions may appear opaque and uncontrolled (Rom 7:15).

<sup>35</sup> Paul, “Transparency of Intention,” 1538.



Most apparent injuries conveyed by anonymity are against retributive justice. Persons committing acts against the law or against social mores may evade scrutiny and culpability through anonymity. At its most primitive level, anonymity is represented by the mask, such as the robber's ski mask, the KKK hood, or the terrorist's bandana. At a more sophisticated level, Swiss bank accounts and offshore shell corporations shield individuals from scrutiny.

Anonymity not only shields individuals from legal culpability but also protects individuals from social accountability. Anonymity in chat rooms encourages *ad hominem* attacks (flaming), ridicule (cyberbullying), inappropriate sexual advances (cyberstalking), and all manner of generally offensive behavior (trolling). The office suggestion box can invite specious accusations against coworkers or management that would have never been spoken publicly. Pseudonyms allow authors to escape accountability for inaccurate or immoral discourse. Historian Christopher Kelly explains, "Anonymity gives them freedom to pursue personal vendettas with impunity . . . causing a predominance of self-seeking, bad faith, venom, and irresponsibility."<sup>36</sup> Bioethicist Robert Baker observes,

Cloaked by anonymity users feel free to pen, type, or tweet their anti-Semitic (ageist, anti-intellectual, anti-Muslim, homophobic, racist, sexist) hate speech hidden behind their hashtags or pseudonyms. Since their anonymous words do not endanger their standing in any community of peers, authors feel free to vent slurs and to engage in character assassination.<sup>37</sup>

In short, anonymity enables and encourages persons to commit immoral acts because it provides a mechanism to avoid culpability and accountability for such acts.

A second category of disadvantages conveyed by anonymity is the protection it affords for collective misbehavior. Large groups of people may commit immoral or illegal actions that each individual of the group would normally refuse to participate. Mobs generate a raw power that can strike out with unrestrained passion or violence. The lynch

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<sup>36</sup> Christopher J. Kelly, *Rousseau as Author: Consecrating One's Life to the Truth* (Chicago: University of Chicago Press, 2003), 8-28.

<sup>37</sup> Robert Baker, "Against Anonymity," *Bioethics* 28, no. 4 (2014): 167.

mob remains the perennial example, but today it might also include the “hacktivist” group *Anonymous* donning their Guy Fawkes masks or the Molotov-throwing Palestinian youths wearing their bandanas. The mob multiplies its power by amassing individuals to collective action, yet, it disperses accountability because each individual assumes only a small portion of the culpability for such acts. Functioning as an immorality multiplier, within the mob “the sin of thousands goes unpunished.”<sup>38</sup>

The third category of harms created by anonymity is to the individual’s identity. Anonymity permits the person to effectively become someone else. One glaring example is the growth in online cyber-bullying, psychologist John Suler calls this the “online disinhibition effect” whereby “people have the opportunity to separate their actions online from their in-person lifestyle and identity.”<sup>39</sup> He concludes, “In the case of expressed hostilities or other deviant actions, the person can avert responsibility for those behaviors, almost as if superego restrictions and moral cognitive processes have been temporarily suspended from the online psyche.”<sup>40</sup> Anonymity permits a fracturing of the self into multiple identities, one publicly accountable to law and custom, the others free to assume any number of alternate darker personalities. Internet trolling, identity theft, and child pornography are but a few of the online behaviors that anonymity promotes.

To summarize, anonymity conveys few advantages but inflicts multitudes of harm. Jury deliberations, secret ballot, or whistleblower protections are considered examples of the advantages of anonymity, but since the identities of jurors, voters, and whistleblowers are officially known by presiding authorities, these examples only represent a type of pseudo-anonymity. Anonymity extends well beyond privacy. When agents clandestinely use enhancing medications for positional advantage, their private use

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<sup>38</sup> Edmund Burke, *Reflections on the Revolution in France* (Indianapolis: Liberty Fund, 1989), 260.

<sup>39</sup> John Suler, “The Online Disinhibition Effect,” *Cyberpsychology & Behavior* 7 (2004): 322.

<sup>40</sup> Suler, “Online Disinhibition,” 322.

becomes public because non-enhanced persons suffer positional disadvantage. The non-enhanced remain unaware of this disadvantage because the enhancers remain anonymous. Anonymity protects immoral agents.

In Glaucon's version of *The Ring of Gyges*, the anonymity of invisibility corrupts everyone. Richard Boyd concludes, "In a world of anonymous actors, injustice would reign."<sup>41</sup> With few exceptions, anonymity encourages immoral behavior by shielding the agent from public scrutiny and accountability. Absolute anonymity corrupts absolutely. Transparency is the antidote to anonymity.

Moral transparency ensures that the agent and his or her actions cannot be morally severed. If agents and actions are transparent, then public accountability and culpability are preserved. Where laws and mores can be applied to such acts, lawful and moral behavior by agents is encouraged, in some cases even enforced. For these reasons, transparency in the cognitive enhancement of individuals facilitates the moral application of such technology and comprises the second criterion for the just use of cognitive enhancing medications.

### **Biblical Transparency**

From the theological perspective, self-deception concerns a refusal to acknowledge sin before God, or fellow sinners, in order to shift blame, suppress the truth, and escape personal culpability for one's sin.<sup>42</sup> Kierkegaard insisted that transparency before God defines the Christian faith.<sup>43</sup> According to theologian Eric Johnson, self-

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<sup>41</sup> Richard Boyd and Laura Field, "Blind Injustice: Theorizing Anonymity and Accountability in Modern Democracies," *Polity* 48, no. 3 (July 2016): 336.

<sup>42</sup> Self-deception is thoroughly condemned in the Bible (Rom 1:18; Gal 6:3; 1 John 1:8; Jas 1:26). Evil men are self-deceived and hypocritical (Pro 1:18, 6:32; Matt 23:27). Self-deception lies at the center of the crucifixion, where Christ says, "They do not know what they are doing" (Luke 23:34).

<sup>43</sup> Kierkegaard writes, "Faith is: that the self in being itself and in wanting to be itself is grounded transparently in God." Soren Kierkegaard, *The Sickness unto Death* (London: Penguin Books, 2004), 114.

deception operates at two levels, one within divine command and the other within virtue theory. He explains, “It seems unavoidable to conclude that some versions of self-deception are likewise morally reprehensible and forbidden, subsumed under the general command of God not to lie, but to be truthful to others and to oneself.”<sup>44</sup> As to virtue, Johnson writes, “Transparency before God and with oneself is a morally desirable trait towards which we should strive. We cannot know ourselves; nevertheless, from the Christian standpoint, it is virtuous to be honest with oneself.”<sup>45</sup> Transparency convicts sin and encourages righteousness.

From a pragmatic perspective, transparency is best implemented through formal policy. For example, the United States military has developed guidelines for the approved use of the neurostimulants Modafinil for sustained operations (greater than 24 hours). Such policies are developed by qualified medical personnel and implemented by military experts based upon objective data and explicit goals. In short, the individual soldier does not subjectively choose the type and duration of cognitive enhancing medication, it is prescribed by dedicated personnel according to objective policy. As a study published in *Military Medicine* concluded, “Sleep-deprived individuals are themselves poor judges of their own cognitive performance (brain areas that are involved in self-assessment may be impaired).”<sup>46</sup> Conversely, the policy of many teaching hospitals is the formal prohibition of cognitive enhancing medications for doctors in training. A 2003 Residency Program Director’s Alert states, “There is no role for modafinil use by resident physicians. It is unethical and irresponsible for physicians to use a stimulant drug while performing duties

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<sup>44</sup> Johnson, “Protecting One’s Soul,” 183.

<sup>45</sup> Johnson, “Protecting One’s Soul,” 184.

<sup>46</sup> Daniel S. Moran, “Psychostimulants and Military Operations,” *Military Medicine* 172, no. 4 (2007): 384.

related to patient care.”<sup>47</sup> Formal policies for the approved use of cognitive enhancing medications promotes transparency and discourages abuses.

Transparency is a vital second criterion for determining the morality of an application of cognitive enhancing medication because it exposes the first criterion (just cause) to public scrutiny and personal introspection. If an agent fails to meet the just cause criterion, transparency invites community critique and censure. With transparency it is more difficult for self-deception to rationalize an immoral action. If just cause is the path toward moral enhancement, transparency seeks to recruit the community to help to keep people from getting lost.

### **Temporality**

Temporality is a third criterion for a biblical Christocentric value to guide human enhancement technology. For human enhancement technology, temporality describes the duration of the medication’s effects upon the agent’s cognition. The enhancement might be effective for only a few hours, for an entire lifetime, or for countless future generations. In general, the duration of the enhancement ought to correlate to the duration of the just cause. For instance, if a surgeon serving during a natural disaster requires cognitive enhancement to remain alert for unusually extended hours in order to save lives (just cause) and takes these neurostimulants according to established public policy (transparency), then the chosen cognitive enhancement ought to last only until the crisis subsides (temporality). In the same way, if a cognitively challenged child will need enhancement for several years in order to learn to read and write, then the selected enhancement technology should last for years.

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<sup>47</sup> “Provigil: Drug May Help Sleepy Residents, But Use with Caution,” Residency Program Director’s Alert (November 2003): 103-5, reported in Kelli J. Westcott, “Modafinil, Sleep Deprivation, and Cognitive Function in Military and Medical Settings,” *Military Medicine* 170, no. 4 (2005): 333.

Most cognitive enhancing medications demonstrate a short duration of effectiveness of only several hours. The half-life of methylphenidate (Ritalin) ranges from 1.3 to 7.7 hours, averaging about 3.5 hours.<sup>48</sup> The half-life of dextroamphetamine (Adderall) is about 10 hours.<sup>49</sup> The half-life of Modafinil (Provigil) is about 15 hours.<sup>50</sup> Short duration is one of the attractive features of the most popular pharmacologic neurostimulants used for cognitive enhancement. If an undesirable side effect presents, the medication can be discontinued. Also, since such stimulants make sleep difficult, their short duration permits normal diurnal sleep cycles. Situations of short duration, which fulfill the criterion of just cause and transparency, require only a short duration of cognitive enhancement. Using neurostimulants that last longer than the moral situation demands risks medical side-effects, psychological dependency, and immoral temptations.

### **Medical Risks**

The problem is that there is increasing evidence that chronic use of many cognitive enhancing drugs risks serious adverse effects. Comparatively minor reactions include loss of appetite, dry mouth, insomnia, irritability, nausea, dizziness, and palpitations.<sup>51</sup> More serious effects include heart damage, including cardiomyopathy,

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<sup>48</sup> The half-life of a medication is the period of time required for the concentration or amount of drug in the blood plasma to be reduced by one-half. United States Food and Drug Administration, “Ritalin LA (Methylphenidate Hydrochloride) Extended-Release Capsules Prescribing Information,” accessed July 13, 2018, [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2013/021284s020bl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2013/021284s020bl.pdf).

<sup>49</sup> United States Food and Drug Administration, “Medication Guide: Adderall XL,” accessed July 13, 2018, [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2007/021303s015bl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2007/021303s015bl.pdf), 2.

<sup>50</sup> United States Food and Drug Administration, “Provigil (modafinil) Tablets [C-IV],” accessed April 9, 2019, [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwjC14mk-cPhAhUOqZ4KHO2mBIOQFjABegQIBRAC&url=https%3A%2F%2Fwww.accessdata.fda.gov%2Fdrugsatfda\\_docs%2Flabel%2F2015%2F020717s037s0381bl.pdf&usg=AOvVaw2j3HSI5htcEoUP5S5DBA3R](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwjC14mk-cPhAhUOqZ4KHO2mBIOQFjABegQIBRAC&url=https%3A%2F%2Fwww.accessdata.fda.gov%2Fdrugsatfda_docs%2Flabel%2F2015%2F020717s037s0381bl.pdf&usg=AOvVaw2j3HSI5htcEoUP5S5DBA3R).

<sup>51</sup> These are but a very few of the extensive list of potential adverse reactions to psychostimulants included in the FDA required package insert for Adderall (amphetamine mixed salts). Other minor reactions include tachycardia, elevation of blood pressure, overstimulation, restlessness, irritability, euphoria, dyskinesia, dysphoria, depression, tremor, tics, aggression, anger, logorrhea, dermatillomania, blurred vision, mydriasis, unpleasant taste, diarrhea, constipation, urticaria, rash, impotence, changes in libido, and

dysrhythmias, and necrotizing vasculitis.<sup>52</sup> In a study of 43,999 methylphenidate users there was a 1.8-fold increase in risk of sudden death or ventricular arrhythmia.<sup>53</sup> To mitigate these medical risks, cognitive enhancing medications should only be used for the shortest duration that addresses the situation requiring its application.

Besides the medical risks of using cognitive stimulants for long durations, there may be prolonged psychological changes to the agent's personality or psyche. Chronic use of psychostimulants has also exacerbated existing psychiatric disorders or initiated new psychoses. The mechanism of action causing these complications is similar to that of cocaine.<sup>54</sup> Also, evidence of amphetamine addiction and tolerance imply that these drugs cause alterations in brain architecture and neurochemistry through the process of neuroplasticity.<sup>55</sup> Since addiction treatment offers such a low success rate, the neuroplastic changes wrought by neurostimulants appears very difficult to repair.

### **Psychological Risks**

Dependency on these drugs is not only biochemical; there is a psychological placebo effect as well. Students who believed they were receiving cognitive enhancing medications when they were actually receiving a placebo reported better mental focusing

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alopecia. Adderall (dextroamphetamine/amphetamine) Package Insert, accessed July 24, 2019, <https://www.iodine.com/drug/adderall/fda-package-insert>.

<sup>52</sup> In February 2005, Health Canada removed Adderall XL from the Canadian market due to these concerns. Lakhan and Kirchgessner, "Prescription Stimulants in Individuals," 661-77.

<sup>53</sup> The authors point out that while the association was statistically robust, the causative relationship could not be established by their study. H. Schelleman et al., "Methylphenidate and Risk of Serious Cardiovascular Events in Adults," *American Journal of Psychiatry* 169 (2012): 178-85.

<sup>54</sup> J. P. Chen, "Methamphetamine-Associated Acute Myocardial Infarction and Cardiogenic Shock with Normal Coronary Arteries: Refractory Global Coronary Microvascular Spasm," *Journal of Invasive Cardiology* 19, no. 4 (2007): E89-92.

<sup>55</sup> In animal studies, even exposure to low doses of methylphenidate produced permanent changes to the brain. G. H. Moll et al., "Early Methylphenidate Administration to Young Rats Causes a Persistent Reduction in the Density of Striatal Dopamine Transporters," *Journal of Child and Adolescent Psychopharmacology* 11 (2001): 15-24.

during cognitive testing even though their cognitive scores did not increase.<sup>56</sup> In many ways, users might come to see their normal cognitive functioning as deficient or pathological, altering perception to see such medications as therapeutic and compulsory, rather than complementary and voluntary.<sup>57</sup> Further, these drugs may suppress normal emotions, creativity, and sociability.<sup>58</sup> There have been very few studies of the long-term effects of neurostimulants (greater than 24 months follow-up) to fully predict the risks.

### **Moral Risks**

Finally, the criterion of temporality guards against the instrumental abuse of a temporary situation in order to rationalize a cognitive enhancement drug of prolonged or permanent duration. If technology should become available that would permanently enhance cognition, a single temporary situation fulfilling the just cause and transparency criterion may not subsequently fulfill the criterion for temporality.

Returning to the example of the disaster-relief surgeon morally choosing cognitive enhancement for a just cause, he might be tempted to select *permanent* enhancement, arguing that unforeseen future needs would satisfy the moral criterion for his decision. Such rationalization might eventually apply to genetic cognitive enhancement, should such technology become available. Because such permanent enhancement exceeds the duration of the justifying situation, it remains susceptible to abuse for unjust causes.

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<sup>56</sup> Alison Looby and Mitch Earleywine, "Expectation to Receive Methylphenidate Enhance Subjective Arousal But Not Cognitive Performance," *Experimental and Clinical Psychopharmacology* 19, no. 6 (December 2011): 433-44.

<sup>57</sup> Wolpe notes, "Clearly, some of the top selling drugs in the world today are being used by patients who fit no traditional definition of pathology, yet still see in their own functioning a deficit that these drugs address." Wolpe, "Treatment, Enhancement, and the Ethics of Neurotherapeutics," 392.

<sup>58</sup> Scott Vrecko, "Just How Cognitive Is 'Cognitive Enhancement'? On the Significance of emotions in University Students' Experiences with Study Drugs," *AJOB Neuroscience* 4, no. 1 (January-March 2013): 4-12. Marcha Farah reviews several conflicting studies and concludes that "there is no clear pattern in the literature on ADHD and stimulants regarding stimulant effects of creativity." Marcha J. Farah et al., "When We Enhance Cognition with Adderall, Do We Sacrifice Creativity? A Preliminary Study," *Psychopharmacology* 202 (2009): 541-47. Farah's own work indicates that Adderall may impair the convergent task skills of "higher-performing individuals" only.



Once the emergency has passed, cognitive enhancement would subsequently remain available at risk of serving positional advantage, illicit gain, or recreation. Temporality helps to guard against such abuses.

### **Proportionality**

Proportionality describes the relationship between a part and the whole. For cognitive enhancement, a proportionality criterion requires that the expected quantitative effects of the cognitive enhancement are titrated to the quantitative requirements of the just cause. This concerns not only the correct dosing for each individual, but also selecting the medication that most exclusively enhances the specific cognitive skill that the just cause demands. The criterion of proportionality requires that the proper drug at the proper dose be selected which best serves the circumstances of the just cause.

### **Proper Dosage**

The known effects of many cognitive enhancing medications change with dosage. The initial dosage of almost any medication ought to be the minimal amount expected to produce observable effects. This dosing strategy guards against overdosing patients who are sensitive to dopaminergic drugs, identifies patients with idiosyncratic or immune reactions to the drug, and affords the shortest duration of action in the case of undesirable side effects.<sup>59</sup> Because each person's neural biochemistry is unique, the dosage may need subsequent increases until the desired effect is achieved. Also, the incidence of increasing tolerance to the medication may require incremental increases

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<sup>59</sup> Numerous studies have demonstrated a co-tolerance between ADHD stimulant medications and cocaine. Rats exposed to methylphenidate were subsequently more likely to self-administer cocaine (activate a delivery mechanism in their cages) which might explain the higher incidence of illicit drug use by persons receiving legal neurostimulants for ADHD. The common mechanism of action is the increase firing rates of dopamine neurons in the ventral tegmental area of the brain. C. L. Brandon et al., "Enhanced Reactivity and Vulnerability to Cocaine Following Methylphenidate Treatment in Adolescent Rats," *Neuropsychopharmacology* 25 (2001): 651-61.

into the future, or even a change to another neurostimulant to which the patient has not developed a tolerance.<sup>60</sup>

From a moral perspective, proportionality guards against abusing a just cause to justify using neurostimulants at dosages that produce euphoria, an unjust cause. Lab animals who are permitted to self-dose methylphenidate, tend to select doses to achieve euphoria, similar to animal studies with cocaine.<sup>61</sup> In a study of 334 college students diagnosed with ADHD and medically treated with neurostimulants, 25 percent reported also using their medication at higher doses “to get high.”<sup>62</sup> The criterion of proportionality guards against abusing neurostimulants by using them at doses that ultimately serve unjust causes.

### **Target Attribute**

The efficacy of each cognitive enhancing medication varies slightly according to (1) the unique neurochemistry of each patient and (2) the specific cognitive tasks that require enhancing. The common etiology of ADHD patients is impaired catecholamine neurotransmission in the prefrontal cortex, but each person’s unique biochemistry makes it difficult to predict which catecholamine medication will work best.<sup>63</sup> In a study of 174 patients, 28 percent responded better to amphetamines, 16 percent responded better to methylphenidate, and 41 percent responded equally to both medications.<sup>64</sup>

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<sup>60</sup> T. E. Robinson and J. B. Becker, “Enduring Changes in Brain and Behavior Produced by Chronic Amphetamine Administration: A Review and Evaluation of Animal Models of Amphetamine Psychosis,” *Brain Research* 396 (1986): 157-98.

<sup>61</sup> S. Schenk and S. Izenwasser, “Pretreatment with Methylphenidate Sensitized Rats to the Reinforcing Effects of Cocaine,” *Pharmacology Biochemistry and Behavior* 72 (2002): 651-57.

<sup>62</sup> Upadhyaya et al., “Attention-Deficit/Hyperactivity Disorder,” 799-809.

<sup>63</sup> A. F. Arnsten, “Fundamentals of Attention-Deficit/Hyperactivity Disorder: Circuits and Pathways,” *Journal of Clinical Psychiatry* 67, S8 (2006): 7-12.

<sup>64</sup> E. L. Arnold, “Methylphenidate vs. Amphetamine: Comparative Review,” *Journal of Attention Disorders* 3 (2000): 200-211.

Also, different cognitive function tests evaluate different cognitive skills and are affected differently by various cognitive medications. In a study of 125 children, methylphenidate was superior to amphetamine for improving scores on the Conners Teacher Rating Scale-Revised (CTRS-R), which measures conduct problems, hyperactivity, and inattentive-passive factors.<sup>65</sup> In another study of 33 hyperactive boys, methylphenidate and amphetamine were equally successful for improving reading, but amphetamine produced a greater improvement in math scores.<sup>66</sup> Although similar studies comparing different neurostimulants have not been performed on healthy persons, similar differences in cognitive effects can be expected.

Cognition entails a vast array of different intellectual skills. The criterion of proportionality encourages matching the proper drug at the proper dose to target the proper skill to address the just cause. If higher doses of a medication produce side effects such as euphoria that interfere with serving others for their benefit, then such dosage is immoral according to the criterion of proportionality. If the selected medication targets cognitive skills which are not demanded by the particular situation requiring enhancement, then that drug selection is immoral according to proportionality.

### **Reverence**

The final criterion for determining the moral application of cognitive enhancing technology is *reverence*. Reverence is usually defined as deep respect, honor, or deference toward God.<sup>67</sup> In the Bible, reverence expresses a relationship with God in emotion, attitude, and ethical obedience.

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<sup>65</sup> D. Efron, F. Jarman, and M. Barker, "Methylphenidate versus Dexamphetamine in Children with Attention Deficit Hyperactivity Disorder: A Double-Blind, Crossover Trial," *Pediatrics* 100 (1997): E6.

<sup>66</sup> J. Elia et al., "Classroom Academic Performance: Improvement with Both Methylphenidate and Dextroamphetamine in ADHD Boys," *Journal of Child Psychology and Psychiatry* 34 (1993): 785-804.

<sup>67</sup> Geoffery W. Bromiley, ed., *The International Standard Bible Encyclopedia* (Grand Rapids: Eerdmans, 1988), 4:177.

## Reverence as Emotion

In the Old Testament, “reverence” is usually translated from the Hebrew *אָרַא*, alternatively translated as “fear.”<sup>68</sup> Hebrew scholar Mayer Gruber explains, in the Old Testament, “what is commonly called in English ‘fear’ refers to a spectrum of emotions, attitudes, and behavior.”<sup>69</sup> When *emotion* is in mind, *אָרַא* is translated as “fear.” In the New Testament, reverence is similarly connected with fear (*φόβος*) or caution (*εὐλαβέομαι*) (Heb 11:7, 12:28; 1 Pet 3:15). The emotion of fear properly results from the recognition that God has the power to decree “heaven-sent reprisals” for disobedience. Yet, the emotion of fear is not exclusively an anxiety of dread, like one might fear a malicious captor. Fear can also express an anxiety about offending someone, like a dutiful son might fear disappointing his loving father. The former is a servile fear, the latter is a filial fear.<sup>70</sup> As creatures of God, a servile fear of God is appropriate. Yet, as children of God, all persons are called to a filial fear. The fear of the Lord is not only the beginning of wisdom, but an expression of love.

## Reverence as Attitude

Reverence can be more than simply an emotional reaction toward God; reverence can also be a predisposition, orientation, or *attitude*. When attitude is in mind, *אָרַא* is translated as “reverence,” rather than “fear.”<sup>71</sup> For example, in the translation of *אָרַא* in Leviticus 19:3, the AV writes “*Fear* every man his mother and father,” the NASB says,

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<sup>68</sup> In the NASB, every Old Testament appearance of “revere,” “revered,” or “reverence,” is translated from *אָרַא* or *אָרַאָה*. Reverence, awe, and fear are nearly synonymous. For example, Jos 4:14 (*אָרַא*) is translated as “revered” (NASB), “awe” (NIV, RSV), or “fear” (KJV).

<sup>69</sup> Meyer Gruber, “Fear, Anxiety and Reverence in Akkadian, Biblical Hebrew and Other North-west Semitic Languages,” *Vetus Testamentum* 40, no. 4 (October 1990): 420.

<sup>70</sup> R. C. Sproul, “Throughout the Bible We Are Told to Fear God. What Does That Mean?” Ligonier Ministries, July 14, 2009, accessed July 30, 2018, <https://www.ligonier.org/learn/qas/throughout-bible-we-are-told-fear-god-what-does-me/>.

<sup>71</sup> Gruber writes, “*yr* ‘to revere’ describes an appropriate attitude toward God.” Gruber, “Fear, Anxiety and Reverence,” 420.

“Every one of you shall *revere* his father and mother,” and the NIV states, “Each of you must *respect* your father and mother.” In Exodus 20:12 and Deuteronomy 5:16, God commands, “Honor (כָּבֵד) your father and your mother.” Hence, reverence, respect, and honor are nearly synonymous for the emotion of filial fear.

### Reverence and Ethics

The emotion of filial fear, experienced from an attitude of deep respect and devotion, ought to produce ethical acts of obedience. When ethics is in mind, יָרָא refers to acts of honor to God, such as “I will bow down in reverence” (Ps 5:7).<sup>72</sup> For example, Obadiah “feared the Lord” (יָרָא אֶת־יְהוָה) so he hid one hundred prophets of the Lord (1 Kgs 18:3-4). Conversely, God commanded the Hebrews not to fear (לֹא תִירָאוּ) other gods; do not to bow down before them (Jdg 6:10). In the New Testament, the “fear of the Lord” (φόβος τοῦ κυρίου) is equated with the “fear of Christ” (φόβος χριστου) [Eph 5:21]). Thus, an attitude of reverence moves filial fear toward obedient acts of service to God.

As a criterion for ethical adjudication, reverence demands that moral acts bring glory and honor to God. The Psalmist promises to glorify the Lord (Ps 86:12). Jesus glorified the Father through His obedience on the cross (John 17:1). Peter proclaims, “Whoever serves, let him do so as by the strength which God supplies; so that in all things God may be glorified through Jesus Christ” (1 Pet 4:11). Paul exhorts, “Whatever you do, do all to the glory of God” (1 Cor 10:31; see also Col 3:17). As humans are the *imago Dei*, Simon Kistemaker concludes, “nothing in our conduct should obstruct God’s glory from being reflected in us.”<sup>73</sup> Calvin admonishes, “There is no part of our life, and no action so minute, that I ought not to be directed to the glory of God.”<sup>74</sup>

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<sup>72</sup> אֶל־הַיְכָל־קִדְשְׁךָ יִרְאֶתְךָ (At Your holy temple I will bow in reverence for You).

<sup>73</sup> Simon J. Kistemaker, *Exposition of the First Epistle to the Corinthians*, New Testament Commentary (Grand Rapids: Baker, 1993), 358.

<sup>74</sup> John Calvin, *Commentary on the Epistles of Paul the Apostle to the Corinthians*, trans. John

A criterion of reverence is included in John Feinberg and Paul Feinberg’s self-described “modified form of the divine command theory” of biblical ethics.<sup>75</sup> Recognizing that divine command cannot expressly address every possible ethical situation, they offer “eight questions (tests) that each Christian must face when deciding whether or not to indulge in a given activity. . . . A final test is, *does it bring glory to God?*”<sup>76</sup> Similarly, the final test for a moral use of cognitive enhancing technology is, *does it bring glory to God?*

This final criterion of reverence stands over the previous four criteria to provide the ultimate *telos* for ethical behavior. In the Christological virtues, one might act to serve others (humility) for their benefit (compassion), yet fail to give all the glory to God. Many persons working in secular relief organizations are serving with humility and compassion, but they do not perform such acts to honor God.<sup>77</sup> Concerning the moral criterion presented, one might accept enhancement to serve others (just cause), with full disclosure (transparency), for a limited duration (temporality) and effect (proportionality), but still fail to honor God. A surgeon serving during a natural disaster, properly disclosing her use of a cognitive enhancing medication of short duration and limited effect, might tacitly, even inadvertently, accept all the credit for her benevolence. Reverence demands that, to the extent possible, the agent expressly gives the glory for every good act to God alone.

### Examples

In the previous chapter, it was argued the *phronesis* is essential for adjudicating moral decisions. *Phronesis*, it was asserted, suggests that cognitive enhancing technologies

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Pringle (Grand Rapids: Baker, 2009), 1:347.

<sup>75</sup> John Feinberg and Paul Feinberg, *Ethics for a Brave New World* (Wheaton, IL: Crossway, 2010), 37.

<sup>76</sup> Feinberg and Feinberg, *Ethics for a Brave New World*, 53-55, emphasis original.

<sup>77</sup> When non-believers perform righteous acts, they are demonstrating the power of natural law “written on their hearts.” Yet, they still do not recognize or honor God as the source of such righteousness (Rom 2:14-15).

should submit to a precautionary principle which demands that moral choices be decided according to a predetermined set of moral criteria. Five criteria to guide the *phronesis* for applying cognitive enhancement in a moral manner were then offered. Yet, *phronesis* is also served, to some degree, by studying specific examples to illustrate the practical application of these proposed criterion for moral cognitive enhancement.<sup>78</sup> This chapter closes with the following examination of how cognitive enhancement might be morally evaluated by the ambitious student, the fatigued rescuer, the dutiful soldier, and the diligent scholar.

### **The Ambitious Student**

The vast majority of neurostimulant use by healthy persons occurs in the classroom. The most frequent motivation offered by healthy students who have taken illicit cognitive enhancing medications was to “to get better grades” or “to stay awake and study longer.”<sup>79</sup> Neurostimulant use remains highest at more competitive colleges.<sup>80</sup> Consequently, if grades reflect a ranking among students (i.e., grading on a curve), then the classroom constitutes a competitive milieu where cognitive enhancement affords positional advantage, not unlike the use of anabolic steroids in competitive sports. As this dissertation has argued, to elevate one’s self to the disadvantage to others is a violation of

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<sup>78</sup> The examples provided in this chapter are not intended to provide a taxonomy of casuistry, but rather to simply illustrate how specific situations might be morally adjudicated against the claims of this dissertation’s moral argument. One of the difficulties inherent in any set of moral criteria is the duality between absolutism and relativism. In *The Abuse of Casuistry*, Albert Jonsen and Stephen Toulmin explain, On one side are those who see some one particular set (or “code”) of rules and principles as correct, not just now and for them but *eternally* and *invariably*. . . the other side are those who reject as unwarranted all attempts to define so unique and eternal a body of ethical principles binding on peoples at all times and in all cultures . . . real-life application of moral, legal, and administrative rules calls always for the exercise of human perceptiveness and discernment. (Albert R. Jonsen and Stephen Toulmin, *The Abuse of Casuistry: A History of Moral Reasoning* [Berkeley, CA: University of California Press, 1988], 6-9, emphasis original)

<sup>79</sup> DeSantis, Webb, and Noar, “Illicit Use of Prescription,” 317.

<sup>80</sup> McCabe et al., “Non-Medical Use of Prescription Stimulants,” 96-106.

humility, compassion, and reverence; such applications of cognitive enhancement fail the just cause criterion.

However, if grades are a measure of the mastery of the course information and skills (i.e., every student could potentially get an “A”), then the classroom is not a competitive milieu and there may be no risk of positional advantage. Yale law professor Matt Lamkin explains,

If one views higher education as a high-stakes competition for credentials, then avoiding unfair advantages is of paramount concern. By contrast, if study drugs primarily threaten deep student engagement in the practice of education, then the instinct to talk about enhancements in terms of unfair competition not only reflects the erosion of this value, but can exacerbate this trend.<sup>81</sup>

In other words, even if positional advantage is immoral, “learning” itself remains inherently good. From Lamkin’s view, any technology that enhances learning should be viewed as inherently moral.

Yet, perhaps even when grades convey no positional advantage in the classroom, higher grades might still deliver positional advantage within the careers available to college graduates. In a 2015 survey of incoming college freshmen, over 60 percent admitted that their primary goal for attending college was better employment.<sup>82</sup> Since the job market is normally a competitive milieu, cognitive enhancement in college certainly might convey positional advantage in the workplace. The trade magazine *People Management* calls cognitive enhancement “the pill that could get you a pay raise.”<sup>83</sup> Thus, the use of cognitive enhancement even in a non-competitive collegiate milieu might still fail the just cause criterion if the end is to obtain a higher salary or a better position than other non-enhanced candidates.

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<sup>81</sup> Matt Lamkin, “Cognitive Enhancements and the Values of Higher Education,” *Health Care Analysis* 20 (2012): 348.

<sup>82</sup> Kevin Eagan et al., “The American Freshman: National Norms Fall 2015,” Higher Education Research Institute, Graduate School of Education and Information Studies, University of California, Los Angeles, accessed August 2, 2018, [www.heri.ucla.edu/monographs/TheAmericanFreshman2015.pdf](http://www.heri.ucla.edu/monographs/TheAmericanFreshman2015.pdf), 14.

<sup>83</sup> “The Pill That Could Get You a Pay Raise,” *People Management*, December 2012, 10-11.



A deeper concern about the rise of neurostimulant abuse by college students is the distinction between *process* and *product*. Learning is a *process* of acquiring knowledge and skills. A liberal education intends to teach students how to learn, so that they can engage in a lifetime of acquiring new knowledge and skills. In contrast, grades and degrees are *products* that signal that a student has demonstrated a sufficient skill in the learning process. From this view, using cognitive enhancing medications during exams is aimed at the product, rather than the process. Kimberly Sheridan explains, “Education is essentially about values. It is a system whereby we pass knowledge and skill that we determine to be culturally important.”<sup>84</sup> What will happen when the value of grades surpasses the value of learning skills like “perseverance, hard work and self-motivation?”<sup>85</sup> Perhaps neurostimulants circumvent learning in the quest for better grades.

Some advocates of cognitive enhancement obscure the distinctions between learning-as-process and learning-as-product, believing that since education is inherently good, then any enhancement of learning is inherently moral.<sup>86</sup> Notwithstanding that the content of what is being learned bears on the issue, perhaps if cognitive enhancement is permitted only for learning, but not permitted for examinations, then the learning-as-process could benefit while the pursuit of learning-as-product is discouraged (enhanced learning without exam doping). Enhancement proponent Henry Greely agrees,

Whether the cognitive enhancement is substantially unfair may depend on its availability, and on the nature of its effects. Does it actually improve learning or does it just temporarily boost exam performance? In the latter case it would prevent a valid measure of the competency of the examinee and would therefore be unfair.

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<sup>84</sup> Kimberley Sheridan, Elena Zinchenko, and Howard Gardner, “Neuroethics in Education,” in *Neuroethics: Defining the Issues in Theory, Practice and Policy*, ed. Judy Illes (Oxford: Oxford University Press, 2006), 266.

<sup>85</sup> Chau, “Popping Pills to Study,” 19.

<sup>86</sup> John Harris writes, “If the goal of enhanced intelligence, increased power and capacities, and better health is something that we might strive to produce through education. . . . Why should we not produce these goals, if we can do so safely, through enhancement technologies or procedures?” Harris, *Enhancing Evolution*, 2.

But if it were to enhance long-term learning, we may be more willing to accept enhancement.<sup>87</sup>

Bioscience law professor Matt Lamkin extends this point to the less cognitively endowed,

Does this type of enhancement promote or diminish engagement in the practice of higher education? . . . It seems the real problem is not enhancement as such, but the way particular enhancements work and the way individual students use them. This account suggests we may want to draw a moral distinction between the student who uses Ritalin to maintain a 3.9 GPA at Columbia and the student who (though not suffering from a “disorder”) could not stay in college without it. In the latter case, enhancement enables the student to enjoy the practice of higher education and the internal goods it confers—goods she might be denied without this type of assistance.<sup>88</sup>

Even if learning-as-process satisfies the just cause criterion, it must subsequently be subject to fulfilling the second criteria of transparency by conforming to the statutes of some public policy created by a qualified body. For example, a school’s neurostimulant policy might formally permit cognitive enhancement during music lessons but ban cognitive enhancement for competitive recitals.

Further, even if such an application for enhancement medication fulfilled the just cause and transparency criteria, it would then have to meet the criterion of temporality so that the medication duration does not greatly exceed the lesson duration (i.e., discourage choosing a neurostimulant for Tuesday’s piano lesson that is still active for Wednesday’s math test). Next, proportionality might insist that the medication only enhance education, rather than deliver collateral benefits for contemporaneous activities (i.e. take a neurostimulant to ostensibly learn the piano but actually to enjoy the “high”). Finally, can the use of the enhancement in a particular circumstance be done “as to the Lord, and not unto men?” (Col 2:23 AV). The fifth criterion asks, “Is she playing the piano in honor of God, or to receive the accolades of others? As Os Guinness explains, “Most of us, whether we are aware of it or not, do things with an eye to the approval of some audience or other.

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<sup>87</sup> Greely et al., “Towards Responsible Use of Cognitive-Enhancing Drugs,” 703-4.

<sup>88</sup> Lamkin, “Cognitive Enhancements,” 351.

The question is not whether we have an audience but which audience we have. . . . A life lived listening to the decisive call of God is a life lived before one audience that trumps all others—the Audience of One.”<sup>89</sup>

### **The Fatigued Rescuer**

The kenotic virtues of humility, compassion, and reverence approach their highest expression in those who save human life. The search and rescue pilot and the trauma surgeon represent some of the paradigmatic occupations which may require extraordinarily long hours of high intensity concentration to save lives. For example, in the rescue of survivors of the sinking *Salvador Allende*, two helicopter crews flew fifteen continuous hours requiring eight difficult midair refueling operations.<sup>90</sup> Resident surgeons can routinely average ninety-eight hours of work per week, with some procedures requiring more than twelve hours of sustained concentration.<sup>91</sup> In such professions, fatigue has been shown to impair cognition and dexterity.<sup>92</sup> Rescue operations and trauma surgery are selfless acts of compassion which *prima facie* fulfill the just cause criterion for cognitive enhancing neurostimulants.

In a United States Army study of helicopter pilots, the cognitive enhancer modafinil was demonstrated to attenuate the effects of forty-hour periods of sleep

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<sup>89</sup> Os Guinness, *The Call: Finding and Fulfilling the Central Purpose of Your Life* (Nashville: Thomas Nelson, 2003), 70.

<sup>90</sup> Edward L. Fleming, *Heart of the Storm: My Adventures as a Helicopter Rescue Pilot and Commander* (Hoboken, NJ: John Wiley & Sons, 2004).

<sup>91</sup> Daniel F. Haynes et al., “Are Postoperative Complications Related to Resident Sleep Deprivation?” *Southern Medical Journal* 88, no. 3 (March 1995): 283-90.

<sup>92</sup> N. J. Taffinder et al., “Effect of Sleep Deprivation on Surgeons’ Dexterity on Laparoscopy Simulator,” *Lancet* 352 (October 1998): 1191. Yaron G. Rabinowitz, Jill E. Breitbart, and Christopher H. Warner, “Managing Aviator Fatigue in a Deployed Environment: The Relationship between Fatigue and Neurocognitive Functioning,” *Military Medicine* 174, no. 4 (2009): 358-62.

deprivation.<sup>93</sup> Accordingly, section 2.8.1.3. of the Special Operations Command of the United States Airforce authorizes the neurostimulant “Go pill” Modafinil for combat rescue officers, while prohibiting the use of neurostimulants for other airmen or mission types.<sup>94</sup> Such rescue operations fulfill the just cause criterion. The strict adherence to formal policies fulfills the transparency criterion. Military policy expressly requires the personnel return unconsumed Modafinil to “the appropriate authority” upon completion of the mission; thus, meeting the temporality criterion. Modafinil is the only authorized neurostimulant for the United States Air Force because it does not carry the addictive risks of dexamphetamine which it replaced in military medical kits.<sup>95</sup> The specific targeting of Modafinil for cognitive stimulation while avoiding any collateral effects not applicable to, or even detrimental to, addressing the just cause meets the requirements for the proportionality criterion. To the extent that the rescue mission is truly aimed at saving innocent life, that such activity honors the intrinsic value of life and demonstrates the agape love of one’s neighbor, then such uses of cognitive enhancing neurostimulants might fulfill the final criterion of revering God.

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<sup>93</sup> Westcott, “Modafinil, Sleep Deprivation, and Cognitive Function,” 334.

<sup>94</sup> United States Air Force, “Official Air Force Aerospace Medicine Approved Medications,” June, 13, 2017, accessed December 8, 20118, [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiO2ISo4ZDfAhXxxlkKHT\\_LDisQFjAAegQIBhAC&url=https%3A%2F%2Fwww.315aw.afrc.af.mil%2FPortals%2F13%2FUsers%2F096%2F96%2F96%2FAircrew%2520Medication%2520List%2520June%25202017.pdf&usg=AOvVaw3k2yu-kxOaD2bfLITkQjIj](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiO2ISo4ZDfAhXxxlkKHT_LDisQFjAAegQIBhAC&url=https%3A%2F%2Fwww.315aw.afrc.af.mil%2FPortals%2F13%2FUsers%2F096%2F96%2F96%2FAircrew%2520Medication%2520List%2520June%25202017.pdf&usg=AOvVaw3k2yu-kxOaD2bfLITkQjIj), 11.

<sup>95</sup> Westcott summarizes, “Modafinil is considered to have a very limited potential for abuse. The physiologic effects of modafinil differ from those of addictive central nervous system stimulants in that modafinil does not produce sympathomimetic or anxiogenic effects. A study of the subjective effects of modafinil, compared with amphetamines and placebo, showed that modafinil did not produce amphetamine-like subjective effects among healthy volunteers. Long-term studies of patients with narcolepsy who were administered daily doses of modafinil revealed that patients did not develop tolerance or dependence. Also, researchers have found that, because modafinil is essentially insoluble in water and is unstable at high temperatures, the potential for abuse as an intravenously administered or inhaled agent does not exist.” (Westcott, “Modafinil, Sleep Deprivation, and Cognitive Function,” 334)

The case of the trauma surgeon remains more controversial. Some doctors defend, even encourage, the use of neurostimulant cognitive enhancement by physicians.<sup>96</sup> The Residency Program Director's Alert suggested that modafinil "might be a good solution to the demands of long hours and irregular shifts for residents."<sup>97</sup> Yet residency program directors across the country disagreed. Ilene Rosen of the University of Pennsylvania, stated, "There is no role for modafinil use by resident physicians. It is unethical and irresponsible for physicians to use a stimulant drug while performing duties related to patient care."<sup>98</sup> At the core of this disagreement is the issue of *unavoidable* fatigue in the service of others. Unlike the aforementioned rescue operations involving search and rescue pilots, physician work hours are frequently imposed by custom or policy, not by unavoidable circumstances. As Katherine Drabiak-Syed aptly notes, "Rather than focusing on the problem as physicians' inability to maintain professional performance during long shifts without proper rest, we should shift the scrutiny to the problem of the physician schedule."<sup>99</sup> To the extent that a physician's demanding schedule is simply a product of poor planning or personal choice, the just cause criterion is not met.<sup>100</sup> Further, if the use of cognitive stimulants by physicians is not governed by a formal professional policy, it fails the criterion for transparency. Only in

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<sup>96</sup> Jadon R. Webb, John W. Thomas, and Mark A. Valasek, "Contemplating Cognitive Enhancement in Medical Students and Residents," *Perspectives in Biology and Medicine* 53, no. 2 (Spring 2010): 200-14.

<sup>97</sup> Westcott, "Modafinil, Sleep Deprivation, and Cognitive Function," 335.

<sup>98</sup> Westcott, "Modafinil, Sleep Deprivation, and Cognitive Function," 335.

<sup>99</sup> Katherine Drabiak-Syed, "Sleep Deprived Physicians Considering Modafinil: Using a Controlled Substance for Cognitive Enhancement Gambles with Differential Drug Responses and Violates Ethical and Legal Duties against Physician Impairment," *DePaul Journal of Healthcare Law* 13, no. 3 (Summer 2011): 344.

<sup>100</sup> After decades of complaints, in 2010, the Accreditation Council for Graduate Medical Education convened a task force to determine a policy to limit the work hours of student physicians. The new policy restricts shifts to 24 continuous hours and limits the work week to 80 hours. Despite these policies, resident physicians still frequently work 100 hours per week. Drabiak-Syed, "Sleep Deprived Physicians," 345.

the rare case of truly unforeseen and unavoidable emergency demands on medical personnel are cognitive enhancing neurostimulant use expected to meet the just cause criterion.

### **The Dutiful Soldier**

Since the United States military permits the use of cognitive enhancing medications for rescue operations, some advocates want to extend enhancement technology to every active duty soldier within a combat zone. Michel Jouvet, one of the developers of modafinil, bragged that neurostimulants “could keep an army on its feet and fighting for three days and nights with no side effects.”<sup>101</sup> Military leaders were persuaded: Ritalin and Adderall prescriptions for active-duty soldiers increased 1000 percent in five years.<sup>102</sup> Between 1966 and 1969, 225 million tablets of dexamphetamine were consumed by soldiers.<sup>103</sup>

Further, cognitive enhancing drugs may not only increase combat concentration and reflexes, they may also suppress fear and empathy, the perfect attributes for a super soldier. Proponents frequently justify neurostimulant cognitive enhancement for combat soldiers by implying that their just cause is that “these kids could perform at their peak, stay at their peak, and come home to their families.”<sup>104</sup> How might humility, compassion, and reverence inform a just cause for cognitively enhancing soldiers in combat who might be called to violence, destruction, and the killing of other soldiers?

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<sup>101</sup> Westcott, “Modafinil, Sleep Deprivation, and Cognitive Function,” 334.

<sup>102</sup> Richard Freidman, “Why Are We Drugging Our Soldiers?” *New York Times*, April 21, 2012, accessed August 8, 2018, <https://www.nytimes.com/2012/04/22/opinion/sunday/why-are-we-drugging-our-soldiers.html>.

<sup>103</sup> Lukasz Kamienski, “The Drugs That Built a Super Soldier,” *The Atlantic*, April 8, 2016, accessed August 13, 2018, <https://www.theatlantic.com/health/archive/2016/04/the-drugs-that-built-a-super-soldier/477183/>.

<sup>104</sup> Liam Stoker, “Creating Supermen: Battlefield Performance Enhancing Drugs,” *Army Technology*, April 14, 2013, accessed August 13, 2018, <https://www.army-technology.com/features/featurecreating-supermen-battlefield-performance-enhancing-drugs/>.

Fortunately, centuries of just war theory provide insights for the ethics of applying cognitive enhancement for soldiers during combat. In just war theory, *jus ad bellum* requires meeting four ethical criteria: (1) just cause, (2) proper authority, (3) probability of success, and (4) last resort. The just cause for modern warfare must aim at the restoration of peace.<sup>105</sup> Within the Scriptures, peace is a divine blessing and promise. Jesus, the Prince of Peace, blesses the peacemakers (Isa 9:6; Matt 5:9). Christians are to seek peace with God and love all enemies (2 Cor 5:18-19; Eph 2:11-18; Matt 5:43-44). Both Catholic and protestant traditions adhere to this view.<sup>106</sup> Consequently, just causes within *jus ad bellum* include international peacekeeping, humanitarian rescue, and defense of human rights against genocide.<sup>107</sup> Conversely, narrow nationalistic economic or security interests rarely meet the criterion for just cause.

A soldier committed to combat to achieve humanitarian aims is risking her life to save other lives. This aim may express the humility, compassion, and reverence that meets the criterion for just cause for cognitive enhancement, although caution must be

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<sup>105</sup> Augustine insists that the just cause for warfare must have the “object of securing peace.” Augustine’s examples of unjust motivations for war include “love of violence, revengeful cruelty, fierce and implacable enmity, wild resistance, and the lust of power, and such like.” Augustine, *Contra Faustum Manichaeum*, Book XXII, accessed August 14, 2018, <http://www.newadvent.org/fathers/140622.htm>. Similarly, Aquinas states that *jus ad bellum* must demonstrate “rightful intention, so that they intend the advancement of good, or the avoidance of evil.” Aquinas, *Summa Theologica* II-II, Q40, A1, accessed April 6, 2019, <http://www.newadvent.org/summa/4064.htm>.

<sup>106</sup> The 1993 National Conference of Catholic Bishops defines just cause in warfare as the intention “to correct a grave, public evil, i.e., aggression or massive violation of the basic rights of whole populations.” National Conference of Catholic Bishops, “The Harvest of Justice is Sown in Peace,” November 17, 1993, accessed August 14, 2018, <http://www.usccb.org/beliefs-and-teachings/what-we-believe/catholic-social-teaching/the-harvest-of-justice-is-sown-in-peace.cfm>. The 1993 General Assembly of the Presbyterian Church (USA) defines just cause in warfare as that which “constitutes humanitarian rescue and not cloak the pursuit of the economic or narrow security interests of the intervening powers.” James Johnson argues that this distinction between just humanitarian causes and unjust nationalistic causes is a modern interpretation which Augustine, Aquinas, and Luther neglected since they were generally more concerned with the proper authority to conduct war. Before the rise of modern nation-states, warfare might be conducted by individual principalities, clans, or other non-national entities with the church viewed as unjust authorities for *jus ad bellum*. James Turner Johnson, “Aquinas and Luther on Peace: Sovereign Authority and the Use of Armed Force,” *Journal of Religious Ethics* 31, no. 1 (2003): 3-20.

<sup>107</sup> Johnson, “Aquinas and Luther on Peace,” 4.

taken to ensure that the declared cause for the conflict is not merely a pretext to rationalize an alternative unjust motivation for combat. Just War theorists Duncan Purves and Ryan Jenkins warn that the declared motivation for warfare must not be allowed to mask the true intentions of the combatants.<sup>108</sup>

Consequently, the requirements for just cause within *jus ad bellum* provide the requirements for just cause for cognitive enhancement of soldiers: if the application of cognitive enhancement can subsequently fulfill the remaining criteria of transparency, temporality, proportionality, and reverence, then it may be considered *prima facie* moral. Conversely, if a war is unjust, then the enhancement of soldiers to conduct an unjust war more effectively is immoral.<sup>109</sup>

Opponents of human enhancement on the battlefield offer several objections: (1) enhancement might make achieving the criteria of *jus in bello* more difficult, (2) enhancement applications might progress from temporary and voluntary to permanent and involuntary, and (3) enhancement might eventually threaten the dignity of soldiers by treating them as mere instruments of warfare.

The first objection is that cognitive enhancement might interfere with maintaining the criteria of *jus in bello* if such enhancements diminish fear, empathy, or guilt. The ethical conduct of warfare demands the immunity of non-combatants, neutralization of enemy combatants rather than destruction, and the proportionality of means. Ethicist Jessica Wolfendale worries that “drugs that inhibited fear and other strong

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<sup>108</sup> Purves and Jenkins make a distinction between “motive” and “plan”: “Britain waged war against Germany in 1914, *planning* to protect Belgium, from the *motive* to promote their own national interest.” Duncan Purves and Ryan Jenkins, “Right Intention and the Ends of War,” *Journal of Military Ethics* 15, no. 1 (2016): 19, emphasis original.

<sup>109</sup> Some of the criteria of *jus ad bellum* overlaps with this dissertation’s other proposed criteria for cognitive enhancement. For example, in a democracy, proper authority entails some transparency since the electorate publicly selects the leaders who are authorized to declare and conduct warfare.



negative emotions might result in combatants who behaved rashly.”<sup>110</sup> Indeed, the authorized use of amphetamines by two US Air Force pilots was implicated in the 2002, friendly fire deaths of Canadian soldiers.<sup>111</sup>

The second objection is that enhancement applications might progress from temporary and voluntary toward permanent and coercive. Because the military is a coercive institution that demands obedience and conformity, neurostimulants might become viewed as essential equipping for soldiers. Military ethicist Michael Russo advocates five ethical criteria for the use of “cogniceuticals” within the military: (1) informed and voluntary, (2) proven drug safety, (3) proper dosage and function, (4) medical supervision, and (5) last resort.<sup>112</sup> Because of the risk of coercion, Canada, Netherlands, Denmark, and Germany specifically prohibit the use of amphetamines in their respective militaries.<sup>113</sup>

A final objection is that the enhancement of soldiers might create an environment whereby soldiers become viewed as mere instruments of war to be pharmacologically calibrated for maximum utility. Dominican friar Mannes Matous notes,

The soldier is not a machine but a human person who will need to return to civilian life. He has his own conscience and is ultimately made in the image of God. For this reason, a firm grasp of the depth of the dignity of the human person and the common good will be necessary to ensure that correct moral judgments are made about performance enhancement in the military.<sup>114</sup>

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<sup>110</sup> Jessica Wolfendale, “Performance-Enhancing Technologies and Moral Responsibility in the Military,” *American Journal of Bioethics* 8, no. 2 (2008): 29.

<sup>111</sup> Eric A. Bower, “Use of Amphetamines in the Military Environment,” *Lancet* Supplement 362 (December 2003): s19.

<sup>112</sup> Michael B. Russo et al., “Ethical Use of Cogniceuticals in the Militaries of Democratic Nations,” *American Journal of Bioethics* 8, no. 2 (2008): 39.

<sup>113</sup> Russo et al., “Ethical Use of Cogniceuticals,” 40-41.

<sup>114</sup> Mannes Matous, “Enhancing Military Performance,” *Ethics and Medics* 39, no. 8 (August 2014): 1.

Each of these objections must be answered satisfactorily before the cognitive enhancement of soldiers can be considered, even if a conflict fulfills the *jus ad bellum* criteria for just cause. The soldier's voluntary acceptance of cognitive enhancement must then be examined for its moral application according to transparency, temporality, proportionality, and reverence. God desires the protection of innocent life and the Bible is replete with examples of just warfare in the protection of innocent life and the restoration of justice and peace.<sup>115</sup> If human enhancement serves to enhance peace, then the Christological attitudes of humility, compassion, and reverence are also served.

### **The Diligent Scholar**

A novice scholar is anyone who loves ideas, has a passion for reason, and enjoys communicating knowledge to others. Professional scholars have acquired a recognized degree of formal training and experience. The philosopher scholar loves ideas, creating theories and concepts as the products of intellect. The research scholar values empiricism as the method of intellect in order to validate ideas for practical application. The professor scholar pursues pedagogy for the communication and perpetuation of ideas and reason. Yet, there is much more to scholarship than ideas, degrees, reason, and pedagogy.

In *The Intellectual Life*, French Dominican Sertillanges reminds, "The intellect is only a tool; the handling of it determines the nature of its effects."<sup>116</sup> Human intellect possesses its own inherent teleology that involves more than merely producing ideas through reason that can be taught to others; the purpose of intellect is to seek truth over

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<sup>115</sup> Warfare itself is not condemned in the Bible. Abraham is blessed by Melchizedek, a priest of the God Most High, after conducting warfare to rescue Lot and his family from captors (Gen 14:11-20). David, the man after God's own heart, is commended as a great defender of Israel, God's own people (1 Sam 13:14, 17:37-58). Soldiers are never condemned for their profession, rather, they are held up as examples of faith and discipleship (Luke 3:14, 7:6-9; Act 10:1-2; 2 Tim 2:3-4). The sword of the state, including its military, are established by God to enforce His ordinances (Rom 13:1-2). Jesus will return as a mighty warrior for righteousness (Rev 19:11). Warfare to defend life, restore peace, and exact justice appears consistent with Scripture.

<sup>116</sup> A. G. Sertillanges, *The Intellectual Life: Its Spirit, Conditions, Methods*, trans. Mary Ryan (Washington, DC: Catholic University of America Press, 1987), 17.

falsehood, acquire knowledge by moral means for moral ends, and teach formatively, not merely informatively. Consequently, in the same way that the soldier must meet the moral criteria for *jus ad bellum* as a prerequisite for adjudicating the moral use of cognitive enhancement in combat, the scholar must first meet the criteria of seeking truth through moral means for moral ends as the prerequisites for adjudicating the moral use of cognitive enhancement in scholarship.

The just cause for scholarship is the intellectual discovery of truth. Since Jesus *is* truth, the human *telos* revealed in Jesus entails discovering and reflecting truth (John 14:6). Unfortunately, James Sire notes, “All intellectuals are in love with ideas; not all intellectuals are in love with truth.”<sup>117</sup> From this perspective, epistemic skeptics and relativists disqualify themselves from the community of scholars.<sup>118</sup> Seeking truth is an essential intellectual virtue.<sup>119</sup> Truth within scholarship affirms the correspondence between propositional knowledge and reality, between what one claims to know and what actually exists “out there.”<sup>120</sup> What is “out there” is the revealed divine reality: God is true, Christ is the truth, and the Bible is truth (John 3:33, 14:6, 17:17). For the Christian

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<sup>117</sup> This dissertation does not intend to present a comprehensive examination of human epistemological enhancement. This dissertation limits cognition to the process of acquiring knowledge where knowledge refers to propositional knowledge and excludes procedural knowledge, “acquaintance” knowledge, Reidian experiential knowledge, and others, even though these are also governed by cognitive processes. Further, truth herein refers to correspondence truth. Coherent, constructivist, consensus, pragmatic, and other concepts of truth theories of truth are not addressed herein.

<sup>118</sup> In other words, it is asserted herein that anyone who believes that truth is unattainable or purely relative cannot fulfill a foundational prerequisite for being a scholar.

<sup>119</sup> W. Jay Wood, *Epistemology: Becoming Intellectually Virtuous* (Downers Grove, IL: IVP, 1998), 57.

<sup>120</sup> This dissertation asserts that scholarship ought to be primarily concerned with correspondence truth rather than coherent, constructivist, consensus, pragmatic, and other concepts of truth. Correspondence truth derives from a reality external to humans, given by God within general revelation and special revelation. Other concepts of truth add subjective components such as instrumental usefulness or subjective agreement among proponents to validate an internal “truth” that does not necessarily correspond to objective reality. The delusions of a schizophrenic might be coherent, a fable might be pragmatic, and a mob might act upon a rumor. Yet, delusions, fables, and rumors are not the preveue of the scholar.

scholar, John Henry Newman asserts, “Truth is too sacred and religious a thing to be sacrificed to mere gratification of the fancy, or amusement of the mind, or party spirit, or the prejudices of education, or attachment (however amiable) to the opinions of human teachers.”<sup>121</sup> A scholar seeks only truth; a Christian scholar seeks only God’s truth.

Conversely, God hates liars and Satan is called the “father of lies” (Prov 12:22; John 8:44). Knowledge that is not true is not knowledge at all.<sup>122</sup> Scholars who knowingly pursue and propagate falsehoods are anti-intellectuals, political crusaders, or propagandists. For instance, Brown University disavowed its own 2018 study because it showed “the drive to [gender] transition expressed by teens and young adults could be a harmful coping mechanism like drugs, alcohol or cutting” . . . such a study might “be used to discredit efforts to support transgender youth and invalidate the perspectives of members of the transgender community.”<sup>123</sup> The paper’s author, Lisa Littman, is a true scholar who pursued the truth against political and scientific bias. Brown University’s Dean of the School of Public Health, Bess Marcum, who disavowed the study is certainly no scholar. Enhancing the cognition of those who do not seek the truth only amplifies their ability to disguise their actual intentions to subvert truth. Such uses of cognitive enhancing technology violate the just cause criteria and remains inherently immoral.<sup>124</sup>

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<sup>121</sup> John Henry Newman, *Fifteen Sermons Preached before the University of Oxford* (Oxford: Oxford University Press, 2006), 19.

<sup>122</sup> Knowledge herein is simply defined as justified true belief (JTB), notwithstanding Gettier problems which demonstrate that JTB is necessary but insufficient for knowledge.

<sup>123</sup> Lisa Littman, “Rapid-Onset Gender Dysphoria in Adolescents and Young Adults: A Study of Parental Reports,” *PLoS ONE* 13, no. 8 (August 2018): 1-41. Ben Shapiro, “A Brown University Researcher Released a Study about Teens Imitating Their Peers by Turning Trans. The Left Went Insane. So Brown Caved,” *The Daily Wire*, August 28, 2018, accessed August 30, 2018, <https://www.dailywire.com/news/35119/brown-university-researcher-released-study-about-ben-shapiro>.

<sup>124</sup> It is asserted here that since truth is a necessary but insufficient criterion for knowledge, the pursuit of truth is a necessary but insufficient criteria of the scholar. Voluntarily pursuing and propagating falsehood disqualifies one from being a scholar, and therefore disqualifies one from receiving cognitive enhancement. In one sense, this disqualification preempts the just cause criteria since no purposes served by such falsehoods can mitigate the requirement for truth in scholarship. Of course, one could conjure situations where a scholar might deliberately pursue falsehood for a very good purpose (i.e., a scientist

Even when truth is served through scholarship, immoral means or immoral ends disqualifies such projects as a just cause. As epistemologist Jay Wood explains, “Seeking truth appropriately is a matter of seeking it in the right way, for the right reason, using the right methods and for the right purposes . . . knowledge, like wealth, cannot be sought at any cost but is subject to moral constraints.”<sup>125</sup> Unfortunately, history is replete with examples of acquiring truth through immoral means or for applying truth for immoral ends.

The acquisition of truth ought to be constrained by its moral boundaries. For example, human experimentation is bounded by conditions of informed consent. The researchers behind the infamous Tuskegee Syphilis Study argued that the knowledge gained in their experiments outweighed the suffering of the human subjects who were deceived.<sup>126</sup> *In Dark Medicine*, William Lafluer observes how “rationalizations initially masquerade as reasons . . . the fruits that heal and the fruits that kill all too often hang on the same knowledge tree. And persons trying to pick only the former can hardly avoid knocking some of the latter into their baskets.”<sup>127</sup> The ends of truth are never served by deceptive means.

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coerced to produce a weapon for immoral purposes might seeks to produce false and useless data to protect life), but she is no longer functioning as a scholar.

<sup>125</sup> Wood, *Epistemology*, 57.

<sup>126</sup> The Tuskegee Syphilis Study began in 1932, by recruiting 400 African American men with syphilis for the purpose of observing the natural course of the untreated disease. These “volunteers” were told they were receiving treatment for syphilis, but in actuality they were only receiving placebos. The study was designed to run for 6-8 months, after which the participants would receive actual treatment, but it was extended to nearly 40 years. The participants were even denied antibiotics once the effectiveness of penicillin for syphilis was established. They suffered immensely during this time, many dying of a disease that could have been cured at any time. Despite early criticisms of the morality of deceiving patients for scientific gain, the researchers continue to justify their actions by appealing to the benefits to future syphilis patients. Charlotte Paul and Barbara Brookes, “The Rationalization of Unethical Research: Revisionist Accounts of the Tuskegee Syphilis Study and the New Zealand “Unfortunate Experiment,” *American Journal of Public Health* 105, no. 10 (October 2015): e12-e19.

<sup>127</sup> William R. Lafluer, *Dark Medicine: Rationalizing Unethical Medical Research* (Bloomington: Indiana University Press, 2007), 3.

Even if knowledge is obtained by moral means, such knowledge might intend to serve immoral ends. For example, there is a multi-million-dollar research industry tabulating the habits of gamblers to develop advertising strategies to attract more customers to spend even more money on legal gaming. These studies follow a strict ethical methodology including informed consent, approval by experimentation committees, and submission to peer-review oversight. Despite these ethical means, the ends served by such research remain selfish and harmful. A 2014 study concluded, “Disconcertingly, advertising and promotion may increase consumption levels by retaining problem gamblers by inadvertently undermining personal attempts to cease.”<sup>128</sup> Moral means must never serve immoral ends.

Cognition is always thinking about something, and that something conveys moral implications. James Sire warns, “Thinking is directed toward good or evil, God or self.”<sup>129</sup> If the pursuit of truth involves selfish immoral methods or serves evil ungodly ends, it cannot meet the requirement for just cause for cognitive enhancement.

Even when a just cause is established for the cognitive enhancement of scholars to pursue truth by moral means for moral ends, the conditions of transparency, temporality, proportionality, and reverence must be satisfied. Transparency manifests as a public disclosure of the use of cognitive enhancement under established criteria for just cause. Under this transparency criterion, colleges, universities, research facilities, and teaching hospitals ought to develop and implement reporting policies and oversight committees if they wish to dispense cognitive enhancing medications to faculty, staff, or students. Temporality criterion demands that any approved cognitive enhancing medication would have an effective duration no longer than the temporal scope of the just cause.

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<sup>128</sup> Nerilee Hing et al., “Do Advertising and Promotions for Online Gambling Increase Gambling Consumption? An Exploratory Study,” *International Gambling Studies* 14, no. 3 (2014): 397.

<sup>129</sup> James W. Sire, *Habits of the Mind: Intellectual Life as a Christian Calling* (Downers Grove, IL: IVP, 2000), 87.

Proportionality would require that the cognitive enhancing medication effect the proper mental faculty at the safest dose that meets the goals of the just cause. And finally, for Christians, the intellectual product that is sought through cognitive enhancement ought always to bring glory to God. Even if an intellectual pursuit appears to meet the first four criteria for moral cognitive enhancement, it may not fulfill the final test. Not every philosophical, scientific, or spiritual quest for knowledge is glorifying to God.

For example, philosopher Philippe Verdoux believes cognitive enhancement is the only way humans will solve the greatest mysteries of the universe.<sup>130</sup> It does not glorify God to seek knowledge of the universe's mysteries apart from God.<sup>131</sup> Futurist Ray Kurzweil predicts that only greater human intelligence can deliver the greater wealth that humans desire."<sup>132</sup> It does not glorify God to seek knowledge merely for material gain (Matt 6:19-24, 16:26-33; Luke 12:15, 33-34; 1 Tim 6:9-10, 17-19). Atheist Bertram Russell laments that spiritual questions will remain unsolvable due to limitations of human cognition.<sup>133</sup> God is not glorified when humans seek a spiritual knowledge that is devoid of the Holy Spirit. The hubris of humanism rejects divine revelation as a source of

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<sup>130</sup> Verdoux writes, "Progress in philosophy has been impeded, in part, by two specific constraints imposed on us by the natural architecture of our cognitive systems. Both of these constraints, though, could in principle be overcome by certain cognitive technologies. Philippe Verdoux, "Emerging Technologies and the Future of Philosophy," *Metaphilosophy* 42, no. 5 (October 2011): 682.

<sup>131</sup> Scripture agrees, "When I gave my heart to know wisdom and to see the task which has been done on the earth (even though one should never sleep day or night), and I saw every work of God, I concluded that man cannot discover the work which has been done under the sun. Even though man should seek laboriously, he will not discover; and though the wise man should say, 'I know,' he cannot discover" (Eccl 8:16-17).

<sup>132</sup> Kurzweil writes, "With version 3.0 bodies . . . and our largely nonbiological brains no longer constrained to the limited architecture that biology bestowed on us . . . the overwhelming benefits to human health, wealth, expression, creativity, and knowledge quickly become apparent." Ray Kurzweil, *The Singularity Is Near: When Humans Transcend Biology* (New York: Penguin, 2005), 341,

<sup>133</sup> Russell writes, "There are many questions—and among them those that are of the profoundest interest to our spiritual life—which, so far as we can see, must remain insoluble to the human intellect unless its powers become of a quite different order from what they are now." Bertrand Russell, *The Problems of Philosophy* (New York: Plain Label Books, 1936), 153.

knowledge and refuses to accept that there are God-given boundaries to human knowledge.

Science aids discovery of the natural world; Scripture aids discovery of the supernatural world. Humanist philosophy is the “empty deception” of Paul’s warning in Colossians because such “tradition of men” is contrary to Christ (Col 2:8; see also 1 Cor 2:1-13; 1 Tim 6:20). The methods of philosophy can serve to discover God’s truth, but philosophy without God can never attain truth. “The Lord is the beginning of knowledge” (Prov 1:7; see also Prov 2:6; Pss 19:2, 119:66; Isa 11:2). The scholar who seeks the just cause of truth without beginning with God as the source of truth fails to fulfill the final criterion for cognitive enhancement.

### **Conclusions**

The previous chapters established the kenotic virtues of humility, compassion, and reverence as the aretaic foundations for a bibliocentric ethic for human enhancement. These virtues may be motivated by emotion but ought to be directed by phronesis. It was argued that phronesis supports a precautionary attitude toward human enhancement whereby the ethics for any application of enhancement technology ought to be adjudicated through a set of moral criteria. This chapter proposed the moral criteria of just cause, transparency, temporality, proportionality, and reverence. Returning to the narrow application of enhancement technology to cognitive enhancers, four examples of applying these criteria were provided: the ambitious student, the fatigued rescuer, the dutiful soldier, and the diligent scholar.

This treatise is not intended to be either exclusive or comprehensive. Additional scholarship in the important area of enhancement technology is urgently needed. I pray that this dissertation will initiate a constructive dialogue of critiques and amendments that will strengthen its conclusions, broaden its application, and better align its goals with the will of God.



## CHAPTER 8

### CONCLUSIONS

#### **Introduction**

The purpose of this dissertation was to construct a bibliocentric Christological ethic to guide the moral application of human enhancement technology. It began by narrowly focusing on the current epidemic of neurostimulant abuse on college campuses, but the implications of this dissertation extend broadly to more radical enhancement technologies, such as genetic manipulation, cybernetics, and even transhumanism, which aspires to free humans from embodiment itself. The acceleration of the development of enhancement technologies and the magnitude of their impact upon individuals and communities ought to sound a klaxon of urgency. An ethic to guide human enhancement needs to be developed before enhanced humans become inured to any ethical guidance. As Leon Kass fears, “Bio-engineered perfection . . . will sneak up on us before we know it, and if we are not careful, sweep us up and tow us under.”<sup>1</sup>

Since the enhancement project aims to improve human attributes beyond normal biological limits, some perfected human archetype must be in mind to guide the direction for improvements. For most philosophical naturalists, every individual remains free to envision his or her own archetype human that the individual may pursue with technological abandon. Effectively every person is free to direct their own evolutionary development. As naturalism’s pitchman John Harris concludes, “This new process of evolutionary change will replace *natural selection* with *deliberate selection*, *Darwinian*

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<sup>1</sup> Leon Kass, “Ageless Bodies, Happy Souls: Biotechnology and the Pursuit of Perfection,” *The New Atlantis*, no. 1 (Spring 2003): 10.

*evolution* with “*enhancement evolution*.”<sup>2</sup> In other words, each human is malleable into any number of subjectively selected archetypes.

In contrast, the explicit conclusion of this dissertation is that the *imago Dei* is both human ontology and human teleology. The ontology of the *imago Dei* secures the equal dignity of all persons; the teleology of the *imago Dei* provides the moral boundaries for all persons. Accordingly, the *imago Dei* is the only proper archetype to guide human enhancement. Moreover, the *imago Dei* receives its perfect aretaic model only in Jesus. While the deontological commands of God remain the foundation for imaging God, the divine virtues are the principle transformative ethic of Christ. Jesus is the embodiment of such divine virtues as humility, compassion, and reverence. Humans are to emulate and incorporate these kenotic attitudes *in Christ*. From these virtues, this dissertation then offered five moral criteria for adjudicating the ethical applications of human enhancement medications for the imagers of God: just cause, transparency, temporality, proportionality, and reverence. Lastly, returning to the initial moral issue of cognitive enhancement, this dissertation provided examples of how these five criteria might be applied today.

### **Telos and Ethics**

The above conclusions rest upon the clear presupposition that reality is given and meaningful. The entire argument presented herein is anchored within the metaphysical substrate of divine design. Specifically, creation is inescapably teleological: God created everything and everyone with divine purpose. Creation reveals the glory of God (Ps 10:1), displays His splendor (Ps 8:1), praises His wonders (89:5), and declares His righteousness (Ps 89:5). The universe is not without cause or meaning; it is infused with divine purpose of vital import. Creation reveals the Creator (Rom 1:18-25).

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<sup>2</sup> John Harris, *Enhancing Evolution: The Ethical Case for Making Better People* (Princeton, NJ: Princeton University Press, 2007), 4, emphasis original.

Within this divine design, humans remain a special feature of creation who God designed for His glory (Isa 43:6). Created as imagers of God, humans glorify God when they image God accurately. People image accurately when people conform to God's incarnation in Christ. The scriptures explain, "In Him you have been made complete" (Col 2:10). Without Christ, humans remain incomplete "strangers to the covenants of promise, having no hope and without God in the world" (Eph 2:13). Without Christ, humans are like violins without a maestro, a mute artifact of the divine music that might have been.

In light of the human *telos* revealed in Christ, the study of ethics becomes an examination of the proscribed choices for action which are uniquely Christ-like. Thus, human enhancements that promote the fulfillment of God's purpose for humans as imagers of Christ are *prima facie* moral and righteous, while technology that willfully defies and frustrates God's purpose for humans as imagers of Christ remain *prima facie* immoral and sinful. If a given enhancement fails to serve God's purpose for humans in Christ, whose purpose might it serve?

This question is not rhetorical. Enhancement technologies necessarily envision a *telos* for humanity and a perfect human archetype as a blueprint. Once the *telos* of the *imago Dei* and the archetype in Christ is rejected, where is a replacement *telos* and blueprint to be found? The answer is that once the objective human standard of the *imago Dei* modeled in Christ is renounced, individuals feel free to select any human archetype their autonomous will may conjure. The *telos* for humanity and its perfect human archetype are soon exchanged for a corrupt fantasy of the human imagination. Enhancement no longer seeks to serve God but begins to serve the sinful desires within each individual.

### ***Telos Subverted***

Not everyone agrees that the *telos* for humanity has shifted from the objective *imago Dei* to subjective human will. According to Alasdair MacIntyre, the Enlightenment project rejected *all* teleological purposes for humanity. Without any objective purpose for

humans, ethics as a discipline lost its purpose as well. In *After Virtue*, MacIntyre describes post-Enlightenment modernity as a post-apocalyptic moral wasteland. Without teleology, ethics fails to aid humans in the actuality of their true potential; without divine *telos*, ethics denies that there is any greater potential for humanity. MacIntyre writes,

Its basic structure [ethics] is that which Aristotle analyzed in the *Nicomachean Ethics*. Within that teleological scheme there is a fundamental contrast between man-as-he-happens-to-be and man-as-he-could-be-if-he-realized-his-essential-nature. Ethics is the science which is to enable men to understand how they make the transition from the former state to the latter. Ethics therefore in this view presupposes some account of potentiality and act, some account of the essence of man as a rational animal and above all some account of the human *telos*.<sup>3</sup>

By rejecting human *telos*, mankind remained trapped in his Hobbesian natural state of vicious animal behavior, an egoistic survival-of-the-fittest. According to MacIntyre, each non-teleological ethical theory that followed either attempted to rationalize human behavior as an inherent animal nature or attempted to tame human nature in the manner of animals. An inevitable result of the former is ethical egoism for justifying human selfishness, while the result of the later is utilitarianism for adjudicating competing expressions of pleasure-seeking and pain-avoiding behavior. Without *telos*, deontology was reduced to subjective inclinations that only feigned rational objectivity by appealing to the categorical imperative. The result is that duty devolved to a code of law that merely protected the social contract. Without *telos*, virtues and vices lost their transformative power and humanity embraced its animal nature, refusing to aspire to anything higher. MacIntyre explains,

Since the whole point of ethics—both as a theoretical and a practical discipline—is to enable man to pass from his present state to his true end, the elimination of any notion of essential human nature and with it the abandonment of any notion of a *telos* leave behind a moral scheme composed of two remaining elements whose relationship becomes quite unclear. There is on the one hand a certain content for morality: a set of injunctions deprived of their teleological context. There is on the other hand a certain view of untutored-human-nature-as-it-is.<sup>4</sup>

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<sup>3</sup> Alasdair MacIntyre, *After Virtue* (Notre Dame, IN: University of Notre Dame Press, 2007), 52.

<sup>4</sup> MacIntyre, *After Virtue*, 54-55.

In McIntyre's view, modern man has abandoned all notions of human *telos*, but is this accurate? Is it not more accurate to conclude that man has not so much abandoned human *telos* as he has substituted the objective divine *telos* with a subjective *telos* that is autonomously constructed according to the individual will?

When human *telos* is redefined from God's vision for man toward man's vision of himself, ethics becomes redirected from divine fulfillment to self-fulfillment. Aretaic ethics has not lost its transformative power as McIntyre argues; rather, it has been selfishly subverted. Instead of being true to the role model in Christ, being true to *oneself* is now the preeminent virtue of the modern world. As life coach Rasheed Ogunlaru explains, to be true to oneself means recognizing that "role models are only of limited use. For no-one is as important, potentially powerful and as key in your life and world as you."<sup>5</sup> In short, the *imago Dei* has now become the *imago hominis*.

The contemporary rejection of the objective *imago Dei* for a subjective *imago hominis* is on clear display within the transhumanist movement. Transhumanists believe that technological discoveries will exponentially accelerate, empowering humans to live healthier, wealthier, happier lives by conquering disease, disability, and death. Charles Rubin explains,

They [transhumanists] see the story of humanity as the triumphant tale of an organism unwilling to accept these limitations on their own terms and progressively gaining greater power to confront and eventually overcome them. We are, on their view, the resourceful beings who can become ever increasingly the masters and possessors of nature, including our own nature. We are consummate problem solvers who have come to understand how much better things would have been if someone had asked us how they should be arranged, and who can solve the ultimate problem of our own defective natures.<sup>6</sup>

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<sup>5</sup> "Being True to Yourself Quotes," *Goodreads*, accessed November 2, 2018, <https://www.goodreads.com/quotes/tag/being-true-to-yourself>.

<sup>6</sup> Charles Rubin, "Human Dignity and the Future of Man," in *Human Dignity: Essays Commissioned by the President's Council on Bioethics* (Washington, DC, 2008), 157.

Immortality remains at the top of every wish list for the *imago hominis*. Nothing is more threatening to one's self image as the end of the self. The most urgent goal for the enhancement project remains to transform humans from mortal to immortal. Indeed, the primary creed of the transhumanist project is that "immortality can be achieved through technology."<sup>7</sup> Atheist John Harris declares, "The Holy Grail of enhancement is immortality."<sup>8</sup>

The power of technology has increasingly focused on combating ageing and mortality.<sup>9</sup> Titanium hip replacements, multifocal lens implants, and implantable insulin pumps already introduce the cyborg as the most desired human archetype. Uploading an individual's consciousness into a self-repairing machine is the logical next step.<sup>10</sup> With the increasing popularity of video games and virtual reality, many are beginning to predict that humans will choose to live in a virtual world of their choosing, an advanced version of the "massively multiplayer online game" (MMO) already ubiquitous online.<sup>11</sup> Yet, the ultimate goal for transhumanists is to transcend embodiment itself; to exceed the speed of light and "saturate the universe with our intelligence."<sup>12</sup> Humans finally achieve the omniscience, omnipresence, and omnipotence to "be like God, knowing good and evil" and choosing evil (Gen 3:5).

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<sup>7</sup> Daniel Stone, "These People Believe Death Is Only Temporary: Transhumanists Believe in a Future of Human Immortality," *National Geographic* (February 21, 2018), accessed November 3, 2018, <https://www.nationalgeographic.com/photography/proof/2018/february/nucci-transhumanists-technology/>.

<sup>8</sup> Harris, *Enhancing Evolution*, 59.

<sup>9</sup> Cambridge gerontologist Aubrey de Grey writes, "The problem of aging is unequivocally HUMANITY's worst medical problem." Aubrey de Grey, "A Thousand Years Young," *Futurist* 46 (May/June 2012): 18, emphasis original.

<sup>10</sup> Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge, MA: Harvard University Press, 1988), 115-16.

<sup>11</sup> Ray Kurzweil, *The Age of Spiritual Machines: When Computers Exceed Human Intelligence* (New York: Penguin, 1999), 240.

<sup>12</sup> Kurzweil, *Age of Spiritual Machines*, 356-66.

The fear of death and the existential longing for eternal life are not exclusive to transhumanists. All humans, even Christians, share a certain dread of death.<sup>13</sup> The Scriptures affirm that death is an enemy, the “last enemy” to be defeated (1 Cor 15:26). The Bible declares that those chosen of God live “in the hope of eternal life” (Titus 1:1). This longing for eternal life appears to be a point of confluence between transhumanist and Christian, but upon closer examination, it is actually the point of convergence. Transhumanists reject any given *telos* and place their faith in the human-mediated work of technology, while Christians embrace their divine *telos* and place their faith in Christ-mediated work of grace.

Michel Sandel’s eloquent summary bears repeating. Transhumanists pursue immortality through an autonomous “hyperagency, a Promethean aspiration to remake nature, including human nature, to serve our purposes and to satisfy our desires.”<sup>14</sup> According to Christian ethicist Ronald Cole-Turner, transhumanism builds the enhanced “new self” upon the foundation and desires of the “old self.”<sup>15</sup> The resulting creation becomes a confused chimera of old self and new self. Cole-Turner writes,

When these technologies of human enhancement get inside us, they become part of us, turning us into our own products and blurring the lines we once drew between subject and object, agent and effect. When “I” use technology to change myself, just who is this “I” who decides and who is the “I” that is the result of the decision?

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<sup>13</sup> Of course, there are significant differences between the various definitions and implications of death. For transhumanists, death is merely the cessation of biochemical reactions within any organism and an entropic return to constituent elements. From a biblical perspective, humans are spiritual creatures where biological death merely signals the transition to another form of conscious spiritual existence. For believers, this transition is to new life on a new earth, completed, perfected, and glorified. For non-believers, this transition is to a state of final condemnation and punishment, the “second death.” (Rev 2:11, Luke 15:32; Eph 2:1-3; Col 2:13).

<sup>14</sup> Michael Sandel, “The Case against Perfection: What’s Wrong with Designer Children, Bionic Athletes, and Genetic Engineering,” *The Atlantic Monthly* 293 (April 2004): 54.

<sup>15</sup> Ronald Cole-Turner, “Transhumanism and Christianity,” in *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement* (Washington, DC: Georgetown University Press, 2011), 193.

Have I tried to draw an untenable line between the self that choose and the self that is chosen, between self will and willed self?<sup>16</sup>

Cole-Turner continues, “The new self is the gradual creation of the *persona* of Christ (“it is Christ who lives in me”) at the expense of the desires of the old self . . . if technology is used at all, its role is not to satisfy the will, either before or after the change, but to transform the person in the direction of the new creation in Christ.”<sup>17</sup> The old self is not to be enhanced, but to be “put to death” in order to usher in the new self (Col 3:3-5).

### **Human Enhancement as False Religion**

Transhumanism attempts to fulfill the same existential needs that religion addresses. Indeed, Michael Burdett calls transhumanism the “religion of technology.”<sup>18</sup> Hava Tirosh-Samuelson refers to transhumanism as a “secular faith.”<sup>19</sup> Perhaps most useful, Max More defines transhumanism as a “eupraxsophy . . . a nonreligious philosophy of life that rejects faith worship and the supernatural, instead emphasizing a meaningful and ethical approach to living informed by reason, science, progress, and the value of existence in our current life.”<sup>20</sup>

Many transhumanists agree that their quest for technological immortality is a near-religious crusade. Founder of the posthumanist Raelian movement, Claude Villion, testified before the US Congress, “They say we are a religion . . . but we’re not a religion. Our God is science.”<sup>21</sup> When the living God is rejected, humans step up to fill the void.

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<sup>16</sup> Cole-Turner, “Transhumanism and Christianity,” 8.

<sup>17</sup> Cole-Turner, “Transhumanism and Christianity,” 9-10.

<sup>18</sup> Michael S. Burdett, “The Religion of Technology: Transhumanism and the Myth of Progress,” in *Religion and Transhumanism: The Unknown Future of Human Enhancement*, ed. Calvin Mercer and Tracy J. Trothen (Santa Barbara, CA: Praeger, 2015), 131.

<sup>19</sup> Hava Tirosh-Samuelson, “Transhumanism as a Secular Faith,” *Zygon* 47, no. 4 (2012): 710-34.

<sup>20</sup> Max More, “The Philosophy of Transhumanism,” in *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, ed. Max More and Natasha Vita-More (Chichester, UK: John Wiley & Sons, 2013), 4.

<sup>21</sup> Langdon Winner, “Resistance Is Futile: The Posthuman condition and Its Advocates,” in *Is*



The co-discoverer of DNA, James Watson, defended biotechnologies for extending life by exclaiming, “In all honesty, if scientists don’t play God, who will?”<sup>22</sup>

Perhaps surprisingly, Joseph Wolyniak explains that this transhumanist eupraxsophy did not arise “*over* and *against* religion, but often by *virtue* of it.”<sup>23</sup> Heup Yong Kim defines transhumanism as a “naïve, ultra-right ideology arising from the Judeo-Christian and Enlightenment traditions.”<sup>24</sup> Transhumanism appears to impart certain writings with near-sacred veracity (The Origin of the Species), espouse unifying creeds (Transhumanist Manifesto), and celebrate iconic adherents (Stephen Hawking). Transhumanism provides a theory of creation (The Big Bang), the origin of humanity (evolution), and the demise of the universe (The Big Freeze). Some transhumanist even believe that someday human technology will be able to alter space-time, permitting the “wholesale resurrection” of the “long dead.”<sup>25</sup> Transhumanism appears to join a long list of false religions promising ultimate transcendence from the human condition. Transhumanists are false prophets serving the idol of technology (Rom 16:17; Matt 24:24; Col 2:8; 1 Tim 6:3-5; John 4:1-3).

Regeneration or “being born again” is a spiritual rebirth that promises a future bodily resurrection. Regeneration is the core of the biblical message to humankind. In the Old Testament, regeneration is a central eschatological promise as exemplified by the dry

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*Human Nature Obsolete? Genetics, Bioengineering, and the Future of the Human Condition*, ed. Harold W. Baillie and Timothy K. Casey (Cambridge, MA: MIT Press, 2005), 393.

<sup>22</sup> James Watson, cited in Steven Connor, “Nobel Scientists Happy to ‘Play God’ with DNA,” *Independent* (May 2000): 7, accessed April 9, 2019, <https://www.independent.co.uk/news/science/nobel-scientist-happy-to-play-god-with-dna-277364.html>.

<sup>23</sup> Joseph Wolyniak, “The Relief of Man’s Estate”: Transhumanism, the Baconian Project, and the Theological Impetus for Material Salvation,” in Mercer and Trothen, *Religion and Transhumanism*, 63, emphasis original.

<sup>24</sup> Heup Young Kim, “Cyborg, Sage, and Saint: Transhumanism as Seen from an East Asian Theological Setting,” in Mercer and Trothen, *Religion and Transhumanism*, 98.

<sup>25</sup> Moravec, *Mind Children*, 122-23.

bones in Ezekiel returning to life (Ezek 37). In the New Testament, Jesus explains to Nicodemus that he must be “born again” to receive new spiritual life, which also entails a new resurrected bodily life (John 3). Jesus proclaims that He “came that they may have life, and have it abundantly” (John 10:10). Paul explains, “But God . . . when we were dead in our transgressions, made us alive together with Christ” (Eph 2:5).

### **The Burning Man or the New Man?**

The goal of enhancement for both transhumanist and Christian is the new man. The transhumanist seeks to become a new creature through technological enhancement toward a cyborg machine-man, an intermediary step toward either the mind uploaded to imperishable machine or a disembodied mind entirely freed from material existence. The transhumanists celebrate their scientific achievements and the audacity of their boundless narcissism in the desert sands of the Burning Man Festival.<sup>26</sup> A prophetic moniker of truly biblical portent.

The Christian too desires enhancement into new creature, a “new self, which is in the likeness of God” (Eph 4:24). This enhancement is gifted through Christ, not seized through technology. This new creature is sanctified by God, made holy and righteous. It is a spiritual recreation toward a spiritual Christlikeness that conveys a secondary physical re-creation in the resurrection whereby Christ will “transform the body of our humble

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<sup>26</sup> The Burning Man is an annual festival held since 1986, in a temporary city erected in the Black Rock desert of Nevada. The event is named for the ritual burning of a 40-foot human effigy at the event’s climax. Burning Man involves pagan worship, but it rejects God and religion. It is a post-modern community, but it celebrates individualism. It rejects consumerism even as it negotiates media contracts. It embraces radical environmentalism, yet in 2006, it produced a 27,000-ton carbon footprint. Nudity, drug arrests, accidents, and suicide accompany the celebration. According to “Burner” scholar Lee Gilmore, Burning Man conspicuously avoids self-definition, insisting it is “whatever you want it to be.” Lee Gilmore, *Theater in a Crowded Fire: Ritual and Spirituality at Burning Man* (Berkeley: University of California Press, 2010); Elsa Wenzel, “How Green Was Burning Man?” CNET, September 18, 2007, accessed December 11, 2018, <https://www.cnet.com/news/how-green-was-burning-man/>; Travis Atencio, “Seven Burning Man Employees Have Died by Suicide,” Rave Jungle, August 28, 2018, accessed December 11, 2018, <https://www.ravejungle.com/2018/08/27/burning-man-suicide-employees/>.

state into conformity with the body of His glory” (Phil 3:21). The new incorruptible soul receives a new imperishable vessel.

The debate over human enhancement technology is ultimately a debate about which new creature people are pursuing and which human *telos* people are fulfilling. When Enlightenment reason and science rejected any divine *telos*, they removed the last check on the human will to pursue its own subjective *telos*. MacIntyre insists that the only destination one can arrive by following a subjective *telos* is the Nietzschean *Übermensch*. MacIntyre explains, “The conjunction of philosophical and historical argument reveals . . . one must follow through the aspirations and the collapse of the different versions of the Enlightenment project until there remains only the Nietzschean diagnosis and the Nietzschean problematic.”<sup>27</sup> For the *Übermensch*, human technology only serves human desire.

In contrast, if *telos* is given within the design of creation, then this human *telos* awaits discovery rather than selection. The Scriptures reveal that the *telos* of man is to image God through filial obedience into Christlikeness. Accordingly, ethics proscribes the righteous behavior by which humans fulfill their divine *telos* as imagers. God’s laws are a didactic codification of the divine virtues whose practice leads to Christlikeness. Therefore, enhancement ethics ought to proscribe the application of technologies that aid humans to image God by imaging Christ.

Christian faith does not rest upon technological progress, but in the given human *telos* of the *imago Dei* and the human archetype found only *in Christ*.

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<sup>27</sup> MacIntyre, *After Virtue*, 118.

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## ABSTRACT

### THE END OF HUMANITY: A TELEOLOGICAL ETHIC FOR COGNITIVE ENHANCEMENT TECHNOLOGY

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Human enhancement technologies are developing rapidly. One of the most popular enhancements is the illicit abuse of cognitive enhancing “smart pills” to achieve positional advantage in colleges and workplaces. Chapter 2 reviews the state of debate concerning the ethics of cognitive enhancement technology by contrasting proponents who argue enhancement technology is necessary to overcome the limitations of embodiment, against enhancement opponents concerned with the commodification of human dignity and the risk of a “new eugenics.” This dissertation offers a biblical Christocentric alternative to help guide the moral applications of human enhancement technology for the future.

Chapter 3 argues that finitude and embodiment are not deficiencies of the human condition to be overcome or enhanced by technology. Rather, the limitations of embodiment are divinely good, providing the philosophical and theological warrant for human freedom, equal dignity, and true authenticity.

Since human enhancement implies that there is a perfect human archetype to provide the direction for improvement, chapter 4 argues that fulfillment of the *imago Dei* ought to be the proper teleological objective for human enhancement. Because the *imago Dei* first created in Adam became obscured and frustrated by sin, the image of God is now given in Jesus, the perfect archetype for humanity. According to Oliver O’Donovan, true

humanity is fulfilled by participating “in Christ” with His authority to redeem and reorder creation.

Chapter 5 argues that this participation is effected through the aretaic imitation of Christ’s kenotic attitudes of humility, compassion, and reverence. The applications of enhancement technology that honor these kenotic virtues and assist humans in their fulfillment as *imago Dei* to reorder creation are *prima facie* moral. Applications of enhancement technology which interfere with fulfillment of this human *telos* are immoral.

Chapter 6 explores the role of emotion and *phronesis* to guide the kenotic virtues, concluding that a precautionary principle demands a set of moral criteria to adjudicate the morality of any specific application of human enhancing technology. Chapter 7 argues that Christ’s kenotic attitudes translate into five moral criteria for determining the ethical use of human enhancement technology by healthy persons: just cause, transparency, temporality, proportionality, and reverence. The chapter closes by giving several illustrations of the application of these criteria to various real-world scenarios. Chapter 8 provides the conclusion and contrasts Christian and humanist views of the *telos* for humanity.

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