

Moving Environmental Bioethics into the 21st Century: Green Bioethics and the Common Good

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MOVING ENVIRONMENTAL BIOETHICS INTO THE
21ST CENTURY:
GREEN BIOETHICS AND THE COMMON GOOD

a dissertation

by

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submitted in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

May 2016

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2016

Abstract

Moving Environmental Bioethics into the 21st Century: Green Bioethics and the Common Good

Submitted by Cristina Richie

Director James Keenan

Environmental conservation is a pressing issue for modern humans. Health care systems and the consumption of medical goods should therefore be assessed in light of environmental sustainability. While the primary focus of environmental bioethics has been hospitals and health care facilities, ethicists must also address the offerings of the medical industry going forward. My dissertation proposes four principles to assess the environmental sustainability of current and future medical developments, techniques, and procedures. The four principles of green bioethics are:

1. General allocation of resources should precede special interest access: distributive justice
2. Current human needs over current human wants: environmental conservation
3. Simplicity before complexity: reducing dependence on medical intervention
4. The common good should drive health care instead of financial profit: ethical economics.

The four principles of green bioethics will move environmental bioethics into the 21st century in a responsible and sustainable manner.

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Dedication

For my grandmother, Rosemary “ReRe” Richie, who has displayed dedication to God, grace in ageing, wisdom in life, and has loved me in innumerable ways.

Acknowledgements

I want to thank and acknowledge the contribution of the following groups and people:

Those on my committee: Lisa Cahill for her support, consideration, and generous exegesis of my arguments; Andrea Vicini for his guidance—beginning with my ThM thesis—and erudite insight, and especially to my director Jim Keenan who impelled my writing to develop beyond my perceived existential limits and who inspires my work by his candor, productivity, and knowledge.

Boston College, the Theology Department faculty, especially professors who taught me during my coursework, and Mrs. Charlotte McLeod Flatley, who funded my studies with a generous four-year PhD fellowship.

My fellow PhD students—particularly the ethics students—for their fellowship during colloquiums. I was inspired by those ahead of me and pushed by those behind me. Special gratitude to Kate Jackson-Meyer, David Kwon, and Aaron Taylor, who helped me through the comprehensive exams. Thanks also to Jen Lamson-Scribner for our weekly meetings and again to Kate for her joy and intelligence.

The students I have taught at Massachusetts College of Pharmacy and Health Sciences (Boston, MA.) who sustained my passion for education.

My father Pat, who is our family's first theologian, my mother Nico, a theologian in her own right, my sister Angelica, a pillar of integrity, my brother Matteo, a man of ideas and wit, and my grandmother who this dissertation is dedicated to.

Jason. Who supported me as I pursued Lamentation 3:28, knowing the truth of Ecclesiastes 4:12b. Thank you.

CHAPTER 1

Introduction to Moving Environmental Bioethics into the 21st Century: Green Bioethics and the Common Good

I. Introduction

This chapter will first present the concept of environmental bioethics as a foundational, but currently estranged, part of modern bioethics. While the primary focus of public and theological environmental bioethics has attempted to integrate environmental sustainability into medical systems already in place, theological bioethicists must also address the potential offerings of the medical industry going forward. This dissertation will therefore propose four principles of “green bioethics” that can guide ethical decision-making in the medical industry.¹ The four principles of green bioethics are: 1) a general allocation of medical resources should occur before special interest access; 2) current human needs for health care should take priority before current human wants; 3) simple medical treatments should normally be chosen before complex ones; and, 4) the common good should drive health care instead of financial profit.

Green bioethics specifically focuses on medical developments, techniques, and procedures² because they are the focus of traditional bioethics. They are a specific area of the medical industry that is seldom addressed in terms of environmental impact—unlike waste management and electricity use. Further, they form a core identity of medical practice and are universal in defining medical care. Unlike a medical building, such as a hospital or clinic, which supposes a certain type of health care facility, medical developments, techniques, and procedures cross physical barriers and are the very

¹ An early version of this concept was published as Cristina Richie, “Building a Framework for Green Bioethics: Integrating Ecology into the Medical Industry,” *Health Care Ethics USA* 21, no. 4 (2013): 7-21.

² Defined as medical innovations—current and future—even if they are not yet feasible, or only partially worked out. Some examples include: pharmaceuticals; organs transplantation; MRI machines; X-Ray; “routine” procedures; synthetic biology; 3-D organ and tissue printing; nanotechnologies; transhumanist mechanical accouterments; reproductive technologies; germ line manipulation; human cloning; human engineering; “tongue mesh” surgery; pharmacogenomics; laparoscopy; etc.

foundation of health care.

In proposing the four principles for green bioethics I take a comprehensive approach that accounts for the common good in many areas of health care. The theological concept of the common good offers a broad base for ethics.³ Since there is consensus among Catholic and Protestant theologians that the common good is a worthy foundation for ethical decision-making, identifying these points of convergence across Christian tradition allows for what Willis Jenkins calls “practical strategies for conservation.”⁴ These practical strategies for conservation will shape green bioethics throughout the dissertation. Green bioethics can move health care systems forward in an environmentally responsible manner through the four principles of green bioethics. First, however, it must be situated within the larger conversation of sustainability in the health care industry. This is the task of chapter one.

In this chapter I will trace the growing concern over anthropogenic carbon emissions that cause climate change. Population growth and resource consumption are two major, interconnected culprits of carbon dioxide (CO₂) emissions. Moving from worldwide carbon emissions to a narrow focus on the carbon emissions of the medical industry, I will examine the CO₂ output of the National Health Services and the United States medical sector. Then, the academic and practical philosophies of environmental bioethics in both public and Catholic work will be surveyed.

³ Though not addressing ecology, Daniel Callahan does assess bioethics within the context of the common good. Daniel Callahan, “Beyond Individualism: Bioethics and the Common Good, an Interview,” *Second Opinion* (1988): 53-69, at 56.

⁴ Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (Washington DC: Georgetown University, 2013), 7.

Environmental bioethics in public⁵ discourse has been traced primarily to Van Rensselaer Potter and Jessica Pierce. The writings of these two individuals have been augmented by academic journals dedicated to environmental concerns such as the *Canadian Medical Association Journal* and the *Journal of Medical Humanities*. In addition to the academic contributions to public environmental bioethics through individuals and organizations, three outstanding initiatives of public environmental bioethics have shaped the field.

Practice Greenhealth and the Healthier Hospitals Initiative (HHI) have linked health care systems to larger conservationist movements. This will be highlighted by a case study on the HHI in one Massachusetts hospital. Furthermore, the National Health Services Carbon Reduction Strategy demonstrates progress in environmental bioethics abroad. After examining environmental bioethics in public work, I will survey environmental bioethics in Catholic discourse.

Unlike other environmental bioethics initiatives and implementation, Catholic health care organizations have a theological motivation for conservation rooted in the biblical imperative to care for creation and humankind. Because of this grounding,

⁵ I will be using the term “public” instead of “secular” bioethics. In public discourse, personal religious beliefs are not set aside, but rather form the rich tapestry of pluralistic dialogue in which true consensus occurs. For John Courtney Murray, consensus was an ongoing dialogue that grappled with ideas about morality. Consensus is not mere opinion, but the basic theme of public argument. See John Courtney Murray, *We Hold These Truths* (New York: Sheed and Ward, 1960). The Catholic conception of “public” is also articulated through Jacques Maritain, whereby “to speak as a Catholic having certain temporal position and to speak in the name of Catholicism are two very different things.” Jacques Maritain, *Integral Humanism* (New York: Charles Scribner’s Sons, 1968), 304. Both Murray and Maritain parallel the Augustinian understanding of “secular.” Nigel Biggar notes, “In this secular age (*saeculum*), peace in political society is the result, not of natural uniformity, but of negotiation and provisional compromise between rival viewpoints.” Nigel Biggar, “Why Religion Deserves a Place in Secular Medicine,” *Journal of Medical Ethics* 41, no. 3 (2015): 229–233, at 229–230. However, since this is a project in the vein of Catholic theological ethics, I will maintain the “public/religious” distinction instead of the less-understood “secular/religious” dichotomy. I thank Lisa Sowle Cahill for pointing these nuances out to me.

initiatives of Catholic environmental bioethics take on a concern for the environment similar to the one displayed in public settings, but with a spiritual urgency.

Dignity Health and Catholic Health Initiatives are two such programs, which are both part of the Healthier Hospitals Initiative. In addition to these conservationist programs of large hospital systems, I will describe a cross-section of environmental practices in clinical Catholic locations. Hospital administration, dietary offerings, and green burial are illustrative of Catholic environmental bioethics. After the landscapes of public and Catholic environmental bioethical practices are charted, I will express my concern over the lack of focus and rigor in current environmental bioethical discourse.

Chapter two will begin to address this lacuna through theological grounding in the common good, which will point towards my proposed four principles of green bioethics. Each of chapters three through six will describe a principle of green bioethics, culminating in a coherent and specific framework for moving environmental bioethics into the 21st century. I turn now to the foundational work on environmental bioethics, which has preceded this project.

II. Background of Project

Theologians were among the first “bioethicists” to address ethical decision-making in medicine as an outgrowth of moral theology.⁶ The long history of moral consideration in health care has characterized nearly every society where both religion and medicine were present. In Catholicism, for instance, a rich system for adjudicating the morality of medical dilemmas was produced, tracing back to moral manuals like Heribert Jone’s

⁶ Charles Curran, “The Catholic Moral Tradition in Bioethics,” in *The Story of Bioethics: From Seminal Works to Contemporary Explorations*, eds. Jennifer K. Walter and Eran Klein (Washington, DC: Georgetown University Press, 2003), 113-130, at 114-116.

Moral Theology.⁷ Of course, many of the principles employed in bioethics were developed long before Jone, starting with Thomas Aquinas.⁸ Historical Catholic moral principles have received commentary at various times by theologians who used casuistry to apply ancient principles to contemporary medical and moral dilemmas.⁹ In health care, starting from the mid-1900s, the principle of totality and the distinction between ordinary and extraordinary means were utilized by pioneer by theologians like Gerald Kelly.¹⁰ The principle of the double effect, cooperation, and proportionalism, taught by James Gustafson,¹¹ guided the theological reflection of his Catholic and Protestant students like Lisa Sowle Cahill,¹² Albert Jonsen,¹³ and Stanley Hauerwas.¹⁴ The influence of Catholic theology on medical ethics was prominent in other mid-century scholars like William May,¹⁵ Richard McCormick¹⁶ and Charles Curran.¹⁷ Despite the longstanding dialogue of

⁷ Heribert Jone, *Moral Theology* (Westminster, MD: Newman Bookshop, 1946).

⁸ Thomas Aquinas, *Summa Theologia* 2nd edition, trans. Fathers of the English Dominican Province, Kevin Knight, ed. (Online Edition, 2008).

⁹ For an excellent overview of some of these specific uses see: James Keenan and Thomas Shannon, eds. *The Context of Casuistry* (Washington: Georgetown University, 1995); James Keenan, "Notes on Moral Theology: Moral Theology and History," *Theological Studies* 62, no. 1 (2001): 86-104. For a modern application, see James Keenan, "Applying the Seventeenth-Century Casuistry of Accommodation to HIV Prevention," *Theological Studies* 60, no. 3 (1999): 492-512.

¹⁰ On this see Kate Jackson, "Lessons from Gerald Kelly, S.J., the Father of American Catholic Medical Ethics," *Health Care Ethics USA* 23, no. 2 (2015): 7-18.

¹¹ Lisa Sowle Cahill, "James M. Gustafson and Catholic Theological Ethics," *Journal of Moral Theology* 1, no. 1 (2012): 92-115. See also James M. Gustafson, *The Contributions of Theology to Medical Ethics* (Milwaukee: Marquette University 1975).

¹² Lisa Sowle Cahill, *Bioethics and the Common Good* (Milwaukee, WI: Marquette University Press, 2004); Lisa Sowle Cahill, *Theological Bioethics: Participation, Justice and Change* (Georgetown University Press, 2005).

¹³ Albert Jonsen and Michael J. Garland, *The Ethics of Neonatal Intensive Care* (San Francisco: University of California, 1976); Albert Jonsen, Mark Siegler and William Winslade, *Clinical Ethics: A Practical Approach To Ethical Decisions In Clinical Medicine* (New York: Macmillan, 1982).

¹⁴ Stanley Hauerwas, *Responsibility for Devalued Persons: Ethical Interactions Between Society, Family, and the Retarded* (Springfield, IL: C.C. Thomas, 1982); Stanley Hauerwas, *God, Medicine, and Suffering* (Grand Rapids, MI: Eerdmans, 1994).

¹⁵ William May, *Human Existence, Medicine, and Ethics: Reflections on Human Life* (Chicago: Franciscan Herald Press, 1977); William May, Germain Grisez, Joseph M. Boyle, John Finnis, and John Ford, S.J., *The Teaching of 'Humanae Vitae' A Defense* (San Francisco: Ignatius Press, 1988).

¹⁶ Richard McCormick, *How Brave a New World: Dilemmas in Bioethics* (New York: Doubleday, 1980).

¹⁷ Charles Curran, *Issues in Sexual and Medical Ethics* (South Bend, IA: University of Notre Dame Press, 1979).

moral theology and “bioethics,” the modern, Western cleavages between body and soul, profane and sacred,¹⁸ physician and priest have distanced the healing arts from attention spiritual care. To the post-modern person, bioethics appears as a relatively new discipline. But, in fact, this is *public* bioethics.

Daniel Callahan cites Joseph Fletcher’s 1954 book *Morals and Medicine*¹⁹ as “the first truly fresh manifestation of a growing interest in medical ethics in the post-World War II era.”²⁰ He notes that contemporary, public bioethics emerged as a discipline “during the 1960s and 70s in an era of affluence and social utopianism...(and) for medicine, it was a time that combined magnificent theoretical and clinical achievements with uncommonly difficult moral problems.”²¹ Centers dedicated to bioethical inquiry—like the Hastings Center—emerged.

Located in Garrison, New York, the Hastings Center was co-founded by Daniel Callahan and Willard Gaylin in 1969 and is one of the oldest bioethics think-tanks in the United States. The mission of the Center, according to their website, is “to address fundamental ethical issues in the areas of health, medicine, and the environment as they affect individuals, communities, and societies.”²² In addition to publishing a top-ranked, peer-reviewed journal, they produce several reports and books each year dedicated to bioethical issues and new medical developments, continuing their legacy of public bioethics. In addition to the Hastings Center, other significant developments in the history

¹⁸ Mircea Eliade, *The Sacred and The Profane: The Nature of Religion* (Orlando: Harcourt, 1959).

¹⁹ Joseph Fletcher, *Morals and Medicine* (Princeton, NJ: Princeton University Press, 1954).

²⁰ Daniel Callahan, “Religion and the Secularization of Bioethics,” *Hastings Center Report* 20, no. 4 (1990): 2-4, at 3.

²¹ Callahan, “Religion and the Secularization of Bioethics,” 2.

²² Hastings Center, “About Us: Our Mission,” 2015, at <http://www.thehastingscenter.org/About/Default.aspx>

of contemporary bioethics include Paul Ramsey's 1970 book, *The Patient as Person*,²³ a 1974 conference on bioethics at Haverford College,²⁴ and the 1978 *Belmont Report*.²⁵ Despite these well-known examples of early bioethics, the scholar who coined the term "bioethics," Van Rensselaer Potter,²⁶ had surprisingly little lasting impact on the development of the discipline at the time.

For Potter, bioethics was rooted in an ethic of life, inclusive of the earth and other organisms. In fact, the 1978 *Encyclopedia of Bioethics* states that the discipline of bioethics concerns "problems of interference with other living beings... and generally everything related to the balance of the ecosystem."²⁷ Attention to the world around us is prominent in this definition influenced by Potter, indicating that "environmental bioethics" was an integral part of the original concept of bioethics. Yet a second way of defining bioethics appeared in American academia. While Potter invested in the biological-environmental aspects of bioethics, the so-called Georgetown mantra, from the Kennedy Institute of Ethics at Georgetown University—and adherents thereof—took a decidedly different turn towards the patient-physician relationship through "biomedical ethics," now called, simply, "bioethics."

The Georgetown mantra—autonomy, beneficence, non-maleficence, and justice—became the quintessential standard for bioethics, by codifying these four

²³ Paul Ramsey, *The Patient as Person* (New Haven: Yale University Press, 1970).

²⁴ Callahan, "Religion and the Secularization of Bioethics," 3.

²⁵ National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, "Ethical Principles and Guidelines for the Protection of Human Subjects of Research" (United States Department of Health, Education, and Welfare, April 18, 1979), at <http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html>

²⁶ Van Rensselaer Potter, *Global Bioethics: Building on the Leopold Legacy* (East Lansing, MI: Michigan State University Press, 1988), 2. See also Van Rensselaer Potter, "Bioethics: the Science of Survival," *Perspectives in Biology and Medicine* 14, no. 1 (1982): 127-153.

²⁷ Warren T. Reich, ed., *The Encyclopedia of Bioethics*, vol. 1 (New York: Macmillan, 1978), introduction, xix.

principles in academic bioethics.²⁸ Numerous research centers connected to universities and hospitals arose, focused on the four principles of bioethics to the exclusion of Potter's original concept.²⁹ Thus, the environmental component to bioethics was forgotten by students, teachers, and practitioners of bioethics.

The evolution of the concept of bioethics—which was formerly attentive to nature and ecosystems—into a more technological-individual field, gave the appearance that environmental bioethics was a separate discipline from academic bioethics, according to Warren T. Reich.³⁰ This widespread misperception—resulting in the exclusion of bioenvironments from bioethics—has influenced the theory and praxis of nearly every ecologist, bioethicist, and theological ethicist. I therefore address the conceptual development of environmental bioethics as separate from the narrow understanding of bioethics that limits its concern to the patient-physician relationship, while simultaneously calling bioethicists to return to Potter's original vision, contextualized to the current environmental and bioethical landscape. This should not perpetuate the “bilocated” birth of bioethics—as either environmental or traditional—as the dissertation will make clear, but rather unify the two strains “separated at birth.”³¹ Since the roots of academic bioethics have already been provided, I now turn to ecology to understand the impetus for modern environmental bioethics.

²⁸ Tom Beauchamp and James Childress, *Principles of Biomedical Ethics*, 1st ed. (New York: Oxford University Press, 1979).

²⁹ Elio Sgreccia and Victor Tambone, *Manual de Bioetica* (Arhiepiscopiei Romano-Catolice București, 2003), Capitolul I Bioetica: origini, răspândire și definiții.

³⁰ Warren T. Reich, “The Word ‘Bioethics’: The Struggle Over Its Earliest Meanings,” *Kennedy Institute of Ethics Journal* 5, no. 1 (1995): 19-34.

³¹ *Ibid.*, 31.

A. Anthropogenic carbon emissions and climate change

Concern over the deterioration of the environment has been a significant feature of ethics over the last half century.³² This complex and multifaceted human quandary continues to demand our attention even as policies to curtail climate change lag. Reaching beyond mere biological concerns and into the academic disciplines of theology, feminism, economics, and political theory, the effects of human beings on the environment are such that we are now said to be living in the “era of the anthropocene,” which is dominated by human development.³³ This definition of the modern era is characterized by two interconnected challenges: human population growth and resource consumption.

1. Human population growth

In the last one hundred years there has been a drastic increase of the number of human inhabitants in the world “caused by unprecedented efficiency in reproduction,”³⁴ in tandem with prolonged lifespans from advances in medicine and hygiene. This trend is expected to continue. The United Nations Population Division’s recent 2012 Revision *World Population Prospect* predicted that with medium fertility rates—2.53 children per woman—the world’s population is projected to reach 8.1 billion in 2025, and to further increase to 9.6 billion in 2050 and 10.9 billion by 2100.³⁵ These figures can only predict

³² Lynn White, “The Historical Roots of Our Ecological Crisis,” *Science* 155 (1967): 1203-1207.

³³ “The Anthropocene is the name of a proposed new geological time period (probably an epoch) that may soon enter the official Geologic Time Scale. The Anthropocene is defined by the human influence on Earth, where we have become a geological force shaping the global landscape and evolution of our planet.” Bruno Martini, “The Anthropocene: Humankind as a Turning Point for Earth,” *Astrobiology Magazine*, 24 June 2013, at <http://www.astrobio.net/interview/5530/the-anthropocene-humankind-as-a-turning-point-for-earth>

³⁴ Robert C. Cook, *Human Fertility: The Modern Dilemma* (New York: William Sloan Associates Publishers, 1951), 6.

³⁵ “The ‘high-variant’ projection, which assumes an extra half of a child per woman (on average) compared to the medium variant, implies a world population of 10.9 billion in 2050 and 16.6 billion in 2100. The ‘low-variant’ projection, where women have half a child less, on average, than under the medium variant,

changes in human population and do not account for externalities of population growth that affect humans directly (e.g. competition for natural resources such as water, land, living space, food, poverty, war, and stress on the ecosystem due to a ballooning populus).

Furthermore, these numbers cannot predict the impact that human population growth has on the non-human community. “Biologists estimate that at least 1,000 plant and animal species become extinct annually.”³⁶ Many of the lost species are lost as a direct result of the need for humans to develop land to support a growing population. And, due to current population growth trajectories,

even if the human collective were to pull as hard as possible on the total fertility policy lever... the result would be ineffective in mitigating the immediately looming global sustainability crises (including anthropogenic climate disruption), for which we need to have major solutions well under way by 2050 and essentially solved by 2100³⁷

according to a report from the *Proceedings of the National Academy of Sciences of the United States of America*.

Theological ethicists like James Gustafson challenge unchecked human dominion and point out “that the purpose of God included the well-being of the entire creation, not

would produce a population of 8.3 billion in 2050.” The UN’s conclusion is astonishing: “Thus, a constant difference of only half a child above or below the medium variant would result in a global population in 2050 of around 1.3 billion more or less compared to the medium variant of 9.6 billion.” United Nations Division of Economic and Social Affairs, *World Population Prospects: The 2012 Revision*, Volume I: Comprehensive Tables (New York: United Nations, 2013), xv; xviii.

³⁶ Tobias Winright, ed. *Green Discipleship: Catholic Theological Ethics and the Environment* (Winona, MN: Anselm Academic, 2011), introduction; 2.

³⁷ Corey J. A. Bradshaw and Barry W. Brook, “Human Population Reduction is not a Quick Fix for Environmental Problems,” *PNAS: Proceedings of the National Academy of Sciences of the United States of America* (October 27, 2014): 1-6, at 4.

just of humanity alone.”³⁸ Sustainability is not only impacted by human population growth, but also resource consumption.

2. Resource consumption

Food, water, energy, lumber, minerals, and vegetation are fundamental to sustain basic human life, but the drive to consume more than what is essential is ravaging the planet and leading to anthropogenic climate change.³⁹ Even essential, minimal use of natural resources can lead to resource exploitation if the carrying capacity of the earth is overburdened.⁴⁰ For instance, water is necessary for all life and in many developed countries tap water is clean, extremely cheap, and readily available. However, people choose to purchase and consume bottled water. In 2008, wholesale bottled water sales were 11.2 billion dollars, with most sales occurring in the United States and other developed nations where bottled water is unnecessary to ensure cleanliness.⁴¹ This is an unnecessary burden on multiple, scarce resources.

In order to obtain bottled water, free water must first be gathered from a location, purified, and transported to a bottling factory. Oil must be extracted to fuel bottle manufacturing, which also depends on petroleum and plastic in order to create the disposable bottles.⁴² Once bottles have been made and the water has been transported to the factory, energy is used—often from non-renewable sources—for the machinery to

³⁸ Paraphrased in Lisa Sowle Cahill, *Bioethics and the Common Good* (Milwaukee, WI: Marquette University Press, 2004), 11. See James M. Gustafson, “The Contributions of Theology to Medical Ethics,” *Perspectives in Biology and Medicine* 19, no. 2 (1976): 247-272, at 251.

³⁹ Environmental Protection Agency, “Climate Change Indicators in the United States,” 2010, at <http://www.epa.gov/climatechange/indicators.html>

⁴⁰ Aldo Leopold, *A Sand County Almanac and Sketches Here and There* (Oxford: Oxford University Press, 1949), 219.

⁴¹ Mark J. Allman, “Theology H2O: The World Water Crisis and Sacramental Imagination,” in Tobias Winright, ed., *Green Discipleship: Catholic Theological Ethics and the Environment* (Winona, MN: Anselm Academic, 2011), 379-406, at 385.

⁴² Plastic, individual bottles of still water are common in the United States; Europe often uses family-size or individual “still” and “sparkling” bottled water at restaurants. My concern is individual, plastic bottles of still water that are considered “disposable,” as opposed to “renewable” like Nalgene bottles.

bottle the water. Once the water is in the bottle, a label using paper and ink is placed on each individual container; bottles are then grouped and packaged for transportation, using cardboard and more plastic for wrapping; and then shipped via truck or plane, which uses fossil fuel.

The Pacific Institute estimated that “approximately 17 million barrels of oil equivalent were needed to produce the plastic water bottles consumed by Americans in 2006—enough energy to fuel more than one million cars for a year.”⁴³ This description illustrates the profligate wastefulness of just one of our consumerist practices. Each act of consumption has a corresponding output of carbon dioxide (CO₂), which is a leading cause of climate change.⁴⁴ Environmentalists therefore speak of the ecological crisis in terms of CO₂ emissions of products, actions, individuals, families, countries, or the world aggregate. Of special concern for environmental conservation is the effect of each country’s carbon emissions on the planet, another symptom of consumption.

In 2008, China and the United States were the top two countries producing CO₂ emissions, with China emitting 6,534 million metric tons and the U.S. 5,833 million metric tons.⁴⁵ To put this in perspective, the third most emitting country—Russia—produced nearly four times less than China. Russia was responsible for 1,729 million metric tons of CO₂. Even the very least of the top 20 carbon emitting countries—Ukraine—only generated 350 million metric tons in 2008, about 20 times less than China.⁴⁶ While China and the U.S. top the charts of carbon emission by country, it should

⁴³ Pacific Institute, “Fact Sheet: Bottled Water and Energy: Getting to 17 Million Barrels,” (December 2007), 1-2 at 1, at http://pacinst.org/wp-content/uploads/sites/21/2013/04/bottled_water_factsheet.pdf

⁴⁴ International Energy Agency, “CO₂ Emissions from Fuel Combustion - 2011 Highlights,” at <http://www.iea.org/co2highlights/co2highlights.pdf>

⁴⁵ Union of Concerned Scientists, “Each Country’s Share of CO₂ Emissions,” Revised August 20, 2010, at http://www.ucsusa.org/global_warming/science_and_impacts/science/each-countrys-share-of-co2.html

⁴⁶ Ibid.

be noted that when per capita emissions are examined, statistics look different.

While the birthrates were about the same in both countries, China only emitted an average of 4.91 metric tons per capita, while the U.S. emitted nearly four times that amount at 19.18 tons per capita.⁴⁷ Attention must be paid not only to national but also individual carbon emissions as they relate to planetary destruction.

The consequences of human population growth and human resource consumption are twin issues that face all humans today. Data are overwhelmingly in support of the need to reduce carbon emissions through stabilizing or reducing human population growth, resource consumption, or both. Yet there are still those who hold to a strong anthropic principle, or the idea that our ecosystem will correct itself and the imbalances that human create. This *Candide*-like optimism is countered by current concerns that humans are irrevocably damaging our planet. Climate change is viewed by many as a worldwide concern.

3. Directions in conservation⁴⁸

Talk of “climate chaos”—the natural disasters that result from climate change—looms large in news coverage. Environmental professor Bill McKibben’s outspoken work on climate change through his 350.org initiative has become popularized through lectures on college campuses. In many cities there is a growing trend of “greening” life choices from food to fashion. Religious groups have also chimed in. In 2001, the United States Conference of Catholic Bishops issued a statement calling attention to the desperate need

⁴⁷ Ibid.

⁴⁸ Conservation is the just stewardship and allocation of resources. In ecological terms, it is the middle ground between preservation (preventing resources from any use) and exploitation (using all resources without regard for other’s needs or proportioning).

for environmental conservation as part of promoting the common good.⁴⁹ At this critical moment in human history, where our future depends on our ability to adapt and address the environmental perils of population growth and resource consumption, all areas of human life must be scrutinized for their ability to conform to ecological priorities. Health care and the medical industry have also begun to address environmental conservation.

B. The medical industry and CO₂

The health care system is ubiquitous in our lives and impacts the environment from birth to death, including every check-up, prescription, procedure, clinical advancement, and therapeutic technique. The medical industry is too pervasive and economically significant to disregard its environmental effects or exempt it from the scrutiny of environmental ethics. Ethicists are realizing that the planet cannot afford to have ecological ethics and bioethics remain distinct fields.⁵⁰ Ecological ethics must be integrated into health care. The future of our world may very well depend on how effectively we halt ecological destruction and conserve our resources. The health care system is gradually being examined within the context of conservation. Indeed, this point has been reiterated by recent assessment of the carbon emissions of the health care sector in the United Kingdom and United States.

1. Carbon emissions of the health care sector

The United Kingdom examined the carbon expenditure of its National Health Services (NHS) and calculated that the NHS is responsible for 25% of England's public

⁴⁹ United States Conference of Catholic Bishops, "Climate Change A Plea for Dialogue Prudence and the Common Good," 15 June, 2001, at <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/global-climate-change-a-plea-for-dialogue-prudence-and-the-common-good.cfm>

This statement and the 2015 encyclical *Laudato Si* from Pope Francis will be explored in chapter two.

⁵⁰ Cheryl C. Macpherson and Muge Akpınar-Elci, "Caribbean Heat Threatens Health, Well-being and the Future of Humanity," *Public Health Ethics* 8, no. 2 (2015): 196-208.

sector emissions. Interestingly, the carbon emissions are not from familiar high-carbon culprits like meat in cafeterias, high-powered facilities that rely on electricity and air conditioning, or even single-use instrument waste. Rather, “pharmaceuticals contribute most to procurement emissions, being responsible for four million tons of carbon per year.”⁵¹ Pharmaceuticals account for nearly a quarter of the 18 million tons of carbon dioxide emitted each year by the NHS. The United States is also examining carbon emissions of its health care sector.

In 2009, the *Journal of the American Medical Association (JAMA)* ran an article estimating the carbon output of the medical industry in the U.S. It was over thirty times higher than the NHS. In 2007, the U.S. health care sector expended an estimated 546 million metric tons of carbon dioxide.⁵² CO₂ emissions from hospitals and associated businesses count for 8 percent, or nearly a tenth of the country’s emissions. However, health care accounts for 16 percent of U.S. gross domestic product.⁵³ This can either be taken to mean that the health care industry is a low-carbon emitter compared to other sectors of commerce, or that the cost of health care services are disproportionate to their use of resources. As I will argue in the final chapter, I believe the cost of health care is significantly inflated.

Looking at the different health care departments for percentages of carbon emissions in the U.S. tells a story similar to that of the United Kingdom’s National Health Services. *JAMA* reported, “the health care sector, including upstream supply-chain activities, contributed an estimated total of 546 million metric tons of carbon dioxide

⁵¹ Ian Roberts, “The NHS Carbon Reduction Strategy,” *BMJ* 38, no. 7689 (2009): 248-49, at 248.

⁵² Jeanette W. Chung and David O. Meltzer, “Estimate of the Carbon Footprint of the US Health Care Sector,” *JAMA* 302, no. 18 (2009): 1970-1972.

⁵³ Julia Whitty, “Diagnosing Health Care’s Carbon Footprint,” *Mother Jones*, 10 Nov. 2009, at <http://www.motherjones.com/blue-marble/2009/11/diagnosing-health-cares-carbon-footprint>

equivalent (MMTCO₂Eq), of which 254 MMTCO₂Eq (46%) was attributable to direct activities. The largest contributors were the hospital and prescription drug sectors (39% and 14%, respectively).”⁵⁴ While it seems obvious that hospitals in the U.S. would have large carbon footprints—since they are habitually outfitted with air conditioning for comfort, rely on sub-zero temperatures for storage of certain products, and require consistent energy, as well as backup generators for machines that sustain life functioning—it is surprising, perhaps, that manufacturing little pills would be a substantial environmental menace.

However, the pharmaceutical industry, “with its high energy costs of manufacturing and researching drugs, combined with high transportation costs for drug distribution”⁵⁵ leads to a surprisingly hefty carbon output. This is just one more grievance against the pharmaceutical industry, including overmedication and greed.⁵⁶ Nonetheless, the tandem reports on the carbon emissions of the NHS in the *British Medical Journal* from 2009 and the U.S. health care sector in the *Journal of the American Medical Association*, also from 2009, provide the foundation for an environmental critique of the pharmaceutical industry as well. Modern pioneers in environmental bioethics Jessica Pierce and Andrew Jameton recognized that the carbon emissions from “pharmaceutical products with complex manufacturing processes, (have) environmentally significant precursors...as well as complex and hazardous solid, air and water emissions, including toxic, infectious and radioactive wastes.”⁵⁷

⁵⁴ Chung and Meltzer, “Estimate of the Carbon Footprint,” 1971.

⁵⁵ Whitty at <http://www.motherjones.com/blue-marble/2009/11/diagnosing-health-cares-carbon-footprint>

⁵⁶ In particular see the work of physician and first woman to serve as editor-in-chief of the *New England Journal of Medicine*, Marcia Angell, *The Truth About Drug Companies: How They Deceive Us and What to Do About It* (New York: Random House, 2005).

⁵⁷ Jessica Pierce and Andrew Jameton, “Sustainable Health Care and Emerging Ethical Responsibilities,” *Canadian Medical Association Journal* 164, no. 3 (2001): 365-369, at 365. Later published under the same

Although carbon emissions in the health care industry are only recently receiving international and domestic attention, there is actually a legacy of attention to environmental factors that affect human health. The next section provides a modern historical context for my project. Green bioethics is constitutive of an evolving environmental bioethic in public and Catholic discourse.

III. Context of Project

In the 1970s, environmental bioethics made connections between pollution, carbon emissions, and human health.⁵⁸ This downstream impact of climate change on people worldwide has continued to receive interest in the medical industry, urging conservation to better the lives of those who currently suffer under conditions of food scarcity, respiratory disease, and drought as a result of CO₂ emissions.⁵⁹ Environmental bioethics focuses on health care of people alive today as it relates to ecological challenges.

There have been several major trailblazers in the field of public environmental bioethics. Leadership has come from individuals writing and publishing in the academic world and initiatives and organization that work with hospitals to make them more sustainable. This section examines public environmental bioethics using the work of Van Rensselaer Potter, Jessica Pierce, the efforts of the *Canadian Medical Association Journal* and *Journal of Medical Humanities*, as well as recent trends in environmental bioethics as marking points. I also look at three initiatives that have built a greener health

title in Michael McCally, ed. *Life Support: The Environment and Human Health* (Boston: MIT Press, 2002), chap. 8.

⁵⁸ Paul Ehrlich, "Bioethics: Are Our Priorities Right?," *Bioscience* 53, no. 12 (2003): 1207-16; David Resnik, *Environmental Health Ethics* (Cambridge: Cambridge University Press, 2012).

⁵⁹ Anthony Costello et al., "Managing the Health Effects of Climate Change," *Lancet* 373, no. 9676 (2009): 1693-733.

care industry: Practice Greenhealth, the Healthy Hospitals Initiatives, and the NHS Carbon Reduction Strategy.

A. Environmental bioethics in public discourse

1. Scholars and journals leading environmental bioethics

In the chronicles of environmental bioethics there are peaks and valleys of academic interest. Van Rensselaer Potter, writing in the 1970s and 80s, was the first environmental bioethicist, calling civil society to articulate an environmental philosophy. Dr. Jessica Pierce, influenced by Potter, wrote her initial articles on environmental bioethics nearly a decade later and continued to publish on practical application of environmental bioethics from the 1990s into the early 2000s. At the same time, the *Canadian Medical Association Journal* and *Journal of Medical Humanities* dedicated multiple articles to the various avenues for academic inquiry within the discipline of environmental bioethics. From 2012 to the present we see a third generation of environmental bioethics emerging that attempts to integrate medical technology with the escalating environmental crisis. I discuss these developments in the next section.

a. Van Rensselaer Potter

Van Rensselaer Potter was educated in biochemistry and become professor of oncology at the McArdle Laboratory for Cancer Research at the University of Wisconsin in Madison after earning a PhD in 1938.⁶⁰ He is considered the father of modern bioethics and the earliest academic to use the term “bioethics.”⁶¹ In his first book, *Bioethics: Bridge to the Future*,⁶² went beyond common understandings of bioethics as merely

⁶⁰ Henk A. M. J. ten Have, “Potter’s Notion of Bioethics,” *Kennedy Institute of Ethics Journal* 22, no. 1 (2012): 59–82, at 59–60.

⁶¹ Potter, *Global Bioethics*, 2.

⁶² Van Rensselaer Potter, *Bioethics: Bridge to the Future* (New Jersey: Prentice-Hall, 1971).

ethical issues related to health care professionals. Rather, Potter included “a global perspective with an ecological focus on how we as humans will guide our adaptations to our environment.”⁶³ His work was not necessarily conservationist the way that later environmental bioethicists were, that is, focused on conservation to reduce the effects of pollution on human health. Rather, Potter assumed the interconnectedness of humans and the natural environment and connected bioethics to the world outside of health care.

In 1988, Van Potter published his second and final book *Global Bioethics: Building on the Leopold Legacy*. *Global Bioethics* aspired to bring the human back to an intimate relationship with the land and acknowledged how far we had come from nature. In the opening pages he laments that modern bioethics went in a drastically different direction than he envisioned, writing “with the focus on medical options, the fact that bioethics had been proposed to combine human values with ecological facts was forgotten by many: the ethics of how far to exercise technological options in the exploitation of the environment was not associated with the term bioethics.”⁶⁴ This lamentable fracturing was compounded by two further predicaments that forcefully emerged in the seventeen years between his books.

The first of several major dilemmas Potter highlighted for global bioethics was the desire to continue the human species, but not infinitely. Potter recognized that there was an “ecological need to limit the exponential increase in the human population... (and) no program (of conservation or advancement) can hope to succeed without the acceptance of controlled human fertility as a basic ethical imperative for the human

⁶³ Quoted in Potter, *Global Bioethics*, x.

⁶⁴ *Ibid.*, 1-2.

species.”⁶⁵ It is noteworthy that population growth takes the stage in Potter’s work and indeed, in later works by bioethicists concerned with ecology.⁶⁶ Although carbon emissions are not mentioned, this seeming oversight was due to the time period: the concept had not yet been developed.

A second dilemma for Potter’s global bioethics was the contrast between quality of life and an almost fetishistic “sanctity of life” that demands we evade death at any cost—environmental or social.⁶⁷ He wrote, “medical technology has achieved miracles, yet in many cases the victory has been the thwarting of death but not the restoration of health. In other words, the new technologies frequently lead to decisions in which life maintenance has taken precedence over the restoration of a meaningful existence.”⁶⁸ Plato provides a parallel anecdote of the purposes of medicine in *The Republic*, which describes values of medicine and healing.

Plato records that the physician Asclepius “did not think it worthwhile to treat a man incapable of living a normal life since such a one is of no use to himself or to the state.”⁶⁹ That is, extending life merely for the sake of respiration and circulation—which at this point in medical history can be done artificially—is not the purpose of medicine. Potter believed that function and health, and then accepting that death is *inevitable* should be the objective of the medical profession and industry. At the same time, limiting medical procedures to support basic health allows resources to be preserved instead of

⁶⁵ Ibid., 2.

⁶⁶ Cristina Richie, “‘Green’ Reproduction, Resource Conservation, and Ecological Responsibility,” *Worldviews: Global Religions, Culture, and Ecology* 18, no. 2 (2014): 144–172.

⁶⁷ Non-ecologists have also addressed this issue. See Desmond Tutu, “Desmond Tutu: A Dignified Death is Our Right – I am in Favour of Assisted Dying,” *The Guardian*, 12 July 2014, at <http://www.theguardian.com/commentisfree/2014/jul/12/desmond-tutu-in-favour-of-assisted-dying>

⁶⁸ Potter, *Global Bioethics*, 8.

⁶⁹ Plato, *The Republic*, trans. Richard Sterling and William Scott (New York: W.W. Norton, 1985), Book III, 407, d.

exploited. Commerce and artificially sustained life must take a backseat to environmental protection.⁷⁰

Unfortunately, Potter's work is generally hostile to religious communities that he fears will preempt efforts to control fertility (both contraception and abortion), choose a non-medical death, and reject the non-theistic, humanistic articulation idea of bioethics.⁷¹ Nonetheless, Potter's work was essential. He relocated bioethics in the *bios*—the life of the world—and connected conservation and medicine. More than this, Potter provided the vision for environmental bioethics, which would move in many directions in the coming years.

b. Jessica Pierce

In the subsequent “generation” of environmental bioethics in the late 1990s, Dr. Jessica Pierce was at the inception of the modern environmental bioethics movement, appearing as a major advocate for environmentally sustainable advances in medical and hospital practices. After graduating from Scripps College in Claremont, California, she earned a Master of Divinity from Harvard University and a PhD in religious ethics from the University of Virginia. Formerly a Faculty Associate at the Center for Bioethics and Humanities, University of Colorado Denver (Anschutz Medical Campus), she is currently a writer and independent scholar in bioethics.⁷²

In 1997, Pierce examined the “new” idea of greening of health care products by reducing the use of hazardous chemicals in facilities and using environmentally friendly

⁷⁰ Potter, *Global Bioethics*, 8-10.

⁷¹ *Ibid.*, 9; 153; 169.

⁷² Jessica Pierce, “Curriculum Vitae,” n.d., at http://jessicapierce.net/?page_id=228

cleaning products.⁷³ These are now common practices in many hospitals and other businesses. Following the intellectual steps of Van Rensselaer Potter, Jessica Pierce engaged the interrelated issues of global pollution and health care in several short articles leading up to a full-length book in 2004. Her work connects ecology and bioethics, just as Potter's did.

Noting that "about 25% of human health problems are already environmental in origin,"⁷⁴ in 2001 Pierce, along with Andrew Jameton, co-authored an article for the *Canadian Medical Association Journal* insisting that the health care industry examine the ways in which human health was inextricably linked to our ecosystem and contingent on a healthy planet. They argued that the symbiotic relationship between human life (*bios*) and planetary ethics was undeniable. Environmental bioethics must therefore acknowledge that "health care shares responsibility for the environmental problems created by the acquisition, processing and transportation of natural resources required to make the supplies and energy used by consumers" since "health care services represent a significant sector of intensive North American economies."⁷⁵ This vision for sustainable health care combined the conservationist sensibilities of ecology, the reality that the global marketplace must be slowed down, and that notion that health care must become "smaller."⁷⁶ Although Pierce and Jameton's article challenged the for-profit model of health care, their suggestions articulated a vision of sustainable health care in the 21st century.

⁷³ Jessica Pierce, "Can you use a 'Greener' Cleaner?" *Hospitals Materials Management* March (1997): 58-60 and Jessica Pierce, "Product Review Yields Cleaner, Greener Use of Chemicals," *Health Facilities Management* March (1997): 54-62.

⁷⁴ Jessica Pierce and Andrew Jameton, "Sustainable Health Care and Emerging Ethical Responsibilities," 365.

⁷⁵ *Ibid.*, 366.

⁷⁶ The environmental doctrine of "small" is articulated in Larry L. Rasmussen, *Ethics for a Small Planet: New Horizons on Population, Consumption, and Ecology* (New York: SUNY Press, 1998).

The next year Pierce struck again with a sole-authored article, this time in the *Journal of Medical Humanities*. In 2002, she persuasively wrote that bioethics was an under-tapped paradigm for discussions on environmental problems and human health. In particular, “bioethics is in a good position to adapt itself to the biological, social, and moral implications of environmental change.”⁷⁷ At the same time, Pierce stressed that the medical industry is directly responsible for some measure of poor human health vis-à-vis pollution. She pointed out the incongruity between an industry premised on beneficence and the environmental hazards of health care production, noting “health care relies on heavy use of petroleum-based energy, which causes ground level air pollution and adds to the atmospheric overload of carbon dioxide.”⁷⁸ Following this article on the obligations and responsibilities of the health care system in relation to global CO₂ emissions, Pierce co-authored a book with Andrew Jameton in 2004, *The Ethics of Environmentally Responsible Health Care*.⁷⁹

This full-length treatment of environmental bioethics was one of the first books since Van Potter’s 1988 monograph to address the health needs of human beings—both current and future—and the limits of our shared ecosystem that sustains us. Many tensions were highlighted in *The Ethics of Environmentally Responsible Health Care*, such as the gap between health care needs in developed and developing nations, the individual versus the community, and the limited resources of the planet versus the demands of a growing human population. As ethicists writing from within an American context, the United States health care system was targeted in particular.

⁷⁷ Jessica Pierce, “Can Bioethics Survive on a Dying World?,” *Journal of Medical Humanities* 23, no. 1 (2002): 3-6, at 4.

⁷⁸ *Ibid.*, 5.

⁷⁹ Jessica Pierce and Andrew Jameton, *The Ethics of Environmentally Responsible Health Care* (New York: Oxford University Press, 2004).

In the opening pages Pierce and Jameton wrote that “conventional principles of bioethics... need to be reformulated in the light of the changing global environment... we strive here to bridge the gulf that separates environmental perceive from the viewpoints of health professionals and ethicists in their midst.”⁸⁰ This seemingly insurmountable task of setting limits in the face of a capitalist system must be attended to, however uncomfortable. Overall, Pierce and Jameton wrote a powerful book that evaluated the interplay between medicine-as-health and medicine-as-harm. Their two-fold focus on personal responsibility to make ecological medical decisions and pollution of the medical industry articulated environmental bioethics near the turn of the century.

Pierce is still modestly active in academia. In 2009, she wrote two pieces on environmental bioethics via blog post. The first, “Ethics of Sustainable Healthcare Reform,” with Dan Bednarz, discussed oil use, financial gain, and ecological unsustainability of the health care system.⁸¹ The second essay, “Environmental Bioethics—A Manifesto,” touched on a wide variety of ecological issues within the medical industry including climate change, peak oil, doctor-patient relationships, personal responsibility for health, carbon emissions, toxic pollution, and the health care system.⁸² Pierce has most recently moved into the realm of bioethics and animal rights, but her earlier work on environmental bioethics made deep inroads to a burgeoning field of study. Positing the health care industry not only as an agent of harm, but also as a solution to local and global health care problems, resonates other efforts of the second

⁸⁰ Ibid., 5.

⁸¹ Jessica Pierce and Dan Bednarz, “Ethics of Sustainable Healthcare Reform,” 28 Aug. 2009, at <http://healthafteroil.wordpress.com/2009/08/28/the-ethics-of-sustainable-healthcare-reform/Health After Oil>)

⁸² Jessica Pierce, “Environmental Bioethics—A Manifesto,” 13 Nov. 2009, at <http://healthafteroil.wordpress.com/2009/11/13/environmental-bioethics%E2%80%94a-manifesto/Health After Oil>)

generation of environmental bioethics.

c. *Canadian Medical Association Journal* and the *Journal of Medical Humanities*⁸³

Leading up to the publication of Pierce and Jameton's *The Ethics of Environmentally Responsible Health Care*, two journals took a profound interest in environmental bioethics. The years between 2000-2003 saw growing academic attentiveness to environmental bioethics and issues related to human health and planetary sustainability. The *Canadian Medical Association Journal* (CMAJ) and the *Journal of Medical Humanities* (JMH) both ran article series exploring ecology and medical ethics.

First, between 2000-2001, CMAJ published numerous articles on the ecosystem and physical wellbeing. In an editorial piece introducing the series and rationale behind the publications, the editor explain,

about a year ago Dr. Michael McCally of the Mount Sinai School of Medicine in New York interrupted these ruminations (on the intimate connections between health care systems, human health, the economy, social justice, and national security) with the idea of publishing a series of papers to make the connection between these global environmental changes and human health.⁸⁴

Over the next two years, nine articles would be systematically published on population and consumption, climate change, ozone depletion, cancer, war, endocrine disruption,

⁸³ Other journals are illustrative of this movement as well. From 2003-2007 the journal *Symbiosis: The Journal of Ecologically Sustainable Medicine* published two issues per year, for five years. Archives are available at <http://www.envirolink.org/external.html?www=http%3A//www.teleosis.org&itemid=200509070143570.746443>. In 2011, the journal *Health Affairs* dedicated an entire issue to "Environmental Challenges for Health." See *Health Affairs* 30, no. 5 (2011): 810-997.

⁸⁴ Editor *Canadian Medical Association Journal*, "Ecosystem Evasion and Health," *Canadian Medical Association Journal* 163, no. 5 (2000): 489.

species loss, sustainable health care (by Jessica Pierce), and risk assessment.⁸⁵ The diverse publications attest to the wide spread concerns of environmental bioethics which touch every aspect of human life as creatures and as *homo sapiens*.

Dovetailing with the efforts of *CMAJ* to introduce concerns about the environment into the medical world, in 2002 the *Journal of Medical Humanities* devoted an entire issue to the connections between the declining environment and health care.⁸⁶ Authors wrote on “environmental thinking,”⁸⁷ the role of natural light in human health,⁸⁸ the Amish ethos of placing communal needs above individual “rights” to prolong life,⁸⁹ the need for simple living with a restructuring of the global economy to aid public health,⁹⁰ the connection between eco-feminism and feminist bioethics,⁹¹ the allure of biotechnologies and implications for resource use in a planet with limited resources,⁹² and the role of childlike wonder about nature in our declining years.⁹³ These articles expanded the notion of environmental bioethics from a purely scientific, medical pursuit to one that was also of interest to the humanities, including poetry, prose, and even art.

Hence, the contours of environmental bioethics continue to expand. It seems that at every turn there is a new organization, ethicist or initiative ready to take on the challenges of environmental degradation and human health, health care and

⁸⁵ A list of the articles in the series can be found in John C. Bailer, III and A. John Bailer, “Environment and Health: 9. The Science of Risk Assessment,” *CMAJ* 164, no. 4 (2001): 503-506, at 506.

⁸⁶ *Journal of Medical Humanities* 23, no. 1 (2002): 3-92.

⁸⁷ Pierce, “Can Bioethics Survive?,” 3-6.

⁸⁸ David B. Morris, “Light as Environment: Medicine, Health, and Values,” *Journal of Medical Humanities* 23, no. 1 (2002): 7-29.

⁸⁹ Jennifer Girod, “A Sustainable Medicine: Lessons from the Old Order Amish,” *Journal of Medical Humanities* 23, no. 1 (2002): 31-42.

⁹⁰ Andrew Jameton, “Outline of the Ethical Implications of Earth’s Limits for Health Care,” *Journal of Medical Humanities* 23, no. 1 (2002): 43-59.

⁹¹ Jessica Pierce, Hilde Lindeman Nelson, and Karen J. Warren, “Feminist Slants on Nature and Health,” *Journal of Medical Humanities* 23, no. 1 (2002): 61-72.

⁹² Michael Gillespie, “Saving What We Love at Any Cost: The Rhetoric of Heroic Medicine as Diversion,” *Journal of Medical Humanities* 23, no. 1 (2002): 73-86.

⁹³ Roger Pierce, “Natural Piety,” *Journal of Medical Humanities* 23, no. 1 (2002): 87-92.

responsibility. The third generation of environmental bioethics is characterized by a breadth of academic writings, organizations, and university programs.

d. Recent trends in environmental bioethics

The third generation of environmental bioethics has taken shape in part through academic writings. In 2012, David Resnik's *Environmental Health Ethics* brought environmental bioethics back to the forefront of medicine.⁹⁴ Resnik, a bioethicist at the National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, N.C.,⁹⁵ pursued many of the same paths that Potter and Pierce had created, while also expanding on issues of nutrition, natural disasters, and public health. The ethical connections between carbon emissions and medical technology began to appear in other thought-provoking literature.

In 2012, Matthew Liao, Anders Sandberg and Rebecca Roache co-authored an article entitled "Human Engineering and Climate Change" in *Ethics, Policy and the Environment*.⁹⁶ This provocative article proposed genetic engineering to reduce the carbon footprint of future humans. Suggestions included selecting genes for meat intolerance, smaller people, and altruistic tendencies, among other measures. While the proposals made in "Human Engineering" are quite extreme, and somewhat hyperbolic, they nevertheless reinforce both the possibility of integrating environmental ethics into health care offerings and the necessity of conservation. In addition to authored works promoting environmental bioethics, the discipline has also become part and parcel of scholastic institutions, attesting to the growing interest in the subject.

⁹⁴ David Resnik, *Environmental Health Ethics* (Cambridge, UK: Cambridge University Press, 2012).

⁹⁵ National Institute of Environmental Health Sciences, "David Resnik, Bioethicist," 2015, at <http://www.niehs.nih.gov/research/resources/bioethics/bioethicist/>

⁹⁶ Matthew Liao, Anders Sandberg, and Rebecca Roache, "Human Engineering and Climate Change," *Ethics, Policy and the Environment* 15, no. 2 (2012): 206-221.

Notably, the American Society for Bioethics and Humanities (ASBH) has an affinity group on Environmental Bioethics.⁹⁷ In 2013, the ASBH sponsored an undergraduate conference entitled “Bioethics: Intersections of Global Health and Environmental Policy,” noting, “no previous host university has delved this deeply into the subject of environmental ethics, and we are excited to be leading the conversation in this important field.”⁹⁸ Furthermore, Harvard Medical School has a club dedicated to topics connected to environmental bioethics. Harvard Students for Environmental Awareness in Medicine (SEAM) publishes a quarterly newsletter and “collaborates with the Longwood (Boston) Green Campus Initiative on a number of projects to improve energy efficiency and recycling and to reduce waste among students and staff.”⁹⁹ Environmental bioethics is becoming a part of academic curriculum as well.

New York University offers a Masters of Arts in Environmental Bioethics and the aforementioned Matthew Liao is the Director. Their 5-year MD/MA program has two tracks leading to the terminal degree. Although they “anticipate that most of our dual-degree students would opt for the health ethics track,”¹⁰⁰ the fact that a major university has a degree dedicated to environmental bioethics attests to the importance of the discipline. I have also taken a pedagogical interest in environmental bioethics and from 2014-2016 integrated a section on ecology and health into my *Health Care Ethics* class at Massachusetts College of Pharmacy and Health Sciences in the Longwood Medical area

⁹⁷ The group affinity group “Environmental Bioethics” is lead by Cory Labrecque. See the American Society for Bioethics and Humanities, “Affinity Groups,” at <http://www.asbh.org/membership/content/affinity-groups.html#sthash.RQihJnS5.dpuf>

⁹⁸ American Society for Bioethics and Humanities, “National Undergraduate Bioethics Conference,” Georgetown University, April 5-7, 2013, at <http://nubc2013.org/>

⁹⁹ Harvard University Center for the Environment, “Student Groups: Students for Environmental Awareness in Medicine (SEAM),” at <http://environment.harvard.edu/student-resources/student-groups>

¹⁰⁰ New York University School of Medicine, “MD/MA in Bioethics,” n.d. at <http://school.med.nyu.edu/studentsfaculty/student-affairs/masters-programs/mdma-bioethics>

of Boston. Both students online and in person were educated in the tradition of conservation in health care.

The awareness of environmental ethics in the medical industry continues to develop. Recently, the conversation has shifted from environmental bioethics to green bioethics,¹⁰¹ but the ties to the original concerns of Potter, Pierce, *CMAJ*, and *JMH* remain strong in both academic and clinical settings. Several initiatives that reflect the concerns of environmental bioethics have become hallmarks of “green” hospitals and clinics as well.

2. Initiatives of environmental bioethics

Initiatives demonstrate the successful implementation of philosophical environmental bioethics; they are the praxis of the theory. Similar to academic environmental bioethics, the primary motivation for these clinical environmental policies is human health and a cost-efficient health care facility. Practice Greenhealth, the Healthier Hospitals Initiative, and the NHS *Carbon Reduction Strategy* are three examples that take varied approaches to strategic implementation of environmental bioethics in health care facilities and institutions.

a. Practice Greenhealth

Practice Greenhealth, based in Reston, Virginia, is the longest established environmental bioethics initiative in the United States. Tracing back almost twenty years ago to 1998, its inception was a powerful joining of forces between the American Hospital Association (AHA) and the U.S. Environmental Protection Agency (EPA). At that time, the two groups “signed a landmark agreement to advance pollution prevention

¹⁰¹ Rebecca Roache, “Making Consequentialism More Appealing,” *Journal of Medical Ethics* 41, no. 5 (2015): 359-360, at 360.

efforts in our nation's health care facilities.”¹⁰² Known as the Memorandum of Understanding (MOU), this document “set new goals for hospital pollution prevention over the next five years, and brought together a stake-holders’ council to enforce the provisions of the MOU.”¹⁰³ The Memorandum of Understanding “became the cornerstone of the Hospital for a Healthy Environment (H2E) program and called for: virtual elimination of mercury waste; reduction of the health care sector’s total waste volume; chemical waste minimization; and a variety of educational and information sharing activities focused on pollution prevention and toxics minimization.”¹⁰⁴ Again, a mixture of concern for the environment vis-à-vis public health hazards and strategies for reducing waste, which in turn would lead to larger profit margins, was evident.

The Hospital for a Healthy Environment Program (H2E) was popular, drawing together number of partners and facilities. It grew rapidly and within eight years “the H2E program had 1,342 partners representing 7,148 health care facilities including 1,604 hospitals, 3,674 clinics, 912 nursing homes and 958 other types of facilities.”¹⁰⁵ Realizing the necessity of an expanded environmental agenda, and facing funding cuts from the EPA, the Hospital for a Healthy Environment Program broadened its goals.

Most recently, in January 2008, the Hospital for a Healthy Environment Program “was reorganized and renamed Practice Greenhealth and... is currently the nation’s leading membership and networking organization for organizations in the health care community that have made a commitment to sustainable, environmentally

¹⁰² Practice Greenhealth, “History,” 2014, at <https://practicegreenhealth.org/about/history>

¹⁰³ Environmental Protection Agency and American Hospital Association, *Memorandum of Understanding between the American Hospital Association and the U.S. Environmental Protection Agency* (Washington, DC: Health Care Without Harm, 2001), 1.

¹⁰⁴ Practice Greenhealth, “History.”

¹⁰⁵ Ibid.

preferable practices.”¹⁰⁶ The most notable of the new goals was “reducing health care’s environmental footprint through resource conservation and other *measurable* environmental improvements”¹⁰⁷ (italics mine). Note that the goal of conservation is only in reference to its ability to be quantified, reiterating a pragmatic approach to environmental bioethics (i.e., a hospital can track how many needles were purchased, disposed of, or reused, but it is difficult to track the carbon impact of a particular procedure, such as kidney dialysis. Thus multi-stepped, complex procedures are rarely quantified.¹⁰⁸) The narrow focus of “measurable environmental improvements” addresses the letter of ecology, but not the spirit.

Even so, Practice Greenhealth has a far reach into many different branches of the medical industry in addition to historical longevity. “Practice Greenhealth members include hospitals and health care systems, health care providers, manufacturers and service providers, architectural, engineering and design firms, group purchasing organizations, and affiliated non-profit organizations.”¹⁰⁹ The comprehensive, sweeping approach to environmental bioethics of Practice Greenhealth ensures that all nearly branches of the medical industry have the potential to be impacted by ecological standards. In addition to Practice Greenhealth, the Healthier Hospitals Initiative has tackled climate change from within the medical industry.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ One procedure whose carbon footprint has been calculated is a heart bypass operation in the U.K., which emits 1.1 tonnes of CO₂. See Mike Berners-Lee, *How Bad Are Bananas? The Carbon Footprint of Everything* (London: Profile Book, 2010), 131-132.

¹⁰⁹ Ibid.

b. Healthier Hospitals Initiative

The Healthier Hospitals Initiative (HHI), also based in Reston, Virginia, is a national campaign to lead environmental change in the health care sector. Essentially the HHI is a think-tank and information center, providing “webinars, networking and strategy sharing, proven case studies, (and) guides... (to) incorporate environmentally friendly practices into daily operations.”¹¹⁰ HHI focuses on six branches of ecological health care: healthier food; leaner energy; less waste; safer chemicals; smarter purchasing; and engaged leadership.¹¹¹

Many of these initiatives mirror other corporation’s attempts to “green” their business. For instance, a part of the HHI healthier food strategies include serving less meat and sugary beverages in hospitals.¹¹² Leaner energy includes using less air conditioning and replacing halogen lights with light emitting diode (LED), which are cooler.¹¹³ In both cases, the financial savings are touted as beneficial while also improving public health.

Since the HHI is based in the health care industry, initiatives also connect to health care specific measures related to safer chemicals. Among these concerns are the ecological implications of red bag (biohazard) waste; switching from one-use devices to reprocessing; and eliminating health care specific toxins like Di(2-ethylhexyl)phthalate (DEHP) released from polyvinyl chloride (PVC).¹¹⁴ DEHP is found in a multitude of hospital devices such as breast pumps; enteral nutrition products; parenteral infusion

¹¹⁰ Healthier Hospitals Initiative, “Brochure,” (ND): 1-12, at 3, at http://healthierhospitals.org/sites/default/files/IMCE/public_files/Pdfs/hhi-brochure.pdf

¹¹¹ Ibid., 3.

¹¹² Ibid., 4.

¹¹³ Ibid., 5.

¹¹⁴ Ibid., 6-8.

devices and sets; general urological (irrigation/ urology sets and solutions, urinary catheters); exam gloves; umbilical vessel catheters; and vascular catheters. These medical devices have been known to be toxic since 2001 when the Food and Drug Administration (FDA) ran a safety assessment of DEHP/PVC exposure localized to hospital settings. The FDA was especially concerned with the vulnerable male neonate population and recommended using alternative methods or devices while also admitting to the necessity of such procedures (instead of preventing the need for them).¹¹⁵

Overall, the HHI promotes numerous green choices and alternatives to hospitals, allowing health care organization to choose the best strategies for their ecological and economic purposes. Each of the aforementioned six initiatives has targeted goals and “levels” of commitments. Partnered hospitals, when they chose to join the Healthier Hospitals Initiative, are then listed on their website not only by location, but also by which of the six strategies they have adopted. This type of positive pressure, combined with participation of big-name health care leaders like Kaiser Permanente, Partners Healthcare, and Stanford Hospital and Clinics, encourage other hospitals to adopt HHI initiatives.¹¹⁶ In fact, “more than 40 hospitals in Massachusetts, including all 10 in the Partners HealthCare system, and 900 hospitals nationwide have joined a healthier

¹¹⁵ In this case prevention could only be accomplished through avoiding pregnancy, using sex-selection, or forgoing treatment. Food and Drug Administration, “FDA Public Health Notification: PVC Devices Containing the Plasticizer DEHP,” (12 July, 2002), at <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm062182.htm> Some ten years later the European Union’s Scientific Committee on Emerging and Newly-Identified Health Risks (SCENIHR) produced a similar warning. Scientific Committee on Emerging and Newly-Identified Health Risks, *Preliminary Opinion on The Safety of Medical Devices Containing DEHP- Plasticized PVC or other Plasticizers on Neonates and other Groups Possibly at Risk* (Luxemburg: European Union, 2014) at http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_047.pdf

¹¹⁶ For a list of participating hospitals committed to HHI initiatives see Healthier Hospitals Initiative, “Participating Hospitals,” n.d., at <http://healthierhospitals.org/about-hhi/participating-hospitals>

hospitals initiative, launched in 2012.”¹¹⁷ As a bioethicist in the Boston area, I am particularly pleased to see my current state of residence join the Healthier Hospitals Initiative.

A case study in the HHI: a Massachusetts hospital

Massachusetts is a hub of medical invention and innovation, so it is significant that hospitals in the commonwealth have joined the environmental bioethics movement.¹¹⁸ The Boston area features prominent and Top-Ten ranked hospitals, as well as numerous teaching and research institutions specializing in health care. Ingraining an environmental philosophy into health care facilities and professionals sets precedence for other organizations to follow suit. Although many aspects of the “greening” of Massachusetts hospitals are similar to other businesses—such as attention to the quality of food served, the type of energy used to power facilities, and efficient architectural design— in 2014 the *Boston Globe* reported that some hospitals are going one step further.

In addition to the usual suspects of commercial greening, like recycling office paper, “many hospitals (in Massachusetts) have started rooftop vegetable and herb gardens, and kitchen staff are purchasing more local produce from sustainable farms and seafood from local fishermen” (sic).¹¹⁹ Some hospital menus now read like a “farm-to-table” restaurant. In the Boston area this is especially desirable as high incomes and consumer-based medicine is marketed at the wealthy elite. And, while these initiatives

¹¹⁷ Deborah Kotz, “Hospitals Take Steps To Set Healthy Examples For Patients,” *Boston Globe*, 31 March 2014, at <http://www.bostonglobe.com/lifestyle/health-wellness/2014/03/30/hospitals-take-steps-set-healthy-examples-for-patients/k8AdsJDkdnN5qWh8fyKDWL/story.html>

¹¹⁸ For the historical role of Boston in medical innovation see Guenter B. Risse, *Mending Bodies, Saving Souls: A History of Hospitals* (Oxford: Oxford University Press, 1999), 339-361.

¹¹⁹ Kotz.

will reduce the carbon impact of the medical industry, the emphasis remains on marketing and lucrativeness rather than environmental conservation.

The president of the nonprofit group Health Care Without Harm, Gary Cohen, reflected on the ways modern hospital systems are antithetical to human health. He is quoted as saying, “hospitals have healing as their core value, yet they unwittingly contribute to chronic disease in our society by selling junk food, being enormous users of toxic chemicals and energy resources, and generating a ton of waste.”¹²⁰ While Cohen is correct in pointing out the conflict of interests between those seeking sophisticated health care from an environmentally menacing system and the health of the patients themselves, his statement begs the question, “why was junk food introduced in hospital settings in the first place?”

The answer, of course, is consumer marketing and profit margins. People *like* to eat fried foods and drink sugary sodas. Salads, water, and high-protein vegetarian meals that are flavorful and healthy do not sell in this “junk food nation.” The debate about the obligations of hospitals to give only healthful options to patients lies between public health, patient autonomy, and paternalism but the new “healthy” foods being offered to patients are a mixed bag at best.

Cohen proudly states, “Spaulding (a major hospital in the Boston area) vending machines now contain bottled water or diet beverages, baked chips, and sweets with less added sugar.”¹²¹ Yet these are choices are, arguably, just as unhealthy as their precursors. Chemicals, preservatives, and a lack of fresh fruit dominate the snack options while whole grains and healthy fats are absent in even the greenest of hospitals. Environmental

¹²⁰ Ibid.

¹²¹ Ibid.

bioethics still has some serious work to do. A notable example of a comprehensive plan to reduce carbon emissions in the health care sector is the NHS Carbon Reduction Strategy.

c. NHS Carbon Reduction Strategy

Outside of the United States those concerned with anthropogenic climate change are addressing the impact of the medical industry on global warming. A third initiative of environmental bioethics, and perhaps the most effective and comprehensive strategy to emerge in this purview, is the United Kingdom's National Health Service's (NHS) Carbon Reduction Strategy.

The NHS has drafted and implemented a systematic and aggressive Carbon Reduction Strategy for England in reaction to their assessment of CO₂ emissions of the medical industry.¹²² The plan is backed and implemented by the government as a part of a larger appraisal of country's carbon emissions. Since the U.K. has socialized medicine, the national administration oversees health care policy, distribution of medicine, and health insurance, and therefore can limit carbon emission.

Carbon capping is believed to be one of the most efficient and effective ways of quantifiably limiting carbon dioxide emissions in the health care system and in other forms of commerce. Despite support from both science and ecology,¹²³ carbon caps are difficult to implement in some countries—like the United States—and there has been reluctance to initiate any sort of carbon caps, trading, or binding measures to reduce the

¹²² NHS Sustainable Development Unit, *Saving Carbon, Improving Health: NHS Carbon Reduction Strategy for England* (London: NHS Sustainable Development Unit, 2009).

¹²³ Indeed, even theological backing. See Dan DiLeo, "Faithful Citizenship in the Age of Climate Change: Why U.S. Catholics Should Advocate for a National Carbon Tax," *Journal of Catholic Social Thought* 11, no. 2 (2014): 431-464.

amount of carbon emitted by the health care industry here.¹²⁴ Stubborn U.S. policy aside, the NHS has been lauded as an innovator of health care carbon reduction in the U.K.

One article from *The Guardian* commented that this strategy “puts the U.K. ahead of other countries in recognizing the contribution health services make to a country’s carbon footprint” and that the NHS emissions plan is “the first of its kind in the world.”¹²⁵ The NHS guidelines follow many of the sensible strategies for reducing carbon emissions that we have seen above. “Stemming the ‘oversupply’ of food to curb obesity, encouraging carbon neutral transportation—like walking and biking—eliminating animal based foods from menus, and reducing water waste are recommended.”¹²⁶ Production of pharmaceuticals and energy consumption will also be reduced. As a companion to the Carbon Reduction Strategy, the NHS has addressed not only what goes on in the hospital *qua* business, but also what drives medicine: research.

The National Institutes for Health Research (NIHR) is the branch of the NHS that supports research—case studies, clinical trials, study design, data collection, and trial monitoring. As such, research was considered in the development of Carbon Reduction Strategy. In a separate document, the NIHR *Carbon Reduction Guidelines*, “developed by researchers for researchers... highlights areas where sensible research design can reduce waste without adversely impacting the validity and reliability of research.”¹²⁷ It seems that no stone was left unturned when the NHS set out to taper the carbon impact of the medical industry. When public policy is tied to health care funding and carbon limitations

¹²⁴ Cristina Richie, “What Would An Environmentally Sustainable Reproductive Technology Industry Look Like?,” *Journal of Medical Ethics*, 41, no. 5 (2015): 383-387.

¹²⁵ James Black, “NHS Leads World on Strategy to Cut Carbon Emissions,” *The Guardian*, 26 May 2009, at <http://www.theguardian.com/environment/2009/may/26/nhs-carbon-emissions>

¹²⁶ Roberts, 249.

¹²⁷ National Institutes for Health Research (NIHR), “Carbon Reduction Guidelines,” (October 2010): 1-20, at 2, at www.nihr.ac.uk/files/NIHR_Carbon_Reduction_Guidelines.pdf

exacted on the health care system, effective progress can be made. The NHS Carbon Reduction Strategy and *Carbon Reduction Guidelines* will surely be a model for other health care systems globally in the years to come.

Environmental bioethics has already influenced the medical industry through organic food in hospital cafeterias, using renewable sources to generate energy in medical compounds, and “cradle to grave” manufacturing processes that reduce carbon dioxide.¹²⁸ In addition to the numerous public scholars, initiatives, and organizations participating in environmental bioethics, Catholic hospitals are also practicing environmental bioethics through responsible practices and initiatives.

B. Environmental bioethics in Catholic discourse

Those working within Catholic hospitals and health care organizations are contributing to environmental bioethics by putting public conservationist strategies into action, with theological foundations. This is truly unique to Catholics, as there are large numbers of hospitals and health care facilities that are run and managed by Catholics. Other religions in the U.S. and U.K. tend to separate their faith from clinical settings. Certain Christian branches that retain a denominational name of a hospital do so out of tradition rather than live commitment to that dimension of their faith.¹²⁹ Yet Catholics have maintained a religious identity within the health care system.

Catholic health care organizations have joined forces with environmental bioethics to build hospitals and health care faculties that are green. This emerged both

¹²⁸ Catholic Health Association and Practice Greenhealth, *Environmental Sustainability: Getting Started Guide* (St. Louis: The Catholic Health Association of the United States, 2010).

¹²⁹ For instance, the Evangelical Community Hospital in Lewisburg, PA. follows green hospital practices, but does not identify as a Christian hospital. See Evangelical Community Hospital, “History of Evangelical Community Hospital,” n.d., at <http://www.evanhospital.com/about/history>; Evangelical Community Hospital, “Evangelical Community Hospital Celebrates 2012’s Green Efforts,” April 19, 2013, at <http://www.evanhospital.com/Modules/News/Evangelical%20Community%20Hospital%20Celebrates%202012s%20Green%20Efforts>

from a dedication to the well being of the person as an image bearer of God and from an investment in creation care. It should not be surprising that Catholics would combine these two interests into one area of holistic care. “Many of those who originally utilized the terms ‘sustainability’ and ‘sustainable development’ were themselves religious or drew on explicit religious imagery.”¹³⁰ Further, “bioethics was generated in Christian cultural context and it is easy to observe the close historical connection between medical ethics and Christian tradition and principles.”¹³¹

Conservation and creation care are tenets of Catholic theological anthropology. From this worldview, human beings have been uniquely endowed with a role of biblical stewardship. Scenes of biblical responsibility to all of God’s creation are especially noticeable after the formation of the earth (Gen. 1:28-29) and after the flood (Gen. 9:8-16) where there is a re-creation that encompasses God’s plans for humans, animals, and indeed the planet itself. In these places of environmental renewal, “the purpose of God included the well-being of the entire creation, not just of humanity alone.”¹³² A comprehensive ecology, first seen in the Bible, is a foundation of Catholic Social Teaching (CST) and should be lived into by modern Christians.¹³³

In 1990, the World Day of Peace message delivered by Pope John Paul II indicated that “two fundamental principles should guide our moral considerations: the integrity of all creation, and respect for life.”¹³⁴ The Pope reckoned that these two

¹³⁰ Lucas F. Johnston, “Sustainability as a Global Faith? The Religious Dimensions of Sustainability and Personal Risk,” *Journal of the American Academy of Religion* 82, no. 1 (2014): 47-69, at 48.

¹³¹ Luka Tomašević, “Development and Perspectives of Theological Bioethics,” *Croatian Medical Journal* 54 (2013): 86-88, at 86.

¹³² Cahill, *Theological Bioethics*, 11.

¹³³ This will be discussed more fully in chapter two.

¹³⁴ James T. McHugh, “A Catholic Perspective on Population,” in *The Challenges of Global Stewardship: Roman Catholic Responses*, Maura Ryan and Todd David Whitmore, eds. (Notre Dame: University of Notre Dame Press, 1997), 85-101 at 93.

principles would result in preservation and harmony; he is quite right. Unfortunately, the violation of these principles in recent decades has led to the destruction of the earth through loss of biodiversity, and increased pressure on animals and humans to find resources to survive. The negative consequences of earth-destruction for millions of animals and plants are untold, but antidotes have been proposed.

The scriptures, moral reasoning, and current scientific data on the environment all provide a framework for a theological cosmology that focuses on protecting the biosphere. Indeed, even in 1987 Pope John Paul II “expanded the concept of authentic development to include ecological considerations”¹³⁵ in the encyclical *Sollicitudo rei socialis* which reminded us “natural resources are limited.”¹³⁶ As such, each person must attenuate his or her consumption in accordance with the finite supply of resources available on earth. Businesses like the medical industry must also take responsibility to reduce the use of fossil fuels, minerals excavated, and other natural goods. Numerous Catholic hospitals—like Sequoia Hospital Physical Therapy and Rehabilitation Services in Redwood City, CA, UCSF Plastic Surgery in San Francisco, CA,¹³⁷ and CHI St. Joseph Children’s Health in Lancaster, PA¹³⁸ do exactly this both through multiple initiatives and practices.

1. Initiatives of Catholic environmental bioethics

Catholic health care facilities invested in the environmental bioethics movement have teamed up with larger organizations to support to their work. Two health systems

¹³⁵ Drew Christiansen, “Learn a Lesson from the Flowers: Catholic Social Teaching and Global Stewardship,” in *The Challenges of Global Stewardship: Roman Catholic Responses*, Maura Ryan and Todd David Whitmore, eds. (Notre Dame, IN: University of Notre Dame Press, 1997), 19-37, at 23.

¹³⁶ John Paul II, *For the Twentieth Anniversary of “Populorum Progressio”: Sollicitudo rei socialis* (Washington, DC: United States Catholic Conference, 1987), 34.

¹³⁷ Dignity Health, “Search Our Locations,” 2014, at <http://www.dignityhealth.org/cm/content/pages/our-locations.asp>

¹³⁸ Catholic Health Initiatives, *Communities of Care* (Englewood, CO: Catholic Health Initiatives, 2015), 4.

that are highly identifiable by their Catholic identity, and which have joined the Healthy Hospitals Initiatives mentioned above, are Dignity Health and Catholic Health Initiatives. Both have led the way towards conservation in clinical Catholic settings.

a. Dignity Health

Dignity Health is a health care system founded by the Sisters of Mercy in 1986 on the West Coast with a mission to “further the healing ministry of Jesus.”¹³⁹ With over forty hospitals and care centers across Arizona, California, and Nevada, Dignity Health currently maintains facilities that are “Catholic” and “non-Catholic.” Both categories of hospitals follow a set of common values that reflect an ecumenical approach to medicine. That is, whether Christian or non-Christian, all health care worker can agree to principles of “dignity, collaboration, justice, stewardship, and excellence.”¹⁴⁰ While the Catholic hospitals also observe the *Ethical and Religious Directives for Catholic Health Services*,¹⁴¹ the common value of stewardship epitomizes environmental bioethics in hospitals.

Dignity Health takes an anthropocentric approach to environmental bioethics. Acknowledging that the planet is “our home” (i.e., the home of human beings), these hospitals are primarily concerned with the amount of resources our planet will be able to provide to future generations of humans.¹⁴² Therefore, their activism in environmental

¹³⁹ Dignity Health, “Our Mission, Vision and Values,” 2014, at http://www.dignityhealth.org/Who_We_Are/Our_Mission_Vision_And_Values/index.htm

¹⁴⁰ Dignity Health, “Statement of Common Values,” (February 12, 2013): 1-3, at http://www.dignityhealth.org/stellent/groups/public/@xinternet_con_sys/documents/webcontent/stgss047977.pdf

¹⁴¹ United States Conference of Catholic Bishops, *Ethical and Religious Directives for Catholic Health Care Services* 5th ed. (Washington, DC: United States Catholic Conference, 2009).

¹⁴² The idea of “the Child” is writ large in environmental discourse. The USCCB writes, with a distinct “pro-life” agenda, “The common good calls us to extend our concern to future generations. Climate change poses the question ‘What does our generation owe to generations yet unborn?’” USCCB, “Plea.” Lee Edelman’s fine critique of the constant appeal to future generation is not neglected in this dissertation, but

bioethics is aimed at preservation of natural resources to better the health of people—current and future.

A wide array of eco-friendly activities such as mercury free hospitals, water saving devices that conserve more than 100,000 gallons of water per processor per year, PVC/DEHP-free products since 2005, eliminating approximately 840 tons of PVC/DEHP from the patient care setting and the waste stream, and sustainable design energy retrofits typify these hospitals. Additionally, Dignity Health lays claim to being the first hospital system in California to join the California Climate Action Registry and commit to voluntarily measure and report all emissions of greenhouse gases. They are also a partner of Healthcare Without Harm—an international coalition working to reform the environmental and public health practices of the health care industry.¹⁴³ These changes have added up to measurable environmental conservation.

In one report, Dignity Health indicated that in 2013 alone they reduced carbon emissions to 244,000 tons and recycled 16.3 million pounds of waste. Most impressively, Dignity Health eliminated 1.4 million pounds of plastic and prevented CO₂ emissions

rather set aside to dialogue with those who find value in this appeal to the future. See Lee Edelman, *No Future: Queer Theory and the Death Drive* (Durham and London: Duke University Press, 2004). However, given that the USCCB statement was issued by non-procreative (presumably celibate men), it is a rather “queer” statement indeed, as it is not their own *decedents* that will be imperiled by climate change, but rather the next *generations*. Queer radical philosopher Kim Q. Hall takes a stance closer to the USCCB, in contradiction from Edelman, when she writes, “dislodged from anthropocentrism, a queer conception of the future can move beyond exclusive anthropocentric and reproductive focus on future generations toward future generation—the resistant commitment to generating alternative communities and modes of being.” Kim Q. Hall, “No Failure Climate Change, Radical Hope, and Queer Crip Feminist Eco-Future,” *Radical Philosophy Review* 17, no.1 (2014): 203-225, at 221. The danger of not approaching environmental sustainability from the “queer” approach, where all are concerned for promoting the common good could, as Willis Jenkins notes, lead to stalled or absent conservation because “if concern for future generations is really concern for one’s own decedents, then wealthy agents in powerful societies may be less concerned about reducing emissions on the supposition that their descendants will be able to adapt to difficult conditions.” Jenkins, *The Future of Ethics*, 287-288. For further ruminations on this issues, see Cristina Richie, “Lessons from Queer Bioethics: A Response to Timothy F. Murphy,” *Bioethics* forthcoming, doi10.1111/bioe.12246.

¹⁴³ Dignity Health, “Environment,” 2014, at http://www.dignityhealth.org/Who_We_Are/Environment/index.htm

equivalent to 42,815 gallons of gasoline by using reusable sharps and pharmaceutical containers.¹⁴⁴ Considering the impact of pharmaceuticals on the environment, this is one of the most significant achievements of sustainable hospital practices. Dignity Health takes both a comprehensive, broad approach to sustainability and an individual, personal approach. These approaches benefit the patients, the community, and the planet. The commitment to Catholic identity has been, in many significant ways, the impetus for joining the environmental bioethics movement. Like Dignity Health, the Catholic Health Initiatives support environmental bioethics by reducing carbon emissions in health care settings.

b. Catholic Health Initiatives

Catholic Health Initiatives (CHI), based outside of Denver, Colorado, formally began in 1986 from Catholic Health Ministries. Eager to make their healing ministry national, Catholic Health Initiatives (at that time Catholic Health Ministries), sought to transform “health care delivery and creat(e) new ministries to promote healthy communities.”¹⁴⁵ For nearly thirty years the Catholic health care system absorbed Catholic home care services, hospitals, and clinics into their organization. Their recent work in environmental sustainability is of note.

CHI claims to have been aware of, and invested in, environmental responsibility since its inception. While their history does not indicate specifics on this matter, Catholic Health Initiatives was recognized in 2008 as “among three Catholic health systems to win a grant from the National Religious Partnership for the Environment and

¹⁴⁴ Dignity Health, “Sustaining Our Healing Ministry: Fiscal Year 2013 Social Responsibility Report,” (2013): 1-89, at 15, at http://www.dignityhealth.org/stellent/groups/public/@xinternet_con_sys/documents/webcontent/stgss045842.pdf

¹⁴⁵ Catholic Health Initiatives, “CHI History,” 2014, at <http://catholichealthinit.org/chi-history>

the Catholic Coalition on Climate Change to raise awareness about global climate change.”¹⁴⁶

Part of their campaign included education about the effects of climate change on human health, a theological grounding for creation care based in scripture, and Catholic statements from Bishops and the Holy See. The booklet produced from this grant assessed climate change from many different perspectives and offers simple, effective solutions for reducing the carbon emissions of hospitals and health care workers within those hospitals.¹⁴⁷ CHI believes that, as a Catholic health care system, they are called to: conserve, recycle, reduce waste and pollution and energy use, promote energy-efficient technologies, eliminate toxins, and use environmentally preferable purchasing.

The most impressive initiative that the organization has begun is their cessation of purchasing bottled water at its national offices. Given what we know about the environmental impact of bottled water production and distribution, this policy sends a strong pro-environmental message. Interestingly, CHI cites both environmental and global justice reasons for their decision. Noting, “of the estimated 2.7 million tons of plastic used each year to make water bottles, only about 20% of these bottles are recycled” and that “bottled water companies exercise a growing control over supplies, (and) more than one billion people globally do not have access to safe drinking water,” eliminating bottled water became an ethical concern on multiple levels.¹⁴⁸ Through

¹⁴⁶ Catholic Health Initiatives, “Environmental Stewardship,” 2014, at <http://catholichealthinit.org/environmental-stewardship>

¹⁴⁷ Catholic Health Association of the United States, *Faithfully Healing the Earth: Catholic Health Care and Climate Change* (Washington, DC: Catholic Health Association, 2009): 1-26, at http://build7.medseek.com/websitefiles/chinational58533/documents_public/Advocacy/climatechangebrochure.pdf

¹⁴⁸ Catholic Health Initiatives, “Environmental Stewardship.”

dedication to environmental stewardship and healthy initiatives, CHI has become a leader in environmental bioethics in Catholic health care settings.

The initiatives of Catholic environmental bioethics, under the auspices of Healthy Hospitals Initiatives (HHI) are very broad. Sustainable design, purchasing local food, encouraging carpooling, reducing oil expended on bottled water, retrofitting buildings with renewable energy, adding recycling programs, and educating employees on ecology are all ways in which Dignity Health and Catholic Health Initiatives are conserving resources to better human health. With facilities, clinics, in-patient, and at-home services, the effects of environmental bioethics can be lost in an almost overwhelming plethora of conservationist strategies to choose from. This can be a catch-22.

On one hand, there are so many conservationist strategies any hospital can put out recycling bins, and then think they are “green,” thus neglecting other commitments to sustainability. On the other hand, health care systems can get bogged down by the magnitude of issues related to climate change and wonder how their one, two, or three initiatives can make a difference in the state of the planet. It is therefore helpful to take a cross-section of environmental bioethic practices in Catholic health care settings to see what is being done and to examine whether it is relevant and effective. Several outstanding practices in Catholic environmental bioethics concern administration, nutrition, and burial.

2. Practices of Catholic environmental bioethics

In recent years, the Catholic Health Association (CHA), located in St. Louis, Missouri, has made hospital facilities more sustainable and educated employees about

environmental ethics.¹⁴⁹ CHA initiatives are undeniably tied to Catholic identity and are “as old as Genesis and woven into the very fabric of Catholic mission.”¹⁵⁰ There are three significant ways some Catholic health care organizations participate in environmental bioethics. The first is administrative, the second is often overlooked, but essential to life—nutrition—and the third confronts each person at the end of life: death. These representative practices demonstrate the diversity of ecological stewardship in Catholic health care settings.

a. Hospital administration

The administrative aspects of Catholic hospitals are very much like any other business aware of the need to conserve resources. Employees at many Catholic hospitals are encouraged to recycle paper, carpool, reduce waste in the workplace, and support renewable forms of energy to power health care settings.¹⁵¹ These are all laudable procedures, but the Catholic Health Association, in particular, has gone one step beyond these organizational models by encouraging the use of green cleaning products, engaging communities in gardening, and lobbying for better government support for the environment.¹⁵² All of these initiatives reflect Catholic values of social transformation and are improving the health care environment. A second way environmental bioethics is implemented in Catholic health care organizations is through hospital menus.

¹⁴⁹ For a brief history of the Catholic Health Association, which traces its roots to 1915, see Risse, *Mending Bodies, Saving Souls*, 522-524.

¹⁵⁰ Catholic Health Association and Practice Greenhealth, *Environmental Sustainability*, inside cover.

¹⁵¹ Florida Medical Association, “Renewable Energy Introduction,” *Workbook 2: Renewable Energy*, at http://www.flmedical.org/Renewable_Energy_Introduction.aspx

¹⁵² See Catholic Health Association and Practice Greenhealth, *Environmental Sustainability*.

b. Food practices

Many Catholic hospitals are focusing on diet. Attention to the types of food served in hospitals, decreasing the waste of food, and examining how food is grown have been offshoots of environmental bioethics in Catholic health care. The “Green Guide for Health Care: Food”¹⁵³ suggests purchasing local fruits and vegetables instead of using trucks to transport the food. This reduces carbon emissions. Eliminating nutrient deficient deep fried foods from patient’s menus also conserves resources. Providing organic alternatives reduces the amount of pesticides used on food. Finally, encouraging humane farm and trade practices also contributes to making hospital food greener.¹⁵⁴ These initiatives are all paving the way for greener hospitals and are entry points for a discussion of environmental bioethics on various hospital committees within the Catholic medical community. The third way Catholics practice environmental bioethics is through “green burial.”

c. Green burial

After a lifetime of participation in the health care system the environmental impact of our terminal destination is often overlooked. Yet decisions regarding how we will “rest in peace” are a key component of environmental bioethics, if for no other reason than the permanent mortality rate of 100 percent. That is to say, not everyone will need cancer care or corrective lenses, but everyone will die.

¹⁵³ Green Guide for Health Care, “Green Guide for Health Care: Food”: 1-40, at http://noharm.org/lib/downloads/food/GGHC_Food_Credits.pdf

¹⁵⁴ I would contend, however, that “humane killing” is an oxymoron and the appropriate response to ecological destruction and slaughter of animals for food is vegetarianism whenever possible. See Tripp York and Andy Alexis-Baker, eds. *A Faith Embracing All Creatures: Addressing Commonly Asked Questions about Christian Care for Animals* (Eugene, OR: Cascade Books, 2012).

There are varying degrees of environmentally friendly burials currently offered. It can be argued that the typical American burial using embalming fluids, a mortician, and a heavy coffin made from wood that is placed in the ground is the least sustainable. Cremation saves space and land and does not absorb as many resources like wood, veneer, and metal, nor does it rely on the chemicals needed for the embalming fluid. However, cremation does emit carbon monoxide and relies on fossil fuels for most cremation processes. Currently, new technologies are making cremation better for the planet.¹⁵⁵ Beyond these typical options, however, one possibility for interment uses even fewer resources and is already practiced in Catholic communities: green burial.¹⁵⁶

Green burial involves a biodegradable casket, without embalming fluids, or cremation. The body is placed in the ground in a traditional manner, but without the extra resources needed for a conventional coffin. Because the casket and corpse is decomposable green burial can only occur in regions relegated for this purpose.¹⁵⁷ One such location of a green burial ground is at the main headquarters of the Immaculate Heart of Mary, a religious congregation of women in Monroe, Michigan. Dubbed “the green nuns,”¹⁵⁸ these women have taken their commitment to conservation “to the grave.” Advances in the area of after-life care are looking for ways to reduce carbon impact, conserve resources, and maintain human dignity.¹⁵⁹ Through hospital administration,

¹⁵⁵ See Neil Bowdler, “New ‘Green Cremation’ Machine Opens in Minnesota,” *BBC News*, 16 Aug. 2012 at <http://www.bbc.co.uk/news/health-19259804>

¹⁵⁶ Cheryl Corley, “Burials and Cemeteries Go Green,” *NPR*, 16 Dec. 2007 at <http://www.npr.org/templates/story/story.php?storyId=17232879>

¹⁵⁷ Heidi Glenn, “Q&A: What It Means to Have a Green Burial,” *NPR*, 16 Dec. 2007, at <http://www.npr.org/templates/story/story.php?storyId=17232879>

¹⁵⁸ See also Sarah McFarland Taylor, *Green Sisters: A Spiritual Ecology* (Cambridge, MA: Harvard University Press, 2007).

¹⁵⁹ Maintaining human dignity must be at the forefront of reducing carbon in green burial. At the Forensic Anthropology Center at University of Tennessee, Knoxville, better known as the “Body Farm” researches the effects of corpse deterioration in a natural setting, with over 1,000 bodies on their property. Although

food offered in health care systems, and green burials, Catholic organizations have demonstrated commitment to conservation. Their initiatives parallel public organizations in many ways, but the source of their inspiration is theological in addition to humanistic.

Public health care organizations have integrated environmental practices and produced scholars that speak to health care in general. Catholic health care systems engage environmental bioethics, motivated by conservation, and in accordance with divine purpose. There are few theologians who work in environment bioethics,¹⁶⁰ leaving a gap in academic resources.¹⁶¹ For all the work that is being done, so much more could be achieved. The next section of this chapter gives a brief analysis and critique of current environmental bioethics in public and Catholic practice, with the intention of proposing a corrective through the rest of the project.

IV. Analysis of Environmental Bioethics

Traditionally, bioethics examines medical developments, techniques, and procedures such as in-vitro fertilization, organ transplantation, and modes for disease containment. Yet these are not done with a conservationist mindset. In contrast, environmental bioethics maintains a green emphasis, but overlooks the details of health care delivery in order to promote conservationism in the larger components of health care systems like buildings and administration.

not done for environmental reasons, this natural decomposition is essentially “green,” yet distasteful to many Christians. University of Tennessee, Knoxville, “Forensic Anthropology Center,” n.d., at <http://fac.utk.edu/default.html>

¹⁶⁰ However, there are several scholars with backgrounds or degrees in theology that work in environmental studies or bioethics (like Jessica Pierce, Lisa Sideris, Mary T. White, and Celia Deane-Drummond) but “few actually identify themselves as *environmental* bioethicists.” Personal correspondence with Cory Andrew Labrecque, the former leader of the ASBH affinity group for Environmental Bioethics, email 19 Jan. 2015.

¹⁶¹ James Gustafson does connect ecology, the common good, theology, and medicine in health care, thus displaying a real aptitude in theological environmental bioethics in “The Contributions of Theology to Medical Ethics,” *Perspectives in Biology and Medicine* 19, no. 2 (1976): 247-272.

Both public and theological health care organizations, initiatives, and bioethicists have contributed to the conversation on environmental bioethics. While all invested parties concur that CO₂ must be reduced, the canon of academic environmental bioethics lack a uniform dedication to specific ethical principles. Environmental bioethics has thus far taken a comprehensive but superficial approach to reducing the carbon emissions of the medical industry. It is largely *reactive* to climate change and rarely examines the environmental impact of current and future medical developments like genetic enhancement, elective surgery, end-of-life care, or pharmaceuticals.

Furthermore, previous suggestions for ecological conservation in the medical industry either tackle too broad an application (as is the case of Pierce and Bednarz) and are therefore ineffective at tangible sustainability, or work under the current production-oriented health care model (as is the case of Liao, et al.), which is the environmental problem of the medical industry in the first place. Willis Jenkins notes, “biomedical ethics is a troubling model... (because) an applied ethics that focuses on resolving the dilemmas created by contemporary health care practices cedes leverage to critique the context in which those dilemmas arise.”¹⁶² I absolutely agree.

Since the primary focus of public and theological environmental bioethics has been conservation as a panacea to climate change, as CO₂ emissions continue to increase exponentially it will not be enough to simply “continue as is” without scrutinizing current and future medical developments, techniques, and procedures of the medical industry. What is needed, rather, is a systematized and coherent approach to environmental bioethics that does not assume consumption is a solution to climate change. This approach must be grounded in theological reflection and scientific data.

¹⁶² Jenkins, *The Future of Ethics*, 170.

V. Conclusion

Green bioethics acts as a complement to environmental bioethics since it is a *proactive* approach to environmental bioethics, which closely scrutinizes medical developments, techniques, and procedures from an upstream ecological perspective of resource impact. The four principles of green bioethics integrate the Georgetown scope of bioethics by focusing on specific practices,¹⁶³ with Potter's "broader vision" for health care that included ecology, global health, and preventive medicine.¹⁶⁴ Again, the principles of green bioethics are: 1) a general allocation of medical resources should occur before special interest access, 2) current human needs for health care should take priority before current human wants, 3) simple medical treatments should normally be chosen before complex ones, and, 4) the common good should drive health care instead of financial profit.

Green bioethics thus synthesizes Potter's "general normative ethic for global health" with the "Georgetown approach... of applied normative ethics."¹⁶⁵ This speaks to a seldom-charted terrain, yet I contend that these two approaches to bioethics must be synthesized in order to address medical developments, techniques, and procedures with a green emphasis and a theological worldview.

Chapter two will provide a theological grounding for green bioethics in the common good, which will point the way towards my proposed four principles of green bioethics. I will argue that selected work from H. Richard Niebuhr, Richard Bauckham, and Catholic

¹⁶³ Defined as "concrete medical dilemmas restricted to three issue-areas: (1) the rights and duties of patients and health professionals; (2) the rights and duties of research subjects and researchers; and (3) the formulation of public policy guidelines for clinical care and biomedical research." Reich, "The Word 'Bioethics,'" 20.

¹⁶⁴ Ibid., 20-21.

¹⁶⁵ Ibid., 21.

Social Thought offer a concept that convergence around the common good. This point of convergence provides a rationale for sustainable solutions in Christian ethics. At the same time, recognizing points of convergence paves the path for a constructive proposals in ecological ethics, ecological theology, or ecological policy beyond Christianity. These are what Willis Jenkins calls “practical strategies.”¹⁶⁶

Eco-theologian Willis Jenkins’ notion of practical strategies for conservation builds the bridge from my ethical foundation in the common good to the four principles of green bioethics. I maintain that these four principles provides a conservationist trajectory for bioethics in an environmentally precarious world. Green bioethics is an urgent issue related to the common good. The health care system and the consumption of medical goods must be assessed in light of environmental sustainability and the good of all people.

¹⁶⁶ Jenkins, *The Future of Ethics*, 7.

CHAPTER 2

The Common Good: Theological Grounding for the Four Principles of Green Bioethics

I. Introduction

Van Rensselaer Potter believed that we are at a point where “knowledge is accumulating faster than the wisdom to manage it.”¹⁶⁷ This applies to medical technology, certainly. But it also applies to climate change. As seen in chapter one, the environmental crisis is, perhaps, the most pressing issue of the 20th and 21st centuries. We know, for instance, that “air pollution is now the world’s largest single environmental health risk.”¹⁶⁸ Yet we, as a society, do not have the wisdom to create strategies for halting climate change, let alone implement them. Christian theology is one source of wisdom that can provide strategies for addressing climate change, that is, “the wisdom to manage it.”

Willis Jenkins comments in his book *Ecologies of Grace* that there are several, non-competitive, rubrics to examine Christian ecological conservation. He believes that theologians need a plurality of approaches to attend to the diverse concerns of ecology, thus drawing a majority of Christians to the environmental movement. Green bioethics is offered as one approach to environmental conservation in the medical industry. Chapter two will locate the theological foundation of the four principles of green bioethics in the concept of the common good.

¹⁶⁷ Van Rensselaer, *Bioethics: Bridge to the Future* (New Jersey: Prentice-Hall, 1971), 76. See also Henk A. M. J. ten Have, “Potter’s Notion of Bioethics,” *Kennedy Institute of Ethics Journal* 22, no. 1 (2012): 59-82.

¹⁶⁸ World Health Organization, “7 Million Premature Deaths Annually Linked to Air Pollution,” 25 Mar. 2014, at <http://www.who.int/mediacentre/news/releases/2014/air-pollution/en>

“The common good transcends the individual good of one person,”¹⁶⁹ affirms Thomas Aquinas. The notion of the common good illustrates continuity within the Christian tradition, while the broad appeal of the common good offers consensus to ground theological ethics. I will be utilizing a biocentric notion of the common good, in keeping with James Gustafson’s 1976 proposal to extend “the usage of the common good (to)... the good of plants and water, air and minerals, as well as the good of human communities.”¹⁷⁰ Thus, the common good in this dissertation may be thought of as a “first principle: a basic, irreducible conception which serves as a starting point for the development of a coherent and comprehensive ethical doctrine.”¹⁷¹ I will begin this chapter by building consensus around concepts pointing at the common good, through the theological contributions of H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching. These streams of theological ethics represent my own academic formation and have influenced my personal intellectual development considerably. Although each branch discusses theological ethics in a different key, they all point towards concepts related to the common good.

The first theologian I will assess is Protestant H. Richard Niebuhr. H. Richard Niebuhr uses the paradigm of *homo dialogicus*, or “the person in dialogue,” to discuss moral responsibility. There are four components of Niebuhr’s articulation of

¹⁶⁹ Thomas Aquinas, *Summa Theologia*, 2nd ednt., trans. Fathers of the English Dominican Province, Kevin Knight. ed. (Online Edition, 2008), II-II q. 58, art. 12.

¹⁷⁰ James M. Gustafson, “The Contributions of Theology to Medical Ethics,” *Perspectives in Biology and Medicine* 19, no. 2 (1976): 247-272, at 256. Prior to this Aldo Leopold recognized that “the land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.” Aldo Leopold, *A Sand County Almanac and Sketches Here and There* (Oxford: Oxford University Press, 1949), 204.

¹⁷¹ Albert Jonsen, *Responsibility in Modern Religious Ethics* (Washington, DC: Corpus Books, 1968), 175.

responsibility, which are described in *The Responsible Self*.¹⁷² The four parts of responsibility can be summarized as: response, interpretation, accountability, and community.¹⁷³ Social or communal responsibility is especially important because it moves ethical inquiry beyond the self, and into the realm of the other. Just as the common good entails people working within a society for the betterment of all, Niebuhr's theology requires that the moral agent account for the various and many needs of a shared community even as they aim towards personal flourishing. Niebuhr's vision of the human being situated in a society, in dialogue with others, generates an idea similar to the common good. The ideas are not identical, but do points towards an ethic that considers the needs of the individual and obligations to society. Niebuhr's work is predisposed to contribute to conversations about the common good.

Second, I will explore the work of Evangelical theologian Richard Bauckham. Bauckham's ethics focuses on human limitation. Bauckham grounds the concept of human limitation in scripture by focusing on the various ways God has placed limits on human use of creation. For Bauckham, human limitation is a byproduct of the interdependence and interconnectedness of humans to other created beings.¹⁷⁴ I will argue that this human limitation points at the common good. For instance, Bauckham interprets the imperative to "fill the land" in Genesis 1 in a way that reflects the common good. He supposes that human were not permitted to "grow food for themselves (and so fill the land) to an extent that competes with the livelihood of other living creatures."¹⁷⁵ Land

¹⁷² H. Richard Niebuhr, *The Responsible Self: An Essay in Christian Moral Philosophy* (New York: Harper and Row, 1963), 61.

¹⁷³ James W. Fowler, *To See the Kingdom: The Theological Vision of H. Richard Niebuhr* (Eugene, OR: Wipf and Stock, 1974), 153-154.

¹⁷⁴ Richard Bauckham, *The Bible and Ecology: Rediscovering the Community of Creation* (Waco: Baylor University, 2010), ch. 1.

¹⁷⁵ *Ibid.*, 17.

could be used for human needs, but had to be shared with other creatures, ensuring that all could enjoy the fecundity of the earth. Hence, limitation, boundaries, and the place of humans within creation are all lenses that Bauckham uses to articulate an ethic similar to the common good.

The third theological approach that works with the idea of the common good is Catholic Social Teaching (CST). CST is concerned with building more just societies around the two basic values of the dignity of the person and the well being of society. The common good includes fair use of the natural world for all people. In the last half-century, emphasis on the good of the entire world has taken on ecological contours.¹⁷⁶ CST indicates, “God intended the earth and everything in it for the use of all human beings and peoples. Thus, under the leadership of justice and in the company of charity, created goods should flow fairly to all.”¹⁷⁷ I will focus primarily on CST expressed by the United States Conference of Catholic Bishops, Benedict XVI, and Pope Francis.

Taken aggregate, the theological articulations of H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching all point towards ideas related to the common good. Though working from different denominational backgrounds, the common good is a point of convergence for these various ethics. Thus, in the penultimate section of this chapter I will use these points of convergence to draw a pathway forward, outlining green bioethics as a practical strategy for conservation¹⁷⁸ in the medical industry.

¹⁷⁶ United States Conference of Catholic Bishops, “Climate Change A Plea for Dialogue, Prudence and the Common Good,” 15 June 2001, at <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/global-climate-change-a-plea-for-dialogue-prudence-and-the-common-good.cfm>

¹⁷⁷ Paul VI, *Populorum Progressio: On the Development of Peoples* (1967), 22. The Pope is quoting from a council which took place a year prior, Vatican II, *Pastoral Constitution on the Church in the World of Today* (1966), 69.

¹⁷⁸ Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (Washington DC: Georgetown University Press, 2013), 7.

The four principles of green bioethics are a proactive approach to sustainability in health care, which closely scrutinizes medical developments, techniques, and procedures. A brief sketch of the methodology, scope, and focus of green bioethics will be drawn in this chapter, while the task of chapters three through six will be to outline the four principles. Although “many science communicators have expressed concern at the public’s obsession with defining which threshold or tipping points will dictate that it is ‘too late’ to curb irreversible climatic change,”¹⁷⁹ the concern of green bioethics is not only that we have reached a crisis point in environmental destruction, but also that the common good demands an environmental assessment of the medical industry. Examining the theological ethic of responsibility in the work of H. Richard Niebuhr is my first task.

II. Protestant Theology of Responsibility—H. Richard Niebuhr

In this section I explore the work of mid-century Protestant theologian H. Richard Niebuhr. I first provide a biographical background, and then summarize one of his major contributions to theology, with an eye towards implications for the common good. In particular, I utilize his book *The Responsible Self*, emphasizing the paradigm he ultimately proposes as the pinnacle of responsibility: *homo dialogicus*. Since responsibility entails the moral agent’s accountability to a community, Niebuhr’s work points towards an ethic that upholds the claims of the common good. I turn now to a brief biography of H. Richard Niebuhr.

A. Background

Helmut Richard Niebuhr (1894-1962) was born in Missouri to the wife of a German Evangelical pastor. Niebuhr began his theological work as an ordained minister

¹⁷⁹ Michael S. Northcott and Peter M Scott, eds., *Systematic Theology and Climate Change: Ecumenical Perspectives* (Florence, KY: Taylor and Francis, 2014), 160.

in the Evangelical Synod, which later merged with the German Reformed Church in America. He was educated at Elmhurst College, Eden Theological Seminary, Washington University, Yale Divinity School, and Yale University. At Yale he received a PhD in religion in 1924¹⁸⁰ and rose to prominence as an American ethicist whose expansive career included several decades as a professor at Yale Divinity School (from 1931 until 1962). His elder brother, Reinhold Niebuhr, was a well-known theologian as well.

H. Richard Niebuhr's work was characterized by an articulation of responsibility, a desire to apprehend and describe American life, and a paradigmatic approach to ethics and faith. His description of responsibility in one of his most influential books, *The Responsible Self*, is the focus of the next section. I briefly mention his three-fold categorization of responsibility and then detail his chosen paradigm of man-in-dialogue (sic).¹⁸¹

B. Theological contributions

H. Richard Niebuhr was one of the most prolific thinkers of the 20th century. In H. Richard Niebuhr's 1963 publication, *The Responsible Self*,¹⁸² he outlines three basic archetypes of responsibility used throughout time. Using Latin terms to portray these paradigms, he begins with the individual, *homo faber*, or man-as-maker. *Homo faber* is described in existential terms, where the human "constructs things according to an idea

¹⁸⁰ Andover-Harvard Theological Library/ Harvard Divinity School, "Niebuhr, H. Richard (Helmut Richard), 1894-1962. Papers, 1919-1962," 2008, at <http://oasis.lib.harvard.edu/oasis/deliver/deepLink?collection=oasis&uniqueId=div00630>

¹⁸¹ I will use the generic "man" in this section, as it is authentic to the Niebuhr text, and era in which he wrote, as well as reflective of the Latin prefix *homo*. In my use, the term includes men, women, and intersex.

¹⁸² *The Responsible Self* comprises the notes of Niebuhr's *Robertson Lectures* at the University of Glasgow (1960) as well as notes from the *Earl Lectures* at the Pacific School of Religion in 1962, and his addresses at the Riverside Church in New York City. See Niebuhr, *The Responsible Self*, 3.

and for the sake of an end.”¹⁸³ Niebuhr regards man-as-fashioner as “the most common symbol” in moral theory.¹⁸⁴ It is teleological in orientation—aimed at an end or goal. Here, the individual asks, “what is my good, ideal or *telos*?”¹⁸⁵ Under this paradigm, actions are ethical when they achieve the intended goal. This can be problematic for authentic responsibility because the agent is uncritically bound to a fixed end. In the next stage of moral response, Niebuhr considers relationships within a community: the individual in a society.

In Niebuhr’s description of *homo politicus*, or “man as citizen,” the moral agent is recognized as a social being. She exists in a community that is affected by individual actions. At the same time, the community sets expectations for conduct. Here, the agent behaves and acts according to local permissive and prohibitive laws. The individual’s actions are in relation to a legal system. In this juridical paradigm, the agent must ask the question, “to what law shall I consent, against what rebel?”¹⁸⁶ This paradigm is fundamentally deontological; morality is determined simply by following rules. Since the agent is obedient to pre-prescribed rules, she is not truly responsible for her morality.

Given the limitations of *homo faber* and *homo politicus*, a third paradigm is proposed, which corrects deficiencies and integrates strengths of these two notions of ethics. Thus, Niebuhr proposes *homo dialogicus*, the “man-in-dialogue,” as constitutive of authentic responsibility. E. Clinton Gardner comments, “the use of the symbol, man-the-answerer (responsibility), does not make the images of man-the-maker (teleology)

¹⁸³ Niebuhr, *The Responsible Self*, 48.

¹⁸⁴ *Ibid.*, 51.

¹⁸⁵ Edward A. Malloy, “The Ethics of Responsibility: A Comparison of the Moral Methodology of H. Richard Niebuhr and Charles Curran,” *The Illif Review* 34 (1977): 19-33, at 24.

¹⁸⁶ Niebuhr, *The Responsible Self*, 53.

and man-the-citizen (deontology) either useless or unnecessary.”¹⁸⁷ The prior two paradigms are stages that must be moved through to achieve true responsibility, where the moral agent is actively engaged in dialogue with the world around her.

Niebuhr’s articulation of *homo dialogicus* is his prime theological contribution to this chapter. Niebuhr’s expectations of the individual, situated within the community, and the ever-changing dimensions of social conditions, point at a concept that strikes a chord with articulations of the common good. Niebuhr’s paradigm of *homo dialogicus* is the topic of the next section.

1. The responsible self: *homo dialogicus*¹⁸⁸

H. Richard Niebuhr argues that responsibility occurs when an agent is in conversation with her world, dubbed *homo dialogicus*. *Homo dialogicus* recognizes the two-fold nature of humans as both distinctive and social. Since the agent exists in a community, she must—along with her community—discern situations, in order to determine the “fitting” action.¹⁸⁹ This dialectical responsibility is the highest form of morality, compared to teleology or deontology (which correspond to *homo faber* and

¹⁸⁷ E. Clinton Gardner, “Character, Virtue, and Responsibility in Theological Ethics,” *Encounter* 44, no. 4 (1983): 315-339, at 316.

¹⁸⁸ There are many points of contact with Niebuhr’s view of responsibility and Catholic theology. For instance, Charles Curran discusses responsibility in *The Catholic Moral Tradition Today*. Charles Curran, *The Catholic Moral Tradition Today: A Synthesis* (Washington DC: Georgetown University Press, 1999), 70-80. Thanks to Andrea Vicini for pointing this out. James Keenan traces Curran’s view of responsibility to Bernard Haring. Keenan writes that Curran was influenced by Haring’s “own responsibility ethics, but makes more explicit the claims to relationality.” James F. Keenan, *A History of Catholic Moral Theology in the Twentieth Century: From Confessing Sins to Liberating Consciences* (London: Continuum, 2010), 100. Haring was writing for “an emendation of the nature-teleology of scholastic moral theology.” Jonsen, *Responsibility in Modern Religious Ethics*, 133. Furthermore, *homo dialogicus* is similar to Klaus Demmer’s concept of the agent conversant with the law. Demmer writes, “the law must foster the sense of public responsibility; yet particularly in our society, with all its complexity, the danger remains that the law will degenerate to a purely technocratic apparatus.” Klaus Demmer, *Shaping the Moral Life An Approach to Moral Theology* (Washington DC: Georgetown University Press, 2000), 82.

¹⁸⁹ *Ibid.*, 60.

homo politicus, respectively). The question the agent asks is, “what is going on?”¹⁹⁰ It should be noted that, ultimately, response is “not merely to be accountable; it is to answer a vocation.”¹⁹¹ Human responsibility is only possible through the grace of God; indeed the paradigmatic responsible One is Jesus Christ. Niebuhr’s theological stance distinguishes his articulation of responsibility from other secular models.

The term “responsibility” is a synecdoche for four stages the moral agent must move through to enact the *homo dialogicus* paradigm. For simplicity, James W. Fowler labels these movements with one-word concepts. Fowler dubs them “response, interpretation, accountability, and community.”¹⁹² Each of these four stages will be explained in turn.

Niebuhr begins his description of *homo dialogicus* by stating, “the first element in the theory of responsibility is the idea of response.”¹⁹³ The potential for response assumes that the person is morally free, instead of constrained by a prior goal or law. For Niebuhr, “freedom is a prerequisite for responsibility.”¹⁹⁴ A free response places the agent in a position to critically think and act. “The ‘fitting’ thing to do is not determined in advance, but rather is discovered in the process of deciding ‘what is going on.’”¹⁹⁵ The process of discernment facilitates the highest form of morality. Moral responsibility must include active involvement in decision-making. After the ability to respond in freedom is established, the second part of responsibility can be enacted. Niebuhr clarifies, “we

¹⁹⁰ Ibid., 63.

¹⁹¹ James Gustafson, “Foreword,” in Jonsen, *Responsibility in Modern Religious Ethics*, 3.

¹⁹² Fowler, *To See the Kingdom*, 153-154.

¹⁹³ Niebuhr, *The Responsible Self*, 61.

¹⁹⁴ Gardner, “Character, Virtue, and Responsibility,” 323.

¹⁹⁵ Malloy, “The Ethics of Responsibility,” 26.

respond as we interpret the meaning of actions upon us.”¹⁹⁶ In the second part of responsibility, interpretation plays a vital role.

With a situation before the individual, action is delayed as the responsible agent seeks “not only responsive action, but responsive in accordance with our interpretation of the question.”¹⁹⁷ The person utilizes analytical and reflective intellectual tools. Under the *homo dialogicus* paradigm, each person is an “answerer, engaged in a dialogic interaction with neighbor and God.”¹⁹⁸ Whereas *homo faber* might disregard the necessity of interpretation, *homo politicus* would find interpretation inexpedient for a morality based on obedience. However, *homo dialogicus* engages the possible meanings and implications of the situation by seeking council with others. This leads to the third step: accountability.

Following the interpretation of the situation, the third element of responsibility emerges as “the anticipation of reaction to our reaction.”¹⁹⁹ That is, the responsible agent does not merely decide what she will do; rather she considers how others in society will react to her anticipated action, to gauge the societal implications of the decision. Further, interpretation ensures that she is not responding as an isolated monad, but rather within a community of agents. This leads to the final movement of ethical responsibility: community.

The fourth aspect concerning responsibility for *homo dialogicus* is not necessarily an action, or a decisive conclusion. Rather, the agent engages her community in an act of social solidarity. Niebuhr remarks, “the responsible self is driven by the moments of the

¹⁹⁶ Niebuhr, *The Responsible Self*, 63.

¹⁹⁷ Ibid., 63.

¹⁹⁸ Malloy, “The Ethics of Responsibility,” 24.

¹⁹⁹ Ibid., 65.

social process to respond and be accountable in nothing less than a universal community.”²⁰⁰ Accountability to the universal community is a high calling indeed, but authentic morality must consist of agents in conversation with society.

Homo dialogicus is Niebuhr’s chosen model of moral responsibility as it is process-oriented, broad, and encompassing; it also accounts for personal development, society’s demands and, of course, places moral responsibility on the agent. I argue that *homo dialogicus* indicates a concern for what may be called “the common good,” understood as a process of moral decision-making that continually reflects on the obligations of the self and the requirements of the moral community. The similarities between Niebuhr’s *homo dialogicus* and the common good will be more fully defended in section V. It is the objective of the next section to explore the theological contributions of a modern Evangelical theologian, Richard Bauckham.

III. Evangelical Theology of Human Limitation Richard Bauckham

In this section I provide a professional and theological background of Richard Bauckham, clarifying the nature of biblical Evangelical theology. I then examine Bauckham’s notion of “limitation.” Bauckham believes that humans must live within God-ordained parameters by acknowledging that individuals have basic requirements to be balanced with needs of others in a community. Limitation brings the individual to their potential while also contributing to the harmony of the society. I will argue limitation indicates a concept akin to the common good and now turn to Richard Bauckham—the theologian.

²⁰⁰ Ibid., 88.

A. Background

Richard Bauckham is Professor Emeritus of St. Andrews, Scotland, where he was a Professor of New Testament Studies, and the Bishop Wardlaw Professor, until he retired in 2007.²⁰¹ Bauckham has written on a variety of topics including systematic theology, the New Testament, the early Jerusalem church, the Bible, and “biblical and theological approaches to environmental issues.”²⁰² Bauckham’s work is considered Evangelical, theologically, as opposed to Evangelical—culturally or socially.²⁰³

Theologically, “Evangelical” refers to a large number of Protestant denominations, which are characterized by ecumenism, social justice, promotion of education, and involvement in “the World.”²⁰⁴ That is, Evangelicals often work with, and believe that people from other Christian denominations are will have eternal life with God following death. Evangelicals have a conscious bend towards social justice, as evidenced in organizations such as the Evangelical Environmental Network (EEN)²⁰⁵ and Evangelicals for Social Action.²⁰⁶ Evangelicals also have a strong investment in educating Christians in principles of biblical exegesis,²⁰⁷ hermeneutics, and the biblical

²⁰¹ Richard Bauckham, “Short CV,” n.d., at <http://richardbauckham.co.uk/index.php?page=short-cv>

²⁰² Richard Bauckham, “Richard Bauckham- Biblical Scholar and Theologian,” n.d. at <http://richardbauckham.co.uk/>

²⁰³ A cultural evangelical would be a member of an Evangelical church, or someone who is self-identified as Evangelical, primarily for reasons like peer pressure, proximity to other Evangelicals or Evangelical churches, predominance of Evangelical culture (especially the south of the United States), or tacit acceptance, i.e. born into an Evangelical church but does not make an adult decision to be a member.

²⁰⁴ Gerald R. McDermott, “The Emerging Divide in Evangelical Theology,” *Journal of the Evangelical Theological Society* 56, no. 2 (2013): 355-377, at 358.

²⁰⁵ Evangelical Environmental Network, “Home,” n.d., at <http://creationcare.org/>

²⁰⁶ Evangelicals for Social Action, “Home,” 2014, at <http://www.evangelicalsforsocialaction.org/>

²⁰⁷ Tracing back to Martin Luther, many biblically conservative Protestants handle biblical exegesis through a three-fold process of translation, interpretation, and application. See Mickey L. Mattox, “Martin Luther,” in *Dictionary for Theological Interpretation of the Bible*, Kevin J. Vanhoozer, Craig G. Bartholomew, Daniel J. Treier, and Nicholas Thomas Wright, eds. (Grand Rapids, MI: Baker Books, 2005), 471-472, at 472.

languages.²⁰⁸ Evangelicals are distinct from—although often confused with—Fundamentalists who are characterized by social and denominational isolation, a lack of interest in social justice, a regard for the literal (English) interpretation of the Bible, and withdraw from “the World.” An account of Richard Bauckham’s Evangelical environmental theology is the topic of the next section.

B. Theological contributions

Gerald R. McDermott notes, “Evangelicals have been vocal in their declarations that the gospel calls us to fight racism, sexism and poverty—(and) even more recently, degradation of the environment.”²⁰⁹ Although a fair number of self-identified Evangelicals in the United States are climate change deniers,²¹⁰ there are others who are actively working to turn the tides of ecocide. Richard Bauckham is among the Evangelical voices addressing climate change and the environment.²¹¹

Bauckham’s theological ecology is predicated on the notion of human limitation. God has put parameters on our actions, and it is our divine duty to adhere to these

²⁰⁸ For instance, Gordon-Conwell Theological Seminary, one of the largest Evangelicals seminaries in North America, describes their academic program thusly: “Since its founding, Gordon-Conwell has educated men and women for Christian service throughout the world. In this tradition, we provide not only the practical tools needed for effective ministry, but also the rigorous academic preparation necessary to shape the mind for biblically faithful service in contemporary society.” Gordon-Conwell Theological Seminary, “Academics,” 2012, at <http://www.gordonconwell.edu/about/Academics.cfm>

²⁰⁹ McDermott, “The Emerging Divide,” 360.

²¹⁰ An astonishing 31% of white evangelicals answered “no” when asked, “Is there solid evidence the earth is warming?.” Pew Research Center, “Religious Groups’ Views on Global Warming,”

16 Apr. 2009, at <http://www.pewforum.org/2009/04/16/religious-groups-views-on-global-warming/>.

²¹¹ See also Janel M. Curry-Roper, “Contemporary Christian Eschatologies and their Relation to Environmental Stewardship,” *The Professional Geographer* 42, no. 2 (1990): 157-169; Janel M. Curry, “Care Theory and ‘Caring’ Systems of Agriculture,” *Agriculture and Human Values* 19, no. 2 (2002): 119-131; Janel M. Curry, Gail Heffner, and David Warners, “Environmental Service-Learning: Social Transformation Through Caring for a Particular Place,” *Michigan Journal of Community Service Learning* 9 (2002): 58-66.; Jonathan R. Wilson, *God’s Good World: Reclaiming the Doctrine of Creation* (Grand Rapids: Baker Academic, 2013); Tripp York and Andy Alexis-Baker, eds, *A Faith Embracing All Creatures: Addressing Commonly Asked Questions about Christian Care for Animals* (Eugene, OR: Cascade Books, 2012).

limitations.²¹² God-ordained limitation extends to the natural world, as well as the natural self (e.g., need for food, sleep, etc.). Bauckham works from a meta-narrative approach, which is theocentric.²¹³ In his biblical theology he uses the specific framework of “eco-narrative,”²¹⁴ which puts Christ at the center of our three-fold relationship with God, other creatures, and ourselves.²¹⁵ Because of our relationality, we must limit our use of the world, in keeping with the ordinations of God. Bauckham’s description of human limitation in the scriptures is the topic of the next section.

1. Human limitation²¹⁶

Protestants typically draw on scripture as the primary foundation for decision-making.²¹⁷ James Gustafson explains, “a biblically informed theology provides the basis for the final test of the validity of particular judgments.”²¹⁸ Thus, Evangelicals look to scripture for normative guidelines, including wisdom to address the current environmental problem. This is the methodological origin for Richard Bauckham as well.

²¹² Seen, for example, in the restriction of food to only plants in Genesis 1:28.

²¹³ See Richard Bauckham, *Bible and Missions: Christian Witness in Postmodern World* (Grand Rapids, MI: Baker, 2003).

²¹⁴ Bauckham, *The Bible and Ecology*, 145.

²¹⁵ *Ibid.*, 146.

²¹⁶ Interestingly, “limitations” of non-human animals appear to be a part of the natural order. The food chain, survival of the fittest, fluctuations in reproductive rates, predation, and food availability ensures that non-rational creatures are inherently limited. When we look back to the creation story, it is logically impossible that animals and plants reproduced but did not die. Animals depended on plants for food, thus plants must have “died.” Death had to be a part of the created order. As created, death had no moral value. It was neutral and inevitable. Once humans were created, death had a moral value assigned to it. Gen. 2:16-17. Bauckham does not address the tension between violence as part of the created order, but Elizabeth Johnson does fill this lacunae. See Elizabeth Johnson, *Ask the Beasts: Darwin and the God of Love* (London: Bloomsbury, 2014). The ethical implications for this theological issue is the extent to which inequality, injustice, and suffering must be part of the natural order, and if it is, what is the obligation of the Christian to alleviate it. Liberation theology was built upon a rejection of suffering as an inherent part of life for some people (but not for others). For the connections between liberation theology and ecology see, Leonardo Boff, *Cry of the Earth, Cry of the Poor* (Maryknoll: Orbis, 1997).

²¹⁷ Other Christian traditions also take a biblical approach to ethics, in various degrees. For instance, Pope Francis appeals to scripture for the distinct contributions of Christianity to ecology. See Francis, *Laudato Si’: On Care for Our Common Home* (Rome: Vatican Press, 24 May 2014), chapter 2, part II, “the Wisdom of the Biblical Accounts,” paragraphs 65-75. See also *Ibid.*, chapter 2, part III, “The Mystery of the Universe,” paragraphs 77; 82.

²¹⁸ James M. Gustafson, “The Place of Scripture in Christian Ethics: A Methodological Study,” *Interpretation* 24, no. 4 (1970): 430-455, at 451.

Bauckham contends that multiple accounts of human limitation are illustrated in the Bible. In order to argue for human limitation, Bauckham surveys Judeo-Christian scriptures to provide examples that indicate God-ordained limitation on humans. Here, I draw out various illustrations Bauckham uses from the Old and New Testament, focusing on the books of Genesis, Job, and Matthew.

Scripture opens with an unambiguous account of God creating the world “good.” Each “day” is in order and limited by the coming of the next day.²¹⁹ The unfolding of the Genesis narrative points to a structure that is rational and orderly. The days do not run into each other; nor do the animals slipshod into each another (taking the non-macro-evolutionary approach). God provides a habitat before fashioning the creatures, providing a cadence for each of the days. For instance, there is sky before the birds appear; water is collected before fish fill the oceans; and land is established before humans inhabit it. On the sixth day, after the animals are made, the humans appear.²²⁰

In Genesis we see that the ‘*adam*’ is put in the Garden to till the land.²²¹ Bauckham notes that agriculture, husbandry, and horticulture bring the earth to its fullest potential by utilizing natural limits of the land (e.g., rain, soil, topography) and the limits of the environment (e.g., number of sunny days, temperature), without exploiting the land through overuse.²²² The land is limited as well as the human.

Elsewhere in Genesis, human limitation is reiterated. Whether by enforced Sabbath periods, or the injunction against eating meat with the blood in it, humans

²¹⁹ The Hebrew is *yom*, which can mean a 24-hour day, or an age, or an era.

²²⁰ The Hebrew is ‘*adam*’, earthling. At this point humans are still an undifferentiated, bi-sexual being, as pointed out in Phyllis Trible, *God and the Rhetoric of Sexuality* (Philadelphia: Fortress Press, 1978), 80.

²²¹ The benevolence and value of work, indicated in Gen. 2:15, plays a prominent role in Catholic encyclicals on work and worker’s rights and therefore has a far reach in the development of Christian ethics beyond ecology. See John Paul II, *Laborem Exercens: On Human Work* (1981).

²²² Bauckham, *The Bible and Ecology*, 17.

experience limitation.²²³ Humans may only take so much land, or kill so many animals (post-deluge), and must respect the boundaries of the created community. Limitation is a part of the very fiber of the human condition. In addition to the numerous examples of limitation in the book of Genesis, Bauckham utilizes the book of Job to reiterate God's cosmic order and the bounds of humankind.

The book Job has been appropriated for environmental usage in past decades as a growing interest in the ecological crisis, coupled with a mounting fondness of non-human creatures has proliferated.²²⁴ Bauckham is particularly interested in the speech of God at the end of the book of Job (chs. 38-41). This monologue emphasizes the place of humans within the created order, and underscores God's delight in creatures for their own sake. Of course, chapters 38-41 were not meant to be a scientific description of weather or animals. Rather, the pericope is instructive for identifying the places that humans cannot access, and the limits to our knowledge about the lives of animals.

Reiterating the idea that God's world is subject to limitation, Bauckham highlights God's control over the mysterious sea,²²⁵ the fickle and life-determining weather,²²⁶ and the fabulous creatures like the behemoth and leviathan.²²⁷ The book of Job emphasizes God's infinite knowledge and vast control of meteorological and zoological activity. The power of God reiterates the dependency of humans.

²²³ Ibid., 23; Gen. 9:3-4.

²²⁴ Kathryn Schifferdecker, *Out of the Whirlwind: Creation Theology in the Book of Job* (Cambridge, MA: Harvard University Press, 2008); Daniel Hillel, *The Natural History of the Bible: An Environmental Exploration of the Hebrew Scriptures* (New York: Columbia University Press, 2007). The "Green Bible" also adopts Job as an ecological story. See Michael G. Maudlin and M. Baer, eds. *The Green Bible* (New York: HarperCollins, 2008).

²²⁵ Bauckham, *The Bible and Ecology*, 40-41.

²²⁶ Ibid., 42-44.

²²⁷ Ibid., 59-62.

Although we till the ground, God laid the foundation (Jb. 38:4). Although we swim in the ocean, God put bounds on the water (Jb. 38:11). Although we can predict the weather, only God can create snow (Jb. 38:22). In each case, humans are a part of creation and as dependent on God as the animals. The book of Job separates the abilities of the human from the power of God. Emphases on the limits of humans are also present in the New Testament, as Bauckham indicates.

As a New Testament scholar, Bauckham is especially keen in his argument that human limitation—as a part of the created order threaded throughout the scriptures—continues in the New Testament. In particular, he re-reads the Sermon on the Mount in an age of ecological catastrophe. Bauckham does note, “hyperbolic extremity characterizes Jesus’ teaching throughout the sermon.”²²⁸ Yet, it is clear that the limits of humans are crystallized in this well-known sermon, rather than dissolved. Matthew 6 is case in point.

Here, Jesus exhorts his listeners to limit disposable wealth by giving to the needy (Mt. 6:1-4). Fasting assumes intentional limitation of food (Mt. 6:16-17). Our love for money is limited and checked by our love for—and devotion to—God (Mt. 6:19-24). Pressing daily needs like food and clothes are limited by our primary objective to seek God (Mt. 6:25-34). We are even told to limit our words in prayer in Matthew 6:5-15! These terrestrial examples make plain the numerous ways God has ordained and structured human limitation.

By way of the examples of Genesis, Job, and chapter 6 of Matthew, Richard Bauckham contributes a theology of limitation and boundaries to Evangelical ethics. He builds an indomitable case for an “ecological” reading of scripture. By realizing that God has put parameters on our actions, we can accept limitation. In sum, Bauckham contends

²²⁸ Bauckham, *Living with Other Creatures*, 143.

that the Kingdom of God includes all of creation and uses limitation to frame our response to the environment.²²⁹ Limitation ensures that the needs of all creatures are met. Hence, Richard Bauckham points at an idea of the common good. Having thus explored the work of two Protestant scholars, I now move on to the most crystalized exposition of the common good, which is found in Catholic Social Teaching.

IV. Catholic Theology of the Common Good—Catholic Social Teaching

Catholic Social Teaching (CST) is the umbrella term for magisterial teachings on various aspects of moral life. Modern Catholic Social Teaching typically date to *Rerum Novarum* in 1891, but, as Kenneth Himes says, it would be inaccurate to say that, “prior to 1891 the papacy ignored social issues” because a concern for social life has always been a defining feature of Christianity.²³⁰ Catholic Social Teaching draws on multiple sources, including scripture,²³¹ reading “the signs of the times” (Mt. 16:1-4), social sciences, systematic theology, and natural law²³² to articulate its teachings. Note, the subsequent interpretation of these teachings by institutional and independent theologians is called Catholic Social *Thought*. In Catholic Social Thought, interpreters of the magisterial teachings are both ordained and lay, male and female, and come from every part of the world, enacting the *sensus fidelium*²³³ through their intellectual and theological ruminations as they translate and disseminate the CST for others.

Catholic Social Teaching is both broadly applicable and narrowly focused. CST calls human beings who are “made in God’s image (to) share (in) this communal, social

²²⁹ Ibid., 64.

²³⁰ Kenneth Himes, “Introduction,” in *Modern Catholic Social Teaching: Commentaries and Interpretations*, Kenneth Himes, ed. (Washington DC: Georgetown University Press, 2005), 1-6, at 3.

²³¹ John Donahue, “The Bible and Catholic Social Teaching,” in *Modern Catholic Social Teaching: Commentaries and Interpretations*, Kenneth Himes, ed. (Washington DC: Georgetown University Press, 2005), 9-40, at 11.

²³² Aquinas, *Summa* I-II, q. 1, art. 7 and 8.

²³³ Second Vatican Council, *Lumen Gentium: Light of the Nations* (1964), 12.

nature... to reach out and to build relationships of love and justice.”²³⁴ Of particular interest for this dissertation is the Catholic Social Teaching on the common good, with emphasis on documents that consider the environment. Although explicit environmental concerns are relatively recent, the larger teachings on the common good have been a central feature of CST throughout the last century.

After providing background on the idea of the common good expressed in CST, I analyze three documents that discuss the idea of the common good. The United States Conference of Catholic Bishop’s *Climate Change: A Plea for Dialogue, Prudence, and the Common Good* (2001), Benedict XVI’s *World Day of Peace Message: If You Want to Cultivate Peace, Protect Creation* (2010) and the groundbreaking encyclical of Pope Francis, *Laudato Si’: On Care for Our Common Home* (2015) will be assessed for their articulation of the common good. First, I offer a brief background of the idea of the common good in CST.

A. Background

The concept of the common good has been a prominent aspect of social philosophy since Plato,²³⁵ Aristotle,²³⁶ and Cicero.²³⁷ It has extended through the work of Augustine,²³⁸ Aquinas,²³⁹ John Locke,²⁴⁰ and Jacques Maritain,²⁴¹ among others.

²³⁴ United States Conference of Catholic Bishops, “Catholic Social Teaching,” 2015, at <http://www.usccb.org/beliefs-and-teachings/what-we-believe/catholic-social-teaching/>

²³⁵ Plato, *The Republic*, Richard Sterling and William Scott, trans. (New York: W.W. Norton, 1985), 185.

²³⁶ Aristotle, *Politics*, Ernest Barker, trans. (Oxford: Oxford University Press, 1995), 1188–1189.

²³⁷ Cicero, *De Re Publica*, C. W. Keyes, trans. (Cambridge: Loeb Classical Library, 1928), bk. 1 ch. xxv.

²³⁸ Augustine, *City of God*, Henry Bettenson, trans. (London: Penguin, 1972), book XIX.

²³⁹ Aquinas, *Summa Theologia*, II-II, q. 58, art. 7.

²⁴⁰ John Locke, *Second Treatise of Civil Government* (Indianapolis, IN: Hackett, 1980).

²⁴¹ Jacques Maritain, *The Person and the Common Good*, John J. Fitzgerald, trans. (New York: Charles Scribner’s Sons, 1947).

Catholic Social Teaching takes up the language of the common good directly²⁴² and provides a theological rationale for an effective public philosophy. Meghan Clark notes CST has frequently been called “Catholicism’s *best kept secret*” (italics hers), since it provides a robust theology for the complexities of human life, yet is little known outside of academic Catholic circles.²⁴³

Catholic Social Teaching offers one of the most comprehensive views of the common good through encyclical teachings, highlighting the various aspects of the common good in all domains of life. The rights of workers to own private property, make a fair wage, and work decent hours were among the topics of the first papal social encyclical in 1891.²⁴⁴ From the first encyclical, teachings have blossomed, and it seems that every facet of life has been addressed by magisterial teachings emphasizing the common good.

The common good can be defined in a number of ways, but perhaps the most well-known expression is found in *Mater et magistra*, which defines the common good as, “the sum total of social conditions which allow people, either as groups or as individuals, to reach their fulfillment more fully and more easily.”²⁴⁵ Essentially, two features define the common good: the individual and society.

In the common good, the rights and preferences of the individual are held in tension with the ideal that all people in a society will flourish. This balance ensures that individuals do not become a cog in wheel—thus reducing a person with dignity to an

²⁴² Benedict XVI, *Caritas in Veritate: On Integral Human Development in Charity and Truth* (2009); John Paul II, *On the Hundredth Anniversary of Rerum Novarum: Centesimus Annus* (1991).

²⁴³ Meghan Clark, *The Vision of Catholic Social Thought: The Virtue of Solidarity and the Praxis of Human Rights* (Minneapolis, MN: Fortress, 2014), 4.

²⁴⁴ Leo XIII, *Rerum Novarum: On Capital and Labor* (1891).

²⁴⁵ John XXIII, *Mater et Magistra: On Christianity and Social Progress* (1961), 65.

inhuman component of society. It also builds a well-ordered society, which supports cooperation in many dimensions of political, domestic, economic, and recreational life. The common good is also a dimension of ecological teachings within CST²⁴⁶ and is the theological contribution from Catholicism in this chapter.

In the next section, I explore the common good in three documents that discuss the idea of the common good from an environmental perspective. First, I look at the United States Conference of Catholic Bishops' (USCCB) *Climate Change: A Plea for Dialogue, Prudence and the Common Good*. My second document is Benedict XVI's *World Day of Peace Message: If You Want to Cultivate Peace, Protect Creation*. Third and finally, I analyze Pope Francis' *Laudato Si': On Care for Our Common Home*. I turn now to CST on the common good within these environmental writings.²⁴⁷

B. Theological contributions

In Catholic Social Teaching, harmony among people depends on environmental conservation and recognizing the inherent worth of all life. This was noted as early as 1990, in Pope John Paul II's World Day of Peace message, *Peace with God, the Creator, Peace with All of Creation*. Here, he indicated that "two fundamental principles should guide our moral considerations: the integrity of all creation, and respect for life."²⁴⁸ CST is aware of the interplay between the environment, individuals, and the common good. These intertwined realities provide a robust Christian ethic. In the last 15 years CST has

²⁴⁶ United States Conference of Catholic Bishops, *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching* (November 14, 1991).

²⁴⁷ For documents on the environment as early as 1989 see John Paul II, *The Ecological Crisis: A Common Responsibility* (1989); John Paul II, *1990 World Day of Peace Message: Peace with God, the Creator, Peace with All of Creation* (1990); Pontifical Council for Justice & Peace, "Chapter 10: Safeguarding the Environment," in *Compendium of the Social Doctrine of the Church* (2005); Pontifical Council for Justice and Peace, "Contribution of the Holy See to the Fourth World Water Forum," (March 16-22, 2006).

²⁴⁸ John Paul II, *World Day of Peace Message: Peace with God, the Creator, Peace with All of Creation* (1990), 15.

demonstrated the continuity, coherence, and, at the same time, diversity of approaches to ecology. I turn first to the earliest of the three documents that I survey, *Climate Change: A Plea for Dialogue, Prudence and the Common Good*.

1. United States Conference of Catholic Bishops, *Climate Change: A Plea for Dialogue, Prudence and the Common Good*, 2001

The United States Conference of Catholic Bishops is convinced that Christians are stewards of the earth and must mitigate climate change. They expound, “as people of religious faith, we bishops believe that the atmosphere that supports life on earth is a God-given gift, one we must respect and protect.”²⁴⁹ While it does seem that their concern for “life” is broad enough to include plants and animals, further investigation of the document shows that they take an anthropocentric approach to environmental conservation. That is, creation is intended for human use.

Further, the common good only includes humans, but “extend(s) our concern to future generations. Climate change poses the question ‘What does our generation owe to generations yet unborn?’”²⁵⁰ Here, it is the unborn of *homo sapiens* that is the focus, not the future generations of flora and fauna, which will diminish, go extinct, or will be lost with ecosystem destruction. The two most significant features of the USCCB *Climate Change* are that the document emphasizes first, human responsibility in climate change and, second, conservation for the common good.

First, *Climate Change* places the responsibility to reduce greenhouse gas emissions that lead to climate change on rich countries that do the bulk of pollution,

²⁴⁹ United States Conference of Catholic Bishops, “Climate Change.”

²⁵⁰ Ibid.

instead of poorer countries which tend to have higher levels of population growth. They point out,

Historically, the industrialized countries have emitted more greenhouse gases that warm the climate than have the developing countries. Affluent nations such as our own have to acknowledge the impact of voracious consumerism instead of simply calling for population and emissions controls from people in poorer nations.²⁵¹

The rationale of the USCCB is two-fold. First, of course, the Catholic Church is officially against artificial contraception²⁵² and there is a fear that artificial birth control—inclusive of abortion—would be utilized as a solution to climate-change related population growth.²⁵³ Second, and nobler, is that each person’s actions affect the common good. Thus, each person must take responsibility to mitigate harmful pollution.

Conservation for the benefit of the common good is the second essential feature of *Climate Change*. Environmental destruction impacts everyone, thus policies must be participatory. Everyone in the common good should cooperate to define the terms of environmental use, and environmental preservation. The United States Conference of Catholic Bishops support a system where “developing and poorer nations have a genuine place at the negotiating table. Genuine participation for those most affected is a moral and political necessity for advancing the common good.”²⁵⁴ The Bishops recognize that ramifications of climate change are not evenly distributed. This disrupts the common

²⁵¹ Ibid.

²⁵² Paul VI. *Humanae Vitae*. Washington DC: United States Conference of Catholic Bishops, 1968. *Humanae Vitae* (Washington DC: United States Conference of Catholic Bishops, 1968).

²⁵³ John Paul II, *Evangelium Vitae: To The Bishops, Priests and Deacons Men and Women Religious Lay Faithful and All People of Good Will on the Value and Inviolability of Human Life* (1995), 16.

²⁵⁴ United States Conference of Catholic Bishops, “Climate Change.”

good by decreasing quality of life. It also jeopardizes the ability of people—especially the impoverished—to flourish.

I maintain that the option for the poor is especially salient in environmental discussions because the underprivileged are more vulnerable to displacement due to climate change. Moreover, people in developing countries are affected by the pollution of countries with large carbon footprints, though they do not reap the corresponding economic benefits. *Latina* theologian Ada Maria Isasi-Diaz maintains, “the common good is to be judged by the rights and participation of the poorest in society.”²⁵⁵ The USCCB echoes this belief by acknowledging that political power and economic hardships preclude participation in climate policies. Conservation must occur on behalf of, and with the collaboration of, all in society for the promotion of the common good. It is outrageous when “the voices of poor people and poor countries are neglected.”²⁵⁶

The common good articulated in *Climate Change* offers solid prolegomena for further discussions on theological ecology. The objective of this document, as indicated in the title, is dialogue, and therefore the conclusions of the teaching do not aim to end the conversation. Nine years after *Climate Change*, Benedict XVI delivered the 2010 *World Day of Peace Message*, also focused on the environment.

2. Benedict XVI, *World Day of Peace Message: If You Want to Cultivate Peace, Protect Creation*, 2010

Benedict XVI was named one of *Grist's* “15 Green Religious Leaders” in 2007, along with the Dalai Lama, Fr. Thomas Berry, and Ecumenical Patriarch Bartholomew

²⁵⁵ Ada Maria Isasi-Diaz, “Defining our Proyecto Historico: Mujerista Strategies for Liberation,” in *Readings in Moral Theology No. 9: Feminist Ethics and the Catholic Moral Tradition*, Charles Curran, Margaret Farley and Richard McCormick, eds. (New York: Paulist Press, 1996), 120-135, at 127-128.

²⁵⁶ Ibid.

I.²⁵⁷ News outlets cite his “electric car”²⁵⁸ and solar-powered residence in Vatican City²⁵⁹ as evidence of his conservationist inclinations. Certainly, Benedict XVI’s teachings on the environment also secured his spot on the Top 15 list. Of particular interest for my purpose is his 2010 *World Day of Peace Message: If You Want to Cultivate Peace, Protect Creation*. Just as the common good was a prime feature of the USCCB document *Climate Change*, so too does the common good emerge in Benedict XVI’s message. Benedict XVI grounds his robust articulation of the common good in two places. First, he draws heavily on the Genesis creation narrative. Second, he maintains an anthropocentric concern for the environment. Taken in tandem, a picture of the common good emerges.

The 2010 *World Day of Peace Message* utilizes the creation story of Genesis as normative for an ecological ethic of stewardship based on the common good.²⁶⁰ Benedict asserts, “But the true meaning of God’s original command, as the *Book of Genesis* clearly shows, was not a simple conferral of authority, but rather a summons to responsibility.”²⁶¹ Responsibility and authority are two sides of the same coin. They partially define how all humans are obligated to care for, and develop, the world around us. Citing Genesis 2:15 Benedict affirms, “Technology in this sense is a response to God’s command to till and keep the land.”²⁶² But, lest technology become *the* driving

²⁵⁷ Grist staff, “15 Green Religious Leaders,” *Grist*, 25 Jul. 2007, at <http://grist.org/article/religious/>

²⁵⁸ Jura Koncius, “A Holy Roller,” *The Washington Post*, 19 Jan. 2006, at <http://www.washingtonpost.com/wp-dyn/content/article/2006/01/18/AR2006011800483.html>

²⁵⁹ AFP, “Vatican is World’s Greenest State: Official Daily,” *Independent U.K.*, 12 Dec. 2010, at <http://www.independent.co.uk/environment/vatican-is-worlds-greenest-state-official-daily-2158560.html>

²⁶⁰ The creation story appears in other CST documents to show a normative anthropology that describes human nature, sin, universal claims to good, ecological sustainability, gender, and dignity. See John Paul II, *Sollicitudo Rei Socialis: For the Twentieth Anniversary of Populorum Progressio* (1987), 29.

²⁶¹ Benedict XVI, *World Day of Peace Message: If You Want to Cultivate Peace, Protect Creation* (2010), 6.

²⁶² *Ibid.*, 10.

force of human activity, moral agents must consider the implications for the common good.

Humanity as a whole must regard the earth as a gift to all people, as part of the common good to be pursued. The universal destination of goods was established from the beginning of time. Therefore, “respect for creation is of immense consequence, not least because ‘creation is the beginning and the foundation of all God’s works.’”²⁶³ And, just as the USCCB placed emphasis on the option for the poor and the unborn, Benedict XVI also includes the entire human community in the common good. He confirms, “the environment must be seen as God’s gift to all people, and the use we make of it entails a shared responsibility for all humanity, especially the poor and future generations.”²⁶⁴ Anthropocentric concern for creation is the second way Benedict XVI expresses the common good in his 2010 *World Day of Peace Message*.

The gift of the earth is part of a covenant, or bond, between all of humanity and the Creator. Every human being is meant to have access to the goods of the earth, without one person or group taking more than their fair share. The ability of the environment to provide for all people is a precondition to a dignified human life. In order for individuals to flourish, creation must not be destroyed. The common good will crumble if the earth is exploited.

Benedict XVI proclaims, “the goods of creation belong to humanity as a whole. Yet the current pace of environmental exploitation is seriously endangering the supply of certain natural resources not only for the present generation, but above all for generations

²⁶³ Ibid., 1.

²⁶⁴ Ibid., 2.

yet to come.”²⁶⁵ Again, we see that creation is for the use of humans. And, even when non-humans are mentioned, it is with the recognition that human needs are an indomitable priority. Paragraph 12 of the 2010 *World Day of Peace Message* states, “the earth, water and air (are) gifts of God the Creator meant for everyone, and above all to save mankind from the danger of self-destruction.”²⁶⁶ Benedict’s anthropocentric approach to conservation provides authoritative teaching on the common good in an environmentally precarious era. In recent years, CST has seen an expansion of the notion of the common good from humankind to our ecosystem. Pope Francis’ encyclical, *Laudato Si’: On Care for Our Common Home*, promulgated in 2015, continues the tradition of ecological teachings on the common good in the Catholic Church. It is the topic of my next section.

3. Pope Francis, *Laudato Si’: On Care for Our Common Home*, 2015

Laudato Si’: On Care for Our Common Home is the first encyclical primarily devoted to environmental concerns. This is significant because encyclicals are one of the most authoritative forms of Church teaching. The title of the much-anticipated encyclical encapsulates the main idea, that the earth is the “common home” for human and non-human animal, plant and water all engendered because of Creator God. We share in the earth’s bounty and wither in its dearth. The call to creation care is not just for faithful Catholics, but rather the Pope addresses “every person living on this planet,” recognizing that the environmental crisis affects everyone.²⁶⁷

Francis defines the common good as “the sum of those conditions of social life which allow social groups and their individual members ready access to their own

²⁶⁵ Ibid., 7.

²⁶⁶ Ibid., 12.

²⁶⁷ Francis, *Laudato Si’*, 3; 205.

fulfillment.”²⁶⁸ The common good is imperiled when temperance yields to greed.

“We are one single human family,”²⁶⁹ declares the Pope, and we exist in a shared world that is in peril. Since humankind is in global predicament, the Pope calls upon intelligent people to alter our trajectory. The emphasis on integral ecology in *Laudato Si’* is the primary manifestation of the idea of the common good in this encyclical.

Integral ecology is full and expansive vision of harmonious life on earth. Pope Francis comments, “since everything is closely interrelated, and today’s problems call for a vision capable of taking into account every aspect of the global crisis (such as)... *integral ecology*, which clearly respects its human and social dimensions”²⁷⁰ of the environment, social life, economics, culture, the common good, and intergenerational justice.²⁷¹ Integral ecology has two parts, which must be explained. First, “integral” refers to the interconnectedness of all systems; we are a “network” of creation.²⁷² Since all people depend on one another, the entire world must participate by promoting the common good.²⁷³ The underlying similarity of all humans as rational is a prerequisite for global participation, but an active and willing spirit is a requirement for social engagement.

Second, “ecology” exists as the matrix of systems which may benefit or harm people. Ecology may have an environmental nuance, but it is wider than just nature. Francis notes that, “human ecology is inseparable from the notion of the common good, a

²⁶⁸ Ibid., 156. The Pope is quoting from Second Vatican Council, *Gaudium et Spes: Pastoral Constitution on the Church in the Modern World* (1965), 26.

²⁶⁹ Ibid., 52.

²⁷⁰ Ibid., 137.

²⁷¹ Ibid., 138-162.

²⁷² Ibid., 138.

²⁷³ Ibid., 135.

central and unifying principle of social ethic.”²⁷⁴ The teachings on integral ecology and integral humanism²⁷⁵ have been a part of CST for decades. Attention to the whole person within society is foundational for the common good. Yet, the individual must undertake their own life-project within the larger scope of contributions to the global community. This guides the vision of integral ecology in *Laudato Si’*.

Laudato Si’ affirms that an authentic human ecology is inseparable from ecological protection and flourishing.²⁷⁶ “Human life is grounded in three fundamental and closely intertwined relationships: with God, with our neighbour and with the earth itself,”²⁷⁷ observes the Pope. Thus, our actions and attitudes in one aspect of life affect the others. If we view ourselves as part of a complex and intertwined community, we can reach authentic fulfillment and respect our neighbor’s claim to the goods of the earth as well. If we disregard the impact of our actions, we reject the relational reality that God has ordained and violate the common good.

We are living in a community of creatures. We are human and non-human, locally, and internationally. “Globalization implies that we think of the common good differently,”²⁷⁸ noted Lisa Sowle Cahill in 2004. That is, ethicists are aware of the needs and contributions of people across the state, the country, and the continent. Our provincial view of “community” is no longer the village we were raised in. Rather, modern citizens recognize that all people are connected through commerce, digital technology, and one shared planet. Now, particularly through the addition of *Laudato Si’*

²⁷⁴ Ibid., 156.

²⁷⁵ Jacques Maritain, *Integral Humanism* (New York: Charles Scribner’s Sons, 1968).

²⁷⁶ Francis, *Laudato Si’*, 5.

²⁷⁷ Ibid., 66.

²⁷⁸ Lisa Sowle Cahill, *Bioethics and the Common Good* (Milwaukee, WI: Marquette University Press, 2004), 19.

into the corpus of CST, there is reason to include all creatures in the common good, and “acknowledge the appeal, immensity and urgency of the challenge we face.”²⁷⁹ The environmental crisis is a common concern of all people and must be addressed effectively and creatively to ensure a reversal of climate change. The notion of the common good must encompass the entire planet because all creatures exist in an irreplaceable world that is limited and finite.

Summary

In sections II-IV, I have outlined the theological contributions of H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching. It is now time to thread common themes together. While Niebuhr and Bauckham do not use the term “the common good,” each describe a concept closely related to the common good. CST directly utilizes the language of the common good. Key terms like responsibility, limitation, and the common good presuppose a community that pursue social goods beyond individual interest. These ideas, furthermore, retain a strong sense of individual value as a person governed, created by, and in relationship with God. In the next section I indicate more concretely how the ethics of H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching demonstrate points of convergence around the idea of a common good. Once these points are established, practical strategies for conservation can be proposed. My particular interest is a strategy for conservation in the medical industry. I now turn to paving a pathway forward for a conservationist bioethic based in the common good.

²⁷⁹ Francis, *Laudato Si'*, 15.

V. Pathways Forward—Willis Jenkins

Willis Jenkins' first book *Ecologies of Grace: Environmental Ethics and Christian Theology*, was an exploration of Catholic, Protestant, and Orthodox theologies of environmental ethics. He described the project as an “exercise in ecumenical understanding, rather than a comprehensive evaluation, or a reconstructive proposal.”²⁸⁰ From his perspective, each branch of Christianity works within its own tradition to address its adherents on environmental problems. Each denomination offers what Jenkins calls a “grace.”²⁸¹ These graces are specifically tailored theologies that reach congregants through a common vernacular. Utilizing denominational graces is ultimately more effective—in Jenkins' purview—than attempting a lowest common denominator (i.e., ecumenical) approach to ethics. Since parishioners of each tradition have developed a common lexicon and worldview, it is most effective to speak to them directly as, say, a Catholic from a Catholic perspective. In this way, the faithful—whether Catholic, Protestant, and Orthodox—are more likely to enact conservation with conviction based on their own teachings.

At the same time, each of the three branches of Christianity concur that there is a need for environmental conservation, paving a common ground between the traditions. This does not gloss over differences, but rather highlights similarities. Jenkins reveals that “illuminating the pluralism... and indicating its practical significance” for Christian environmental theologies were among the goals of his project.²⁸² He achieves this by

²⁸⁰ Willis Jenkins, *Ecologies of Grace: Environmental Ethics and Christian Theology* (Oxford: Oxford University Press, 2008), 227.

²⁸¹ Here, Jenkins follows Laurel Kearns who “observes that there are three basic theological approaches to ecology: ecojustice, Christian stewardship, and creation spirituality.” These generally align with Catholicism, Protestantism, and Orthodox Christianity, respectively. *Ibid.*, 18.

²⁸² *Ibid.*, 20.

pointing to the consensus of Christian branches around ecological ethics. In a line parallel to *Ecologies of Grace*, this section draws out the similarities between H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching, while also recognizing their differences.

It is the objective of the first part of this section to underscore the points of convergence among my chosen theological sources. I argue that H. Richard Niebuhr and Richard Bauckham are concurrent streams that converge around an idea that reflects the common good. CST speaks of the common good directly. Recognizing points of convergence paves the path for moving forward with constructive proposals for ecological ethics, ecological theology, or ecological policy.

In the second part of this section, I utilize Jenkins' call for religious creativity to construct "practical strategies" for environmental conservation.²⁸³ His notion of practical strategies for conservation builds the bridge from my ethical foundation in the common good—explicated in this chapter—to the four principles of green bioethics—articulated in chapters three through six. I maintain that these four principles provide a conservationist trajectory for medical developments, techniques, and procedures in an environmentally precarious world. I begin by indicating points of convergence among the work produced by H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching.

A. Points of convergence among theologies

Establishing points of convergence among theologies strengthens similarities across traditions and indicates points of contact. Willis Jenkins maintains that his "particular pluralist approach intentionally opens space of constructive argument in many

²⁸³ Ibid., 7.

other religious scenes,”²⁸⁴ and, I would add, other intellectual disciplines. Focusing on points of convergence does tend to downplay differences in theological worldviews and convictions about the scriptures or anthropology (especially as it relates to sin and grace). However, points of convergence also allow participants to move forward with unified policies and practices, without necessarily adhering to underlying belief systems. This overall benefit of consensus outweighs the cost of generalities, especially when we talk not only across denominational lines, but also across religious lines.

Willis Jenkins points to ecological writer Bryan G. Norton, whose “convergence hypothesis’ supposes that adherents of diverse environmental worldviews will, by participating in the process of managing specific issues, converge on similar policies.”²⁸⁵ When urgent issues like environmental conservation demand immediate attention, they can expedite political and social processes as well. Thus, I focus on the primary point of convergence between H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching—a notion of the common good. As Willis Jenkins says, “the common good accommodates multiple moral projects seeking the goods of humanity and of creation.”²⁸⁶ I first analyze Protestant H. Richard Niebuhr’s view of *homo dialogicus* as it converges around the idea of the common good.

1. Protestant H. Richard Niebuhr

Niebuhr’s work on responsibility was born of the tumult and immense social changes during the middle of 20th century America. At that time, there was a growing social awareness of the lives of others. Civil rights, social justice, and the aftermath of World War II were among the issues mid-century Americans grappled with. The

²⁸⁴ Jenkins, *The Future of Ethics*, 6.

²⁸⁵ Ibid., 159.

²⁸⁶ Ibid., 130.

appropriateness of ethical action is writ large in Niebuhr's vision of *homo dialogicus*, which asks, "what is the fitting thing to do?" Thus, emphasis on both the agent and society factor into his notion of responsibility. Indeed, Niebuhr's work displays "a concern with the nature of moral agency and a common recognition of the social nature of the self."²⁸⁷ The following features are salient for Niebuhr's work within a moral framework indicative of the common good.

First, Niebuhr includes the community in his articulation of responsibility. Responsibility is larger than the individual since the moral agent must be accountable to constituents of the common good. Second, since all people are part of society, their interests factor into Niebuhr's *homo dialogicus* paradigm. A moral agent cannot act without reference to her community. Third, Niebuhr's proposal for responsibility is dynamic, and ever shifting, as the human asks, "what is going on?" This question faces each generation, geographical location, and—interestingly—branch of moral concern within the common good (e.g., health care, common resources, and social movements.)

Niebuhr's articulation of responsibility can be considered in line with the common good. Niebuhr argues "our action is responsible when it is a response to action upon us in a continuing discourse or interaction among beings forming a continuing society."²⁸⁸ Humans are situated in a community. The self and society are intertwined and interdependent; this is the crux of the common good. I argue that Niebuhr's theology of *homo dialogicus* emphasizes the person within the community and reflects larger concerns related to the common good. Likewise, the work of Evangelical Richard Bauckham indicates a notion—not identical with, but similar to—the common good.

²⁸⁷ Gardner, "Character, Virtue, and Responsibility," 315.

²⁸⁸ Niebuhr, *The Responsible Self*, 65.

2. Evangelical Richard Bauckham

Richard Bauckham's objective is to provide a biblical rationale to halt further ecological destruction.²⁸⁹ Bauckham does this by lifting up scriptures that describe human limitation, thus abandoning the notion of unchecked "dominion" over the earth. Our "special place" in the world is decidedly not an anthropocentrism that translates to a license to do as we wish.²⁹⁰ Instead, it is among God's creation, working within the bounds of our created place. The concepts "interdependence," "limitation," "boundaries," "creatureliness," and "creature" are expedient for discussions on the common good since they articulate an individual identity and reiterate the social location of our actions.

Human limitation displays awareness of our commitments to others. Humans must actively work to put limits on our activities, thus stewarding natural resources on behalf of the shared earthly community. Bauckham successfully provides a language for human actions within biblical bounds. Terms and phrases like "noninterference" and "keep(ing) our hands off" of nature²⁹¹ indicate that the earth itself is part of the common good. Acknowledging the role of the planet in sustaining life is a helpful corrective to the current "divide and conquer" mentality prevalent in many parts of the developed world. Further, Bauckham's common refrain of "letting creation be"²⁹² is flexible enough to translate into multiple forms of moral action.

The principal point of convergence between Richard Bauckham's ecological theology and the idea of the common good manifests in his view of human limitation. In Bauckham's view of human limitation, individuals take only what God has provided to

²⁸⁹ Bauckham, *Living with Other Creatures*, 1.

²⁹⁰ For a conservative Catholic view of the place of humans in ecology, see Joseph Tham, "Challenges to Human Dignity in the Ecology Movement," *The Linacre Quarterly* 77, no. 1 (2010): 53-62.

²⁹¹ Bauckham, *Living with Other Creatures*, 62.

²⁹² *Ibid.*, 6-7; 132.

them, thus appropriately using shared goods. Limitation is a familiar word in the Evangelical canon; the common good is not. However, Bauckham's utilization of the scriptures as his authority for human limitation translates well into a concept related to the common good, without using the unfamiliar term. Last, I look at CST as the final point of convergence around the common good.

3. Catholic Social Teachings

Historically, Catholic Social Teaching on the common good has upheld the claims of the individual to authentic flourishing, and the realities of a sharing goods of a society. *Gaudium et spes* identifies the common good as “the sum of those conditions of social life which allow social groups and their individual members relatively thorough and ready access to their own fulfillment... and consequently involves rights and duties with respect to the whole human race.”²⁹³ These twin social and individual aspects mutually reinforce each other. The social aspect of the common good checks individualism that only seeks ego-satisfaction. At the same time, the dignity of the individual person is maintained by means of access to social goods. The common good is apparent throughout CST, and especially in the three documents I surveyed in section IV.

First, the USCCB's *Climate Change* underscores the need for conservation as an essential feature of the common good. The Bishops do this by placing the burden of lifestyle change on developed world individuals and countries, which are responsible for the vast majority of resource excavation and exploitation. The Bishops require that individuals take initiative to reduce waste in order to preserve our shared environment. Preservation of the earth on behalf of the common good is necessary in this age of ecological catastrophe, thus people must amend their overly-consumptive practices.

²⁹³ Second Vatican Council, *Gaudium et Spes*, 26.

Second, Benedict XVI continues the Catholic Social Teaching on the common good vis-à-vis his emphasis on the creation narrative, which links human relationships with their terrestrial dwelling. The goods of nature were established for humans since the beginning of time. The central teaching the *World Day of Peace Message* can be summed up by one sentence in paragraph six: “Man (sic) has a duty to exercise responsible stewardship over creation, to care for it and to cultivate it.”²⁹⁴ Conservation of the earth for the benefit of all people is expected, appropriate to the biblical tradition of working the land.

Third, *Laudato Si'* balances the claims of the individual and the limits of our common home. Pope Francis maintains, “Authentic human development has a moral character. It presumes full respect for the human person.”²⁹⁵ Although the priority for human needs is prominent in *Laudato Si'*, nature cannot be instrumentalized. Thus, we see an expanded understanding of the common good. “It is not enough to think of different species merely as potential ‘resources’ to be exploited, while overlooking the fact that they have value in themselves,”²⁹⁶ declares Francis. It seems, therefore, that creation is a part of the common good, where humans and animals, climate and water, algae and insects have a claim to species existence in harmony with the larger society. “Each creature has its own purpose. None is superfluous.”²⁹⁷ Each living being is a member of the common good; all participate in a symbiotic ecosystem, while at the same time having a life of their own.

²⁹⁴ Benedict XVI, *World Day of Peace Message*, 6. The Pope is quoting his own *Caritas in Veritate*, 50.

²⁹⁵ Francis, *Laudato Si'*, 5.

²⁹⁶ *Ibid.*, 33.

²⁹⁷ *Ibid.*, 84.

Summary

Within the theological ethics presented above, Protestants tend to emphasize the role of the individual first, whether as a responsible agent—as was the case with H. Richard Niebuhr—or by limiting oneself—as was the case with Richard Bauckham. Yet, both Niebuhr and Bauckham consider the community a salient feature of ethics. Niebuhr contends that accountability to society is essential for responsibility and Bauckham speaks of the “community of creation.” Neither uses the term “the common good,” yet both Niebuhr and Bauckham express a view of ethics wide enough to include the individual-in-society.

Catholics go to the heart of the common good, using overt language, which envisions the moral agent as deeply interconnected to society. This indicates a robust, but primarily anthropocentric, vision of the common good. At the same time, there is evidence that the idea of the common good in CST is expanding to include non-humans. Pope Francis believes, “The development of the Church’s social teaching represents a synthesis with regard to social issues; this teaching is called to be enriched by taking up new challenges,”²⁹⁸ making CST accountable for dehabitation of animals and loss of biodiversity.

From the preceding sections, it may be concluded that H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching all provide an ethic that points towards the common good. These three sources consider that the communal well being and individual flourishing are indispensable elements of the common good. The identification of these points of convergence has prepared the last step of my foundational methodology: practical strategies for conservation. It is essential to have a theological

²⁹⁸ Ibid., 63.

foundation for the enormous undertaking of “greening” the medical industry. Jenkins notes, “Since religious values can enrich public discussion, this challenge offers opportunities for interfaith and ecumenical conversation and cooperation.”²⁹⁹ It is his articulation of practical strategies for conservation to which I now turn.

B. Practical strategies for conservation

Willis Jenkins is convinced that there are multiple, non-exclusive tactics to achieve sustainability. His pragmatism is displayed in the belief that we need a diversity of approaches to attend to the manifold concerns of the environment. This allows for the greatest number of Christians to identify with the ecological movement; theories of ecology need not be pitted against each other for dominance. In a parallel sentiment, Pope Francis remarked, “there is no one path to a solution. This makes a variety of proposals possible, all capable of entering into dialogue with a view to developing comprehensive solutions.”³⁰⁰ Theological ethicists can identify these various approaches to conservation, provide an intelligible model for the interpretation of the environmental crisis, and propose active solutions.

These active solutions may take many different forms and are an invitation to people from all disciplines to participate. Jenkins objective for his monograph “was to show how ethics interprets the relevant disciplines (economics, social theory, environmental sciences) within a general theological account of sustainability.”³⁰¹ Multi-discipline discourse precludes theology from becoming isolated and myopic. At the same time, theologians need not feel bound to academic siloing. Critical thinking, novel approaches, inter-disciplinary solutions, and original initiatives are all welcomed. Jenkins

²⁹⁹ United States Conference of Catholic Bishops, “Plea.”

³⁰⁰ Francis, *Laudato Si'*, 60.

³⁰¹ Jenkins, *The Future of Ethics*, vii.

believes “each strategy (for practical responses to climate change)... orients the reader to look for their trajectory of moral creativity.”³⁰² The braiding of multiple conversations and, indeed a certain amount of ingenuity, generates many practical strategies for conservation. My project is among the voices contributing to the work on theological ecology, many of which are utilized for support.

The topic of this dissertation is sustainability in the medical industry and I propose four principles to promote conservation in health care settings. I am calling these four principles of “green bioethics” to indicate their points of contact (i.e., bioethics), and divergence (i.e., green), with environmental bioethics. In this penultimate section, I introduce green bioethics as a practical strategy for conservation. I explain my methodology, scope and focus, and raise some initial considerations. This allows the remaining four chapters to unfold systematically, with each one addressing a specific principle.

1. Green bioethics as a strategy for conservation

The global community is aware of climate change, loss of biodiversity, famine, drought, pollution, resource scarcity, and food insecurity. Jürgen Moltmann declares, “The next step that must be taken is the transition from a world domestic policy to a common earth policy.”³⁰³ There are two basic methodological approaches to policymaking. One approach leaps over principles and goes directly to laws or initiatives. Indeed, many theologians, scientists, and ecologists have tried their hands at

³⁰² Ibid., 18-19.

³⁰³ Jürgen Moltmann, “A Common Earth Religion: World Religions from an Ecological Perspective,” 63, no. 1 (2011): 16- 24, at 17.

comprehensive environmental policy without articulated principles.³⁰⁴

Another approach outlines principles, with the expectation that others create governmental policies from them. For instance, Jessica Pierce and Andrew Jameton believe that fundamental environmental principles, collectively named “principles of sustainability,” should guide legislative policymaking. Their proposed guiding principles are: “sustainability, a fair distribution of environmental benefits and burdens, modesty of consumption, responsibility to nature and future generations.”³⁰⁵ In between the call for policy alone, and the suggestion for principles without policy, is green bioethics. The four principles of bioethics utilize a clear methodology, have a specific scope and focus, and avoid dogmatism. Each of these will be outlined. First, I explain my methodology.

a. Methodology

Green bioethics approaches the health care industry from an environmental framework rooted in the common good. Christian ethicists must ask, “How are we to fulfill God’s call to be stewards of creation in an age when we may have the capacity to alter creation significantly, and perhaps irrevocably?”³⁰⁶ I have argued that multiple theologies—including those from H. Richard Niebuhr, Richard Bauckham, and Catholic Social Teaching—utilize an idea related to the common good to answer questions such as these. The common good as a theological concept offers a broad base for ethics and lends itself to a problem-focused, pragmatic discussion about medical technologies and environmental conservation.

³⁰⁴ See Mark Z. Jacobson, Mark A. Delucchi, Guillaume Bazouin, Zack A. F. Bauer, Christa C. Heavey, Emma Fisher, Sean B. Morris, Diniana J. Y. Piekutowski, Taylor A. Vencill, and Tim W. Yeskoo, “100% Clean and Renewable Wind, Water, and Sunlight (WWS) All- Sector Energy Roadmaps for the 50 United States,” *Energy & Environmental Science* 8 (2015): 2093-2117.

³⁰⁵ Jessica Pierce and Andrew Jameton, *The Ethics of Environmentally Responsible Health Care* (Oxford: Oxford University Press, 2004), 116.

³⁰⁶ United States Conference of Catholic Bishops, “Plea.”

Through considered judgments of scientific data, we can make cogent decisions about the environmental impact of current health care systems. This requires active participation since “the common good is built up or diminished by the quality of public debate.”³⁰⁷ Positing an ethic morally above green bioethics is important so that policymakers do not slip into deep ecology, or modern Albigensianism,³⁰⁸ an extreme form of which promotes the involuntary “extermination” and extinction of humans for the benefit of the planet.³⁰⁹ For instance, theologians have cautioned against the logical extremes of conservation-based health care that could coerce lower birth rates, shorter life spans, and refusal of life sustaining measures.³¹⁰

Hence, the best available information on climate change, in line with the common good, must guide principles and policies; green bioethics cannot be the highest moral authority. Thus, rather than working under the aegis of a particular moral theory—deontology or utilitarianism, for instance—green bioethics determines the environmental sustainability of medical developments, techniques, and procedures based primarily, but not solely, on their impact on shared natural resources of the common good.

The four principles of green bioethics articulate a rich and multifaceted approach

³⁰⁷ Ibid.

³⁰⁸ Albert Jonsen notes that the Albigensians extolled suicide, condemned procreation (and hid the truth about God within their esoteric society). See Albert Jonsen, *Responsibility In Modern Religious Ethics* (Washington, DC: Corpus Books, 1968), 202. This does not mean that the voluntary diminishment of humans is problematic from a Christian, New Covenant perspective. St. Paul discusses marriage and celibacy. As a celibate himself, he finds it favorable that “all men were as I myself” (I Cor. 7:7). If people were celibate, it would amount to elimination of sex and therefore pregnancy and births. Augustine takes a similar line of thought in *On the Excellence of Marriage*. Augustine, *On the Excellence of Marriage*, in David G. Hunter, ed. *Marriage and Virginity (Works of Saint Augustine: A Translation for the 21st Century)* (Hyde Park: New City Press, 1997), ch. 9 (9).

³⁰⁹ Compare with the Voluntary Human Extinction Movement (VHEM), n.d., at www.vhemt.org/ and the Church of Euthanasia. Church of Euthanasia, n.d., at www.churchofeuthanasia.org/ The Church of Euthanasia stands on the four pillars of “suicide, abortion, cannibalism, and sodomy” (i.e., any non-procreative sex).

³¹⁰ Marcello Di Paola and Mirko Daniel Garasic, “The Dark Side of Sustainability: On Avoiding, Engineering, and Shortening Human Lives in the Anthropocene,” *Rivista di Studi sulla Sostenibilità* 3, no. 2 (2013): 59-81.

to conservation in the medical industry. They can be summarized by the philosophy that medical practices that reduce consumption are more environmentally sustainable than medical practices that increase consumption or expend carbon unnecessarily (i.e., with no clinical benefit). This echoes Aldo Leopold's sentiment that "a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."³¹¹ Methodologically, green bioethics promotes sustainable medical developments, techniques, and procedures and advocates the reduction or elimination of ecologically wasteful medical developments, techniques, and procedures. Furthermore, green bioethics has a tailored scope and focus, which I discuss in the next section.

b. Scope and focus

The health care industry in the developed world—particularly in the United States—is the primary scope of green bioethics. In chapter one I demonstrated that the U.S. health care industry is responsible for nearly a tenth of the country's emissions.³¹² This statistic alone would be innocuous if the U.S. had a sustainable carbon output. However, the United States is consistently among the top three most polluting countries in the world, demonstrating massive resource use. In 2008, America had the second highest CO₂ emissions (after China), at 5,833 million metric tons.³¹³ Thus, the carbon cost from using the health care industry in America is among the highest in the world and must be curtailed.

³¹¹ Aldo Leopold, *A Sand County Almanac and Sketches Here and There* (Oxford: Oxford University Press, 1968), 224.

³¹² Julia Whitty, "Diagnosing Health Care's Carbon Footprint," *Mother Jones*, 10 Nov. 2009 at <http://www.motherjones.com/blue-marble/2009/11/diagnosing-health-cares-carbon-footprint>

³¹³ Union of Concerned Scientists, "Each Country's Share of CO₂ Emissions," Revised 20 Aug. 2010, at http://www.ucsusa.org/global_warming/science_and_impacts/science/each-countrys-share-of-co2.html

Medical developments, techniques, and procedures are the focus of green bioethics because they are the focus of traditional bioethics within the industrialized health care industry. They are a specific area of health care that is seldom addressed in terms of environmental impact, unlike waste management and electricity use. Further, medical developments, techniques, and procedures form a core identity of medical practice and are universal defining aspects of medical care. Unlike a permanent building, such as a hospital, which supposes a certain type of health care facility, medical developments, techniques, and procedures cross physical barriers and are utilized in numerous health care settings, including home care, international medical relief, emergency medical care, and auxiliary or temporary clinics. Both scope and focus are considered in my principles of green bioethics.

In proposing four conservationist principles for green bioethics, I have attempted to take a comprehensive approach that accounts for the common good in many areas of health care, but targeted at medical developments, techniques, and procedures. I propose that green bioethics can move the medical industry towards sustainability through four principles: 1) a general allocation of medical resources should occur before special interest access, 2) current human needs should take priority over current human wants, 3) simple medical treatments should normally be chosen before complex ones and, 4) the common good should drive health care instead of financial profit. These principles address conservation in the medical industry in a coherent and specific manner, yet a few considerations are in order at the outset of this project.

c. Considerations

My principles are symbiotic. Many of them intersect with others. They are not

meant as a definitive test of the sustainability of a particular medical development, technique, or procedure. Neither would I propose that any specific medical development, technique, or procedure meet all four principles to be “green.” These are, after all, *principles*, not rules. On the other hand, adherence to one or two of these principles alone does not guarantee a sustainable medical development, technique, or procedure. Green bioethics also welcomes, and dialogs with, many other disciplines.

Interdisciplinary dialogue is consonant with Jenkins’ points of convergence that lead to practical strategies for conservation. Modern Christian theology invites dialogue from those of different backgrounds to form consensus around social issues. Pope Francis recently spoke on the need for an expansive conversation on the environment stating, “The gravity of the ecological crisis demands that we all look to the common good, embarking on a path of dialogue.”³¹⁴ This dissertation is meant as one platform to spur action, parallel to other dissertations of the sort,³¹⁵ and other projects that will be formed while my work is being disseminated.

It should be noted that, at this time, the vast majority of medical developments, techniques, and procedures have yet to be assigned carbon footprints.³¹⁶ The health care industry is simply too enormous to accurately compute each carbon footprint of every medical development, technique, and procedure. I am aware of this limitation in data and

³¹⁴ Francis, *Laudato Si’*, 201.

³¹⁵ Mary Rowell, *Toward a New Paradigm for Bioethics: Ecological and Theological Contributions* (Ph.D.) dissertation (University of Durham, 2005); Jason Lee Fishel, *The Green Staff of Asclepius: Envisioning Sustainable Medicine* (Ph.D.) dissertation (University of Tennessee, 2014).

³¹⁶ However, the West Midlands Cancer Intelligence Unit pioneered the use of cancer registry data along with GIS (Geographical Information Systems) to calculate the carbon emissions associated with treating breast cancer. They report, “Data comparisons from 1999 and 2004 showed that there has been a 214% increase in total car miles travelled which equates to over 400 tonnes of carbon associated with radiotherapy treatment in the West Midlands. Looking at patient and visitor mileage, and therefore carbon, will prove to be a useful tool in the designing of low carbon patient pathways.” National Health Services Sustainable Development Unit, *Saving Carbon, Improving Health: NHS Carbon Reduction Strategy for England* (London: NHS Sustainable Development Unit, 2009), 67.

therefore will not be relying on a “carbon capping” mentality that supposes there is a set amount of carbon that can safely be released (but not more). Instead, I use the principles of green bioethics—which will be thoroughly explained in chapters three through six—to guide conservation for several reasons.

First, a carbon capping mentality has the potential to relegate environmental ethics to the carbon number associated with a given item. Ultimately, this absolves individuals from thoughtful consideration and inner motivation for conservation. Michael S. Northcott argues, “markets in carbon are idols that legitimate the continuation of a consumptive industrial economy and the continuing sacrifice of the common goods of a stable climate and a livable earth for future generations.”³¹⁷ Simply identifying a carbon number and then declaring an item “sustainable” or “not” is reductionistic. Nonetheless, carbon assessment does provide a quantifiable measure of environmental impact.

Therefore, second, while we wait for the inevitable carbon calculation of individual medical developments, techniques, and procedures, we can still maintain that carbon impact is partially determined by country of locale, thus certain health care systems are more sustainable than others. For instance, in 2011 China emitted an average of 6.5 metric tons per capita, while the U.S. produced nearly three times that amount at 17.62 tons per capita.³¹⁸ The total country expenditure of carbon was about the same for both countries, yet the higher per capita footprint indicates disproportionate use of resources by individuals and corporations within the country.

When buildings, energy, food, medical devices, drugs, and follow-up care are all accounted for, the very nature of American hospitals are more carbon intensive than those

³¹⁷ Michael S. Northcott, “The Concealments of Carbon Markets and the Publicity of Love in a Time of Climate Change,” *International Journal of Public Theology* 4, no. 3 (2010): 294–313, at 303.

³¹⁸ Union of Concerned Scientists, “Each Country’s Share.”

in other countries, and much more carbon intensive than alternatives to medical intervention in the first place. Francis believes, “Reducing greenhouse gases requires honesty, courage and responsibility, above all on the part of those countries which are more powerful and pollute the most.”³¹⁹ Thus, it is appropriate to target the United States health care system in particular, even if we do not know the exact carbon impact of a specific prescription.

Third, because green bioethics is not the highest form of morality—as indicated in this chapter—my suggestions are pertinent not merely because they will save resources, but also because extending sustainable health care to all is a priority to serve the common good. Claiming that the theological concept of the common good—understood as individual flourishing in a just society—must take priority over green bioethics escapes the trap of refusing medicine that will extend or preserve life in order to rid the earth of carbon-emitting humans. While we cannot let the profligate carbon emissions of the medical industry take on “the harmless aspect of the familiar,”³²⁰ it would be a grave injustice to deny medicine simply because humans are environmental liabilities.³²¹

The United States Conference of Catholic Bishops recognizes that “any successful strategy must reflect the genuine participation and concerns of those most affected and least able to bear the burdens.”³²² This requires that the common good direct moral decision-making. It is widely recognized that “so long as we behave as only independent,

³¹⁹ Francis, *Laudato Si'*, 169.

³²⁰ Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962). 20.

³²¹ However, when health care adheres to the principles of green bioethics, there are many successful ways to *prevent* new humans from being born and *mitigate* the carbon output of current humans, all within the bounds of ethics.

³²² United States Conference of Catholic Bishops, “Plea.”

rational, free-enterprisers” we are locked in a system of “fouling our own nest.”³²³ Yet, the tragedy of the commons is counterbalanced by orientation towards the common good.

VI. Conclusion

John Locke argued that “God has given us all things richly, 1 Tim. 6:17”³²⁴ and therefore “the plenty of natural provision...(must be) keeping within the bounds, set by reason, of what might serve for his use.”³²⁵ Yet humans have violated this law, laid down from the beginning of time. The unrestricted capabilities of humankind have dominated the habitats of other creatures in an exploitative way. Benedict XVI believed that the environmental crisis “challenges us to examine our life-style and the prevailing models of consumption and production, which are often unsustainable from a social, environment, and even economic point of view.”³²⁶ Environmental bioethics has begun the work of addressing conservation in the medical industry.

In 2005, Sister Mary Rowell wrote her dissertation on Catholic Environmental Bioethics entitled, *Toward a New Paradigm for Bioethics: Ecological and Theological Contributions*. She drew on various Catholic writers to support the fusion of ecology and bioethics in Catholic theology. In particular, Rowell argued that Catholic Social Teaching provided ample rationale for connecting ecology and bioethics and offered Lisa Sowle Cahill’s 2004 book, *Bioethics and the Common Good*, as a preliminary paradigm for environmental bioethics “in theory and in practice.”³²⁷ Here, Cahill took a comprehensive view of the common good that included ecological concerns. Cahill asserts, “individual

³²³ Garret Hardin, “The Tragedy of the Commons,” *Science* 162, no. 3859 (1968): 1243-1248, at 1245.

³²⁴ John Locke, *Second Treaties of Government*, 20. These bounds are established by 1. how much one can use before it spoils and 2. whatever one has mixed their own labor with, in order to claim it as property.

³²⁵ *Ibid.*, 21.

³²⁶ Benedict XVI, *World Day of Peace Message*, 11.

³²⁷ Rowell, *Toward a New Paradigm for Bioethics*, 245.

life and health now must be seen in the perspective of the common good... of all human societies and of life on the planet.”³²⁸ This vision of the common good as a foundation for bioethics, and the urgency of the environmental crisis lead towards a practical strategy for conservation: green bioethics.

Through the consensus of many Christian theologies, it is apparent that the common good is an appropriate and thick ethical foundation for the principles of green bioethics. The common good will remain the foundation of the next four chapters, as I argue for environmental sustainability in medical developments, techniques, and procedures. It is the task of the next chapter to outline the first principle of green bioethics. Chapter three will examine the global distribution of health care resources and argue that general allocation of medical resources should occur before special interest access.

³²⁸ Cahill, *Bioethics and the Common Good*, 9.

CHAPTER 3

General Allocation of Medical Resources before Special Interest Access: Distributive Justice

I. Introduction

Chapter two laid the foundation for points of convergence around the common good and proposed green bioethics as a practical strategy for conservation in the medical industry. The remainder of the dissertation will develop the four principles of green bioethics from a theological perspective, oriented towards resource conservation, and in support of the common good.

The first principle for green bioethics—general allocation of resources should precede special interests: distributive justice—immediately locates the realm of moral concern to the entire world. Distributive justice entails mitigating the gaping disparities in health care access. This is done when a base level of medical care (general allocation of resources, including health care and doctors) is available and accessible for all people before some, i.e. the medical elite, utilize medical care (including health care and doctors) that does nothing to cure, treat, or prevent diseases (special interest access). This principle satisfies the concern of ecologists regarding our limited resources and global medical workers who recognize the need for health care worldwide. Ecology and bioethics meet together in distributive justice in health care in the following ways.

First, instead of utilizing scarce resources for the multiplicity of desires of the privileged few, the first principle of green bioethics conserves resources by providing life sustaining health care for the many. Yet, medical access includes both health care resources and health care providers. Therefore, second, prioritizing the concentration of physicians delivering basic health care will reduce intellectual waste, distribute the

medical goods of society more equitably, and support a minimally decent existence for all people. Third, when doctors participate in primary health care instead of overspecialization, resources will be conserved in a manner befitting of environmental conservationism and human dignity.

I will start the chapter by exploring ethical and philosophical foundations. In particular, I will examine distributive justice and solidarity. Distributive justice is, in my estimation, the thickest articulation of justice and most in line with the common good and environmental conservation. Additionally, solidarity is tied to distributive justice, emphasizing the interpersonal aspect of distributive justice. I argue that the medical industry can reduce resource use if basic health care is provided for everyone before special interest access. Nonetheless, there are several logistical challenges to distributive justice in global health care.

In the third section of this chapter I address three major challenges to distributive justice. The first is the vast amount of unmet health care needs worldwide, which must be provided. Although there are numerous needs—such as access to sanitation and undernourishment—I will highlight water scarcity. Then I move from an overview of general unmet needs to specific unmet medical needs and address women's health care.

The second challenge to just health care is doctor distribution. Doctors are often drawn to well-paying urban areas and specialty medicine. Doctor misdistribution is further displayed in a lack of physicians and attending health care professionals in childbirth. The third challenge to distributive justice in the health care industry is medical priorities. Medical priorities encompass health care services and health care delivery, thus medical priorities brings together medical developments, techniques, and procedures with

the doctors who provide them. Currently, medical misprioritization is a major obstacle to distributive justice. I will use assisted reproductive technologies (ARTs) as a case study.

The resources required for natural and assisted reproduction highlight two extremes in distribution of medical resources. These poles are instructional for examining health care values, but should not be thought of as the only application for the first principle of green bioethics. In this chapter I will highlight women who plan a medically laborious pregnancy through assisted reproduction and utilize physicians and medical resources for an elective lifestyle treatment. On the other end of the medical spectrum are women who often cannot plan or avoid pregnancy and do not have doctors to attend to them in childbirth. The wide disparities in maternal health care indicate medical injustice, if we understand distributive justice as health care in service to the common good. Having thus acknowledged challenges to distributive justice in the health care industry, I will move to the penultimate section of my chapter, suggesting modes for distributive justice as resource conservation.

The final part of this chapter will appraise the first principle of green bioethics in practice. Distributive justice and resource conservation are apparent in two related initiatives that have redistributed health care resources to those without: telemedicine and teleclinics. Telemedicine has given the impoverished access to health care in remote parts of the world, while teleclinics have reduced the impact of carbon emissions by using digital medical consultations. Although these are green technologies that support the common good, they are not without objection. In telemedicine, for instance, potential ethical issues include inaccessibility and privacy. I will address these lingering questions

and concerns before moving on to my own suggestions for distributive justice as a means of sustainable medicine.

Using a subsidiarity approach, I will examine various levels of health care decision-making and suggest avenues for resource conservation through distributive justice. These—and other policy suggestions in chapters four, five and six—will be more likely to be effective when they are undertaken by democratic deliberation. Here, I offer my considered judgments on the issue as a jumping-off point for discussion. First, I argue that medical consumers in the developed world should voluntarily curtail their use of the medical industry by taking a virtuous approach to health care. In individual cases, supporting the common good entails temperate use of necessary medical resources. Next, I propose doctor redistribution through incentives, loan forgiveness, and policies that actively place doctors in underserved areas. Last, I argue that institutions utilize financial sharing plans to make resources distribution more equitable. I will conclude the chapter by reiterating the urgent need to conserve resources, uphold the common good, and ensure that health care is distributed justly.

There is not only one aspect of the medical industry that needs to be rehabilitated in order to secure distributive justice worldwide, but several aspects must come together to work on behalf of people living in medical deserts. Health care, doctors, and medical priorities must coalesce to secure distributive justice. Technology, policy, and personal responsibility must be aligned to support the common good in ways that will result in conserved resources. Jon Fuller and James Keenan note the intersectional nature of health care ethics. They aver, “when we attempt to broach the topic of justice not with the individual First World physician, but with the developing world public health official,

justice becomes not a remainder concept but rather, *the basic conceptual framework for the bioethical discussion*.³²⁹ Distributive justice is the first principle of green bioethics because with the medical industry—as with our planet—most resources are a zero-sum game. I now discuss the moral and philosophical foundations for this chapter: distributive justice and solidarity.

II. Ethical and Philosophical Foundations

Justice assumes relationality. Thomas Aquinas observes, “justice, as compared with the other virtues, direct(s) man in his relations with others because it denotes a kind of equality.”³³⁰ Justice cannot be exercised in isolation; it presupposes a social location or community. Although there are many theories of justice,³³¹ I claim that distributive justice, informed by Catholic theology, is the most flexible and concrete.

Justice as a theory is foundational to the first principle of green bioethics. I argue that distributive justice in allocation of medical resources is the clearest way in which the claims of the common good can be upheld while environmental sustainability is supported. At the same time, the virtue of solidarity—my second ethical foundation—is tied to justice. Solidarity reflects the “care” dimension of distributive justice, both of which are components of moral development.³³² I turn first to distributive justice.

A. Distributive Justice

One way to articulate and apply justice is distributive justice. Distributive justice

³²⁹ Jon Fuller and James Keenan, “Educating in a Time of HIV/AIDS: Learning from the Legacies of Human Rights, the Common Good, and the Works of Mercy,” in *Opening Up: Speaking Out in the Church*, Julian Filochowski and Peter Stanford, eds. (London: Darton Longman & Todd, 2005), 95-113, at 98. Emphasis mine.

³³⁰ Thomas Aquinas, *Summa Theologia* II-II 2nd ed. Fathers of the English Dominican Province, trans. Kevin Knight, ed. (Online Edition, 2008), q. 57 art. 1.

³³¹ Aristotle, *Politics*, Ernest Barker, trans. (Oxford: Oxford University Press, 1995), I. 2, 1253a; John Rawls, *A Theory of Justice* (Cambridge, MA: Harvard University Press, 1971), 3.

³³² Carol Gilligan, *In a Different Voice: Psychological Theory and Women's Development* (Cambridge, MA: Harvard University Press, 1982).

allocates resources with a view towards equality—however defined.³³³ From a theological perspective, distributive justice in health care encompasses all human beings in the world, with a strong preference and priority for the basic needs of the underprivileged. “Justice requires access to the basic human goods necessary for human life, well-being and society,”³³⁴ states Lisa Sowle Cahill. Elementary health care in developing countries therefore emerges as a fundamental good that must be provided to all people. Pope John Paul II declared, “It is a strict duty of justice and truth not to allow fundamental human needs to remain unsatisfied, and not to allow those burdened by such needs to perish.”³³⁵ Distributive justice makes health care available and accessible to all, without country or income as a prerequisite.

Indeed, the drastically impoverished circumstances and virtual inability to obtain basic health care make simple medical treatments, for the millions without, a relief service and not a luxury. “To condition the international reaction to any other natural or human-made disaster (such as earthquakes, floods, accidents or terrorism) on the victims being able to pay for the treatment... would rightly be considered a crime,”³³⁶ asserts the Catholic Archbishop of Dublin, Diarmuid Martin. Likewise, we ought not refuse basic health care to those who cannot pay for treatments and services. Indeed, in my recent travels to Ukraine I was dismayed to see the effects of a pay-for-service medical system

³³³ For instance, arithmetical equality; proportional equality, equality for the common good, etc. See David Hollenbach, “The Common Good as Participation in Community: A Theological/ Ethical Reflection on Some Empirical Issues,” Presented to the Center for Advanced Catholic Studies, University of Southern California (June 25-28, 2014): 1-33, at 15-18.

³³⁴ Lisa Sowle Cahill, “Germline Genetics, Human Nature, and Social Ethics,” in *Design and Destiny: Jewish and Christian Perspectives on Human Germline Modification*, Ronald Cole-Turner, ed. (Cambridge, MA: MIT Press, 2008), 145-166, at 150.

³³⁵ John Paul II, *On the Hundredth Anniversary of Rerum Novarum: Centesimus Annus* (1991), 34.

³³⁶ Diarmuid Martin, “Intervention by His Excellency Mons. Diarmuid Martin to the Plenary Council of the World Trade Organization on Trade-Related Aspects of Intellectual Property Rights,” *L'Osservatore Romano*, Weekly Edition in English (20 June 2001): 9-10: no. 3.

that ignored the health care needs of those without financial means. Many medical needs were unfulfilled despite gross human suffering. Yet justice points towards equitable distribution medical resources. At the same time, there appears to be a tension between equal distribution of medical resources and environmental conservation.

If everyone in the world consumed medical goods and services at the rate of the United States, there would be a drastic increase in resource use. “The sheer number of people struggling to live with almost nothing—coupled with the profound constraints of our already stressed ecosystems call into question our ability to achieve both sustainability and justice. We may have to ask which should have primacy,”³³⁷ warn environmental bioethicists Jessica Pierce and Andrew Jameton. Pierce and Jameton describe a view of distributive justice that assumes everyone must have the maximum amount of resources available to them. This account of justice places sustainability and medical distribution in competition with each other. However, justice that focuses on a minimum standard of care for all people enacts the claims of sustainability and distributive justice.

Instead of competing for primacy, sustainability and distributive justice are radically dependent on each other, or, as Pierce and Jameton say, “mutually reinforcing goals.”³³⁸ Sustainability and justice are compatible when general allocation of medical resources occurs before special interest access. In order for distributive justice to gain traction, ethicists must appeal to a second and complimentary concept. Solidarity reiterates the social nature of relationships between the individual and others within the common good. It is the second ethical foundation of this chapter, which I now turn to.

³³⁷ Jessica Pierce and Andrew Jameton, “Sustainable Health Care and Emerging Ethical Responsibilities,” *Canadian Medical Association Journal* 164, no. 3 (2001): 365-369, at 367.

³³⁸ Ibid.

B. Solidarity

Solidarity is another multifaceted concept, whose essence has surely been enacted throughout time, although the term did not appear in English until the mid-eighteenth century.³³⁹ Solidarity emerged in the academic discipline of sociology in the nineteenth century,³⁴⁰ and is well established in the lexicon of Catholic Social Thought.³⁴¹ Meghan Clark traces the use of the word “solidarity” in Catholic Social Thought to the Second Vatican Council’s Pastoral Constitution in the Church in the Modern World, *Gaudium et Spes* and describes the development of the teaching over the last fifty years. She describes, “beginning with Pope John XXIII, Vatican II, and Pope Paul VI, human rights and solidarity are introduced into the (Catholic) tradition, and quickly rise in prominence.”³⁴² Solidarity is predicated on the recognition of interdependence³⁴³ and promoted in Catholic social teachings on economics, authentic development, community, peace building, and health care. Solidarity within health care is the objective of this section.

It is well documented that major disparities in health, quality of life, income and political opportunities exist worldwide.³⁴⁴ Theologians are particularly erudite about articulating these differences in health care access. The United States Conference of Catholic Bishops insists, “the virtue of solidarity and (Catholic) teaching on the option

³³⁹ Merriam-Webster Dictionary, “Solidarity,” n.d., at <http://www.merriam-webster.com/dictionary/solidarity>

³⁴⁰ Emile Durkheim, *The Division of Labour in Society* (New York: The Free Press, 1997), 17, ff. The original publication is dated 1893.

³⁴¹ For example, see United States Conference of Catholic Bishops, “Called to Global Solidarity: International Challenges for U.S. Parishes,” (1997), at <http://www.usccb.org/issues-and-action/human-life-and-dignity/global-issues/called-to-global-solidarity-international-challenges-for-u-s-parishes.cfm>

³⁴² Meghan Clark, *The Vision of Catholic Social Thought: The Virtue of Solidarity and the Praxis of Human Rights* (Minneapolis, MN: Fortress, 2014), 5.

³⁴³ Gerald J. Beyer, “The Meaning of Solidarity in Catholic Social Teaching,” *Political Theology* 15, no. 1 (2014): 7-25, at 15.

³⁴⁴ United Nations, *The Millennium Development Goals Report* (New York: The United Nations, 2013). Hereafter: *MDG*.

for the poor and vulnerable require us to measure our health system in terms of how it affects the weak and disadvantaged.”³⁴⁵ Solidarity underscores discrepancies in global health for the purpose of correcting them. Paul VI implored us to consider “The hungry nations of the world (who) cry out to the peoples blessed with abundance. And the Church, cut to the quick by this cry, asks each and every man to hear his brother’s plea and answer it lovingly.”³⁴⁶ This willingness to alleviate pain and promote flourishing is the essence of solidarity.

Solidarity begins with the prophetic call, which claims that we are all neighbors in a global village even if we are separated by geography and local cultures. It disavows an attitude that only looks after oneself, or one’s own family, to the exclusion of others. Erasmus (1466-1536) described a person who neglects his neighbor and goes about his own business, postulating that, if asked, the person might say, “I would... have stopped if any of it had pertained to me. Yet I have nothing in common with him who was harmed.”³⁴⁷ Emphasizing differences in order to absolve the self of responsibility neglects the larger similarities between all people. Instead, solidary accentuates similarities in order to build commonality.

Solidarity is an impetus for moving towards a more just system of health care in support of the common good. Church teachings on solidarity, when implemented, draw health care closer towards equal distribution of lifesaving resources, and further from practices that place some people squarely within medical access and others devastatingly

³⁴⁵ United States *Conference of Catholic Bishops*, “Resolution on Health Care Reform,” *Origins* 23 (1993): 89-102, at 97.

³⁴⁶ Paul VI, *Populorum Progressio: On the Development of Peoples* (1967), 3.

³⁴⁷ Erasmus, *Handbook of the Militant Christian*, trans. John P. Dolan (Notre Dame, IN: Fides Publishers, 1962), 132.

outside of it. Solidarity across the world—through policy implementation, for example—can begin to remedy these inequalities.

Karen Peterson-Iyer suggests that solidarity can be demonstrated through effective policies that reduce vulnerability in health care. She suggests, “a focus on the common good demands that policymakers lift their eyes beyond the horizon of individual choice to consider the broader well-being of the larger community and its many members and groups.”³⁴⁸ In this case, solidarity would recognize that all humans have needs and requirements for physical health, and are also dignified members of a global community. Hence, the first principle of green bioethics includes distributive justice and solidarity as ethical foundations. If implemented, the benefits to the planet and its inhabitants will be innumerable. If neglected, both people and planet are imperiled.

Mary Rowell points out that for bioethicist Daniel Callahan, “a bioethic that draws its inspiration from ecology is necessarily a communitarian ethic; for ecology is fundamentally concerned with the nature of relationships; relationships between organisms with one another and with their environment.”³⁴⁹ Environmental sustainability should be the *modus operandi* of the medical industry.

Health care distribution is not incompatible with environmental conservation when distributive justice is maintained. But, in order to enact distributive justice, rich countries that monopolize natural resources must stand in solidarity with developing nations, demonstrating that all human life is valuable. As a counternarrative to resource consumption and individualism, distributive justice and solidarity are required. Current

³⁴⁸ Karen Peterson-Iyer, “Pharmacogenomics, Ethics, and Public Policy,” *Kennedy Institute of Ethics Journal* 18, no. 1 (2008): 35-56, at 46.

³⁴⁹ Mary Rowell, *Toward A New Paradigm For Bioethics: Ecological and Theological Contributions* (Ph.D.) dissertation (University of Durham, 2005), 88. See Daniel Callahan, “Principlism and Communitarianism,” *Journal of Medical Ethics* 29, no. 5 (2003): 287-291, at 287-288.

impediments to distributive justice translate to policies that tarry. In the next section I explore three challenges to distributive justice in health care.

III. Challenges to Global Health Distributive Justice

There are many challenges to securing distributive justice in the health care industry. The urgency of this matter cannot be discounted. While satisfied Americans pollute the environment with their demands for unnecessary treatments, many ecological disasters impact poorer countries that neither have the material resources, nor the political resources, to defend themselves against climate change related hazards. Jessica Pierce and Andrew Jameton ask, “Can industrialized countries in the northern hemisphere support their high levels of health care consumption without exploiting or ignoring widespread poverty, environmental degradation, ill health and suffering in poorer regions of the world?”³⁵⁰

In this section I examine three challenges to global health distributive justice. First, I discuss unmet health care needs worldwide, with an emphasis on women’s health care needs. Martha Nussbaum notes that, in many parts of the world, women “have not chosen the lives they lead, since frequently they have no conception, or a deficient conception, of alternatives, and a confined list of possibilities.”³⁵¹ Women’s health is often drastically affected by numerous, unplanned pregnancies, which relegate their lives to medical hardship. A second challenge to distribute justice in health care is doctor misdistribution. Women are again doubly affected by a lack of primary care physicians and a lack of maternity doctors. A third challenge to distribute justice is misprioritization of health care offerings. I maintain the focus on women by detailing assisted reproductive

³⁵⁰ Pierce and Jameton, “Sustainable Health Care,” 367.

³⁵¹ Martha Nussbaum, “Aristotelian Social Democracy,” in *Liberalism and the Good*, R. Bruce Douglass, Gerald M. Mara, and Henry S. Richardson, eds. (New York: Routledge, 1990), 203-252, at 238.

technologies (ARTs) as a cause of global health care injustice. ARTs are not the only technological offering that disrupts justice, but they are high profile and controversial. Use of ARTs are increasing, and with them ethical issues of use and access. Thus they will remain a feature of health care ethics for years to come, and will need to be reassessed as growing interest in environmental conservation, justice, and poverty coalesce. Challenges to health care allocation are numerous, but recognizing these disparities is the first step towards just distribution. Thus, I begin with a picture of the current medical landscape through detailing some unmet health care needs worldwide. Many unmet health needs in developing countries could be supplied fairly easily through more equitable distribution of resources.

A. Unmet health care needs

There are numerous health issues indicative of unmet health needs in the developing world such as disease burdens due to violence,³⁵² infant mortality,³⁵³ lack of access to toilets,³⁵⁴ migratory displacement,³⁵⁵ and nutritional deficiencies.³⁵⁶ The so-called “diseases of poverty,” such as respiratory infection, HIV/AIDS, diarrheal diseases, tuberculosis, and malaria continue to plague those living in low-income countries.³⁵⁷ In recent decades, these threats to health have not endangered the vast majority of citizens in the developed world, yet they remain a hindrance to flourishing in developing countries. Although these are all significant concerns, I focus on water scarcity as an example of a general unmet need, foundational to life and health.

³⁵² World Health Organization, *Global Health Risks*, 8.

³⁵³ The United Nations, *MDG* 2009, 24.

³⁵⁴ *Ibid.*, 5.

³⁵⁵ Joint United Nations Programme on HIV/AIDS (UNAIDS) *Gap Report* (Geneva: UNAIDS, 2014), 157-169.

³⁵⁶ The United Nations, *MDG* 2009, 6.

³⁵⁷ World Health Organization, *Diseases of Poverty and the 10/90 Gap* (London: International Policy Network, 2004).

1. Water Scarcity

Lack of access to clean water is a considerable unmet need worldwide, which indicates a challenge to distributive justice. Christians believe that the goods of creation are for the benefit of all people (“the universal destination of goods”) and resources must be allocated to satisfy the needs of everyone inhabiting the earth. Theologian Christiana Peppard declares, “access to fresh water is a fundamental human right.”³⁵⁸ Water is a right because it is a precondition to human health and flourishing.

Water is foundational to human existence. Without it, we cannot stay hydrated and will die. Clean water is necessary for cooking and cleaning food. Water-borne illness and, concomitantly, lack of sanitation, affect children and the elderly disproportionately.³⁵⁹ Water is not “medicine,” but it is a basic health need. Growing recognition of water as an essential—and scarce—commodity is a global concern. Yet the distribution of potable water is not uniform across the world.

Almost one fifth of the world’s population, about 1.2 billion people, lives in areas where water is actually scarce.³⁶⁰ Water is one of the most essential elements for life, but reservoirs are shrinking due to climate change. As global temperatures heat up, droughts ravage landscapes previously flowing with water. This reduces crop yield and can cause famine. In some cases, water gets disconnected from pipes illegally or arbitrarily.³⁶¹ Statistics on water scarcity often do not account for temporary water scarcity, or accessibility of water for wandering people, refugees, migrants, and those living in

³⁵⁸ Christiana Z. Peppard, *Just Water: Theology, Ethics, and the Global Water Crisis* (Maryknoll, MD: Orbis, 2014), 186.

³⁵⁹ United Nations Human Rights, *The Right to Water*, Fact Sheet No. 35 (Geneva: United Nations, 2010), 21.

³⁶⁰ United Nations, “Water Scarcity,” n.d. at www.un.org/waterforlifedecade/scarcity.shtml

³⁶¹ United Nations Human Rights, *The Right to Water*, 1.

“informal” settings. In addition to geographical water scarcity, there are disparities in the quality of available water.

The United Nations has determined that satisfying the basic human right to water includes six characteristics. Water must be sufficient, safe, of drinking quality, acceptable in color and odor, physically accessible, and affordable.³⁶² More and more, the quality of local water is diminished. Previously clean streams are polluted as industrialization spews noxious waste into rivers and lakes. Since many people utilize local water for agricultural and domestic activities, they risk contaminating themselves and their families. Pope Francis calls us to recognize that “every day, unsafe water results in many deaths and the spread of water-related diseases.”³⁶³ Recently, in the United States, hydraulic fracturing, or “fracking,” has tainted water, increased levels of radium bioaccumulation in local supplies, and rendered tap water dangerous to drink.³⁶⁴

It has been pointed out that wholesale bottled water sale in 2008 grossed 11.2 billion dollars. This number was “nearly identical” to the amount of money the Millennium Development Goals estimated would be needed to supply clean water worldwide.³⁶⁵ Distributive justice reiterates the fact that humankind is not facing a shortage of resources, but rather a mismanagement of resources.

“Universal solidarity represents a benefit as well as a duty,”³⁶⁶ declares Benedict XVI. It is the duty of those who are better off to ensure that health care needs are met for

³⁶² Ibid., 4.

³⁶³ Francis, *Laudato Si': On Care for Our Common Home* (Rome: Vatican Press, 24 May 2014), 29.

³⁶⁴ Nathaniel R. Warner, Sidney A. Christie, Robert B. Jackson, and Avner Vengosh, “Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania,” *Environmental Science and Technology* 47, no. 20 (2013): 11849-11857.

³⁶⁵ Mark J. Allman, “Theology H2O: The World Water Crisis and Sacramental Imagination,” in *Green Discipleship: Catholic Theological Ethics and the Environment*, Tobias Winright, ed. (Winona, MN: Anselm Academic, 2011), 379-406, at 385.

³⁶⁶ Benedict XIV, *World Day of Peace Message: If You Want To Cultivate Peace, Protect Creation* (2010), 8.

all people. While the medical industry could hardly be expected to provide water to those outside of hospitals (although they surely provide clean water to patients in the hospital), there are other unmet medical needs in the developing world that are clearly within the bounds of the medical industry. A second example of an unmet health need is women's reproductive health.

2. Women's unmet health care needs

Health care needs a part of the human experience. For women, these necessities take on specific contours related to embodiment in the female form. The potential for menstruation, pregnancy, lactation, birth, and menopause are unique to the female sex. In particular, women's reproductive care often represents one overarching source of various medical needs, yet women's health care is underserved in certain parts of the world.

Women's reproductive care demonstrates discrepancies in distributive health care justice and must be remedied for the following reasons.

Women are often marginalized for their ability or inability to procreate; women are subject to sexual violence in a way men are not; sexual assault has become a tactic of war,³⁶⁷ and even if a woman never gives birth, she lives her life aware of the power and hazards of fertility. Furthermore, women have less control in the male-dominated medical industry, and are still fighting for the right to safe, affordable, and easily accessible contraception.³⁶⁸ In many cases the ability to control fertility is positively correlated with the prospects of one's life, including financial stability, education, and job

³⁶⁷ Margaret Farley, "Justice, Faith, and HIV/AIDS in Africa," in *Calling for Justice Throughout the World: Catholic Women Theologians on the HIV/AIDS Pandemic*. Mary Jo Iozzio, Elsie M. Miranda, and Mary M. Doyle Roche, eds (London: Bloomsbury Publishing USA, 2009), 45-52 at 47.

³⁶⁸ Cristina Richie, "Voluntary Sterilization for Childfree Women: Understanding Patient Profiles, Evaluating Accessibility, Examining Legislation," *The Hastings Center Report* 43, no. 6 (2013): 36-44; Piers Benn and Martin Lupton, "Sterilization of Young, Competent, and Childless Adults," *BMJ* 330, no. 7503 (2005): 1323-1325; Rebecca M. Kluchin, *Fit to be Tied: Sterilization and Reproductive Rights in America, 1950-1980* (New Brunswick, NJ: Rutgers University Press, 2009).

opportunities.³⁶⁹ Yet, in many contexts, the ability to manage fertility is still a luxury and multiple pregnancies tie women to gender-essentialist models of subservience, patriarchy, and economic hardship.

“Across the globe women’s wellbeing is threatened by early or late childbearing and substandard care during pregnancy and childbirth. In some developing regions infertility is as much as three times higher than in developed countries due to inadequate healthcare, unsafe abortions, undiagnosed or untreated pelvic infections, and botched delivery.”³⁷⁰

So-called “unsafe” sex—either with a committed partner or as a result of sex trafficking³⁷¹—can result in contracting the human immunodeficiency virus (HIV); cervical cancer that develops from human papillomavirus (HPV); and unintended conception that ends in abortion, miscarriage, or pregnancy. Note that our language of “unsafe” or “unprotected” sex is equivalent to intercourse without contraception—usually a condom. This correctly concretizes the dangers of sexually transmitted diseases (STDs) and pregnancy that women face in every sexual encounter.

The United Nations reported that in 2010 there was an average of 210 maternal deaths per 100,000 live births, with parts of Africa experiencing 500 deaths per 100,000 live births.³⁷² Women around the world—especially adolescents—are desperate for safe deliveries.³⁷³ Young women ages 15-19 are at risk for maternal mortality at an average of

³⁶⁹ Cristina Richie, “Population Growth, Birth Control, and Income,” *Population Press* 17, no. 3 (2011): 14-15; Jane Lawler Dye, *Fertility of American Women: 2008, Population Characteristics* (Washington, DC: U.S. Census Bureau, November 2010).

³⁷⁰ Anne Donchin, “In Whose Interest? Policy and Politics in Assisted Reproduction,” *Bioethics* 25, no. 2 (2011): 92-101, at 100.

³⁷¹ Teresa Delgado, “This is My Body... Given for You: Theological Anthropology Latina/mente,” in *Frontiers in Catholic Feminist Theology: Shoulder to Shoulder*, Susan Abraham and Elena Procaro-Foley, eds. (Minneapolis: Fortress Press, 2009), 25-47, at 27.

³⁷² The United Nations, *MDG* 2009, 28.

³⁷³ For photographs highlighting the disparities in parturition globally, see David Rosenberg, “What Giving Birth Looks Like Around the World,” *Slate*, 5 September 2014, at

52 deaths per 100,000 births. In parts of Sub-Saharan Africa, the numbers reach into the hundreds.³⁷⁴ A woman's lifetime risk of maternal death is 1 in 3,800 in developing countries, compared to 1 in 150 in developed countries.³⁷⁵ For women living in the developing world who do not have access to basic health needs, even the most common of experiences—pregnancy and childbirth—can be fatal.

The World Health Organization (WHO) estimates that 80% of all maternal deaths are traced to severe bleeding, infections, high blood pressure during pregnancy and unsafe abortion.³⁷⁶ Moreover, the United Nations contends that there is a gap between a women's desire to delay or avoid having children and her actual use of contraception. In parts of Africa, contraceptive use is as low as 12%, attesting to a lack of medical resources for women's health. When unprotected sex is combined with the threat of HIV transmission, the stakes for fatalities are even higher.³⁷⁷ Outcomes of conception and pregnancy-related complications are responsible for the second highest percentage of disability-adjusted life years (DALYs)—a measurement of how disease and injury reduce lifespan—for women in all countries, with the disproportionate burden falling on low-income countries.³⁷⁸

The frightening prospect of another unplanned, unscheduled, and perhaps undesired pregnancy in the developing world, where approximately 800 women die from preventable causes related to pregnancy and childbirth every day,³⁷⁹ was compared by

http://www.slate.com/blogs/behold/2014/09/05/alice_proujansky_birth_culture_takes_a_look_at_birth_around_the_world_photos.html

³⁷⁴ United Nations, *MDG* 2009, 33.

³⁷⁵ World Health Organization, "Maternal Mortality," May 2012, at, <http://www.who.int/mediacentre/factsheets/fs348/en/index.html>

³⁷⁶ *Ibid.*

³⁷⁷ United Nations, *MDG* 2009, 29.

³⁷⁸ World Health Organization, *Global Health Risks*, 10.

³⁷⁹ *Ibid.*

Evangelical theologian Moyer Hubbard to the situation of women in the Ancient Near East, where women prayed fervently to any deity that might save them from death “on their backs.”³⁸⁰

For these reasons feminist bioethicist Barbara Andolsen asserts, “every health care issue should be analyzed in terms of its impact on women. There is often a gender justice dimension to questions about what gets defined as a disease or medical crisis, how research funds are allocated, and which treatment modalities are offered to which patients.”³⁸¹ Those in the developed world must take on the responsibility of helping women to secure basic health care, in alignment with distributive justice. “The concept of the common good is qualified by the virtue of solidarity and a commitment to prioritize the welfare of those who are most marginalized in any society or situation,”³⁸² contends Lisa Sowle Cahill. Women in certain regions of the developing world are at a double disadvantage for unmet medical needs by dint of their geographical location and gender.

The WHO reports factors that “prevent women from receiving or seeking care during pregnancy and childbirth (include) poverty, distance, lack of information, inadequate services and cultural practices.”³⁸³ The matters of women’s health care and distributive justice are complicated because of the biological and systemic connection between fertility, sex, sexuality, and societal power. Traditional cultures may resist

³⁸⁰ Moyer Hubbard, “Kept Safe through Childbearing: Maternal Mortality, Justification by Faith, and the Social Setting of 1 Timothy 2:15,” *Journal of the Evangelical Theological Society* 55, no. 4 (2012): 743-762. The phrase “on their backs” is an allusion to the U.S. feminist journal *Off Our Backs*, published from 1970 to 2008. *Off Our Backs*, n.d., at <http://www.offourbacks.org/>

³⁸¹ Barbara Andolsen, “Elements of a Feminist Approach to Bioethics,” in *Readings in Moral Theology no. 9: Feminist Ethics and the Catholic Moral Tradition*, eds. Charles Curran, Margaret Farley, and Richard McCormick (New York: Paulist Press, 1996), 341-382, at 376.

³⁸² Cahill, “Germline,” 153.

³⁸³ World Health Organization, *Global Health Risks*, 10.

granting women access to contraception or altering harmful practices like infibulation.³⁸⁴

Nevertheless, women's maternal health is an essential aspect of health care. In order to mitigate the disparities in unmet health needs, distribution of health care professionals must be analyzed as well. Doctor distribution is a second challenge to global health care distribution, which I now assess.

B. Doctor misdistribution

Health care workers and bioethicist are not unaware of the medical needs of others. Nor are they ignorant about the misdistribution in resources. Those attuned to these matters of justice inquire, "Is there not an obligation to our fellow humans to provide housing, sanitation and pure water to the many? The global implications of the misdistribution of humanitarian resources must eventually be confronted."³⁸⁵ Basic medical needs like clean water, vitamins, certain pain alleviating drugs, first aid bandages, and barrier forms of contraception do not require physicians for distribution or instruction. These forms of medical care can be brought by volunteers with minimal training in medicine—or no training in medicine at all!

However, medical *care* must be delivered by trained professionals. Medical doctors, nurses, emergency medical technicians (EMTs), midwives and health care paraprofessionals can all be enlisted in the service of tending to the sick and promoting health. Yet, doctors are not dispersed evenly throughout the world. Accessing essential health care is virtually impossible for some people in the world. The *American Journal of Public Health* indicates that "staffing shortages, lack of specialist training in poorer

³⁸⁴ Lilian Dube, "Genital Modification: Expressions of Troubling Masculinities," in *Redemptive Masculinities: Men, HIV, and Religion*, Ezra Chitando and Sophie Chirongoma, eds. (Geneva: WCC Publications, 2012), 373-396.

³⁸⁵ C. Ben Mitchell, Edmund D. Pellegrino, Jean Bethke Elstain, John G. Kilner and Scott B. Rae, *Biotechnology and the Human Good* (Washington, DC: Georgetown University Press, 2007), 125.

countries, and the financial lure of the West have resulted in the migration of physicians and nurses from the mostly developing source countries to the more developed host or destination countries.”³⁸⁶ This is confirmed by data from the World Health Organization.

The World Health Organization has examined doctor density globally and concluded that people living in developing countries often face a primary care physician (PCP) shortage.³⁸⁷ In many African countries, there are .03 doctors per 1,000, or 3 doctors per 100,000 people. In contrast, the United States has 2.3 doctors per 1,000 people, or 230 doctors per 100,000.³⁸⁸ Fewer doctors translate to worse health outcomes for potential patients, diminished lifespans, and risk of living with an acquired disability. This section examines factors leading to general doctor misdistribution, and maternal doctor misdistribution, as a second challenge to global health care distribution.

1. General doctor misdistribution

Doctor misdistribution is a result of numerous “push” and “pull” factors. In some cases, physicians are pushed out of practice in a specific location because of a lack of opportunities to utilize their training where they live. In other cases, doctors are pulled towards higher paying jobs. The result of this “brain drain” is that certain areas have a sufficient or surplus number of physicians required for the population, while other regions have less. “There is growing global concern about the large variation among the world’s nations in the availability of physicians and the negative impact of the scarcity of

³⁸⁶ Onyebuchi A. Arah, Uzor C. Ogbu, and Chukwudi E. Okeke, “Too Poor to Leave, Too Rich to Stay: Developmental and Global Health Correlates of Physician Migration to the United States, Canada, Australia, and the United Kingdom,” *American Journal of Public Health* 98, no. 1 (2008): 148-154, at 148.

³⁸⁷ World Health Organization, “Density of Doctors, Nurses and Midwives in 49 Priority Countries,” *WHO Global Atlas of the Health Workforce*, August, 2010, at http://www.who.int/hrh/fig_density.pdf?ua=1

³⁸⁸ NationMaster, “Health Statistics > Physicians > per 1,000 people (most recent) by country,” 2015, at http://www.nationmaster.com/graph/hea_phy_per_1000_peo-physicians-per-1-000-people

physicians on health equity (and) health disparities.”³⁸⁹ I discuss how general doctor misdistribution is affected by incentives to work in urban locations (a “push” factor) and financially lucrative specializations (a “pull” factor).

General practitioners and specialists tend to “work mainly in the cities”³⁹⁰ where people have stable financial resources. Conversely, there are fewer doctors in destitute regions because they cannot earn a decent living. The migration of doctors from rural to urban areas, and from poor countries to rich nations, is sometime called “fatal flows.” The result of this shortage of physicians in these areas is seen in a number of deleterious health effects.

Without nearby clinics, children go without medical care. The UN found that “children born into the poorest households are almost twice as likely to die before age five as their wealthiest counterparts.”³⁹¹ A portion of these deaths can be attributed to a lack of medical care due to doctor distribution. Physician migration challenges distributive justice, but in order to “design effective policies, policymakers need to understand the nature and context of the differentials in physician migration.”³⁹² Both push and pull factors must be attended to. In addition to working in an urban environment with the opportunity to make a living, overspecialization has been identified as a second cause of doctor misdistribution worldwide and within countries.³⁹³

Health services are usually regressive. It was documented in the *Lancet* that “the distribution of health care expenditures on services other than primary care—mostly

³⁸⁹ Mullan Fitzhugh, “The Metrics of the Physician Brain Drain,” *New England Journal of Medicine* 353, no. 17 (2005): 1810-1818, at 1811.

³⁹⁰ Suwit Wibulpolprasert, “Inequitable Distribution of Doctors: Can it be Solved?,” *Human Resource Health* 3, no. 1 (1999): 2-22, at 6.

³⁹¹ United Nations, *MDG 2009*, 26.

³⁹² Arah et al., “Too Poor to Leave, Too Rich to Stay,” 151.

³⁹³ Wibulpolprasert, “Inequitable Distribution of Doctors,” 2.

higher-level services—(are) skewed toward the best-off.”³⁹⁴ Intellectual and physical resources are funneled into niche medical jobs that provide non-lifesaving, lifestyle procedures to those in the middle and upper class. Doctors who can provide these services are paid very well, making these positions more appealing. Because a majority of medical care is premised on fees-for-services, doctors are pulled towards providing elective treatments, even sometimes alongside general care, such as teeth whitening in the same dentist office that provides teeth cleaning. A critical assessment of the motivation for offering these procedures (i.e., to heal, or to make a profit) must be undertaken and will be more fully elaborated in the next three chapters.

On the surface it appears that non-lifesaving treatments like otoplasty (cosmetic ear surgery), bariatric surgery, Lasik eye surgery, and assisted reproductive technologies are examples of high level, superficial, or expensive services offered to those who have access to disposable income. Upon further investigation, we can nuance the assessment of elective medical procedures by stating that they may have very little intrinsic harm, but when many people use them, and with greater frequency, there is aggregate harm in the form of resource depletion.³⁹⁵ It is beyond the scope of this project to detail all of the salient philosophical, racial, feminist, religious, social, political, sociological and psychological critiques of the proliferation of these procedures. These objections (and arguments in favor of them) must be undertaken by others. Here, it can be acknowledged that the expenses for these treatments are a lucrative source of income for physicians and investors, thus creating a draw to work in these areas of “medicine.”

³⁹⁴ Davidson R. Gwatkin, Abbas Bhuiya, and Cesar G. Victora, “Making Health Systems More Equitable,” *Lancet* 364, no. 9441: (2004): 1273-1280, at 1275.

³⁹⁵ See Anne Schwenkenbecher, “Is There an Obligation to Reduce One’s Individual Carbon Footprint?,” *Critical Review of International Social and Political Philosophy* 17, no. 2 (2014): 168-188, at 172.

For instance, the assisted reproductive technologies business grossed \$16.1 billion dollars in 2013, and is growing at a tremendous rate.³⁹⁶ With 443 reporting fertility clinics in the United States alone,³⁹⁷ ARTs are a booming business and a way for medical professionals to make immense amounts of money. Fertility clinicians who are trained in medicine are given large salaries that draw them to this branch of elective treatments. Ian Craft, director of the United Kingdom's Humana fertility unit,³⁹⁸ "revealed that in the late 1980s some practitioners were making over £500,000 annually from their infertility practice."³⁹⁹ Twenty years later salaries continue to soar and fertility clinics abound.

Working in a financially lucrative, but non-essential aspect of medicine is, of course, appealing to many people. When financial realities such as repaying medical school loans, families to support, and impending retirement in a country with a paltry social security net are present, the draw towards specialization in elective procedures is strong. At the same time, doctor misdistribution is also indicative of the way financial markets protect the interests of the wealthy few to the detriment of the common good. Suggestions for doctor participation in distributive justice will be provided in section four. Right now, I return briefly to the case of women's maternal care, focusing on doctor

³⁹⁶ BCC Research Market Forecasting, *Human Reproductive Technologies: Products and Global Markets*, 2013, at <http://www.bccresearch.com/market-research/healthcare/human-reproductive-technologies-hlc017d.html>

³⁹⁷ Statistics for 2010. Note this does not include non-reporting clinics. Center for Disease Control, "Assisted Reproductive Technology (ART): What is Assisted Reproductive Technology?," 14 November 2014, at <http://www.cdc.gov/art/whatis.html>

³⁹⁸ Humana "is the brand name for plans, products, and services provided by one or more of the subsidiaries and affiliate companies of Humana Inc." It is an international business. Humana Europe was appointed as a supplier for some NHS services for the U.K. in 2007, but no longer operates in the U.K. market. See Business Wire, "Humana Europe Chosen to Provide Support to United Kingdom's National Health Service," *Business Wire*, 5 October 2007, at <http://www.businesswire.com/news/home/20071005005621/en/Humana-Europe-Chosen-Provide-Support-United-Kingdoms>; Humana Europe, "Homepage," 2015, at <https://www.humana.com/europe/>

³⁹⁹ Frances Price, "The Management of Uncertainty in Obstetric Practice: Ultrasonography, In Vitro Fertilisation, and Embryo Transfer," in *The New Reproductive Technologies*, Maureen McNeil, Ian Varcoe, and Steven Yearley, eds. (London: Macmillan, 1990) 123- 153.

misdistribution.

2. Maternal doctor misdistribution

Physicians proficient in maternal health are needed worldwide. The World Health Organization has indicated that a ratio of 23 doctors, nurses, and midwives per 10,000 people is the minimum number necessary to deliver essential maternal and child health services. However, in 49 priority countries, 44 have less than the minimum number, with over 70% having less than 10 health care practitioners per 10,000.⁴⁰⁰ The lack of doctors attending to maternal care is devastating for women in impoverished circumstances. To compound the injustice, maternity care is not necessarily a highly technological endeavor, and could be provided with minimal investments. For millennia women have been giving birth without hospitals or doctors.⁴⁰¹ At the same time, even pre-industrial labors were assisted by community professionals like doulas or midwives. These birth attendants are absent in many births in the modern world.

In rural Africa, only 40% of maternal deliveries were attended by skilled health personnel in 2011. Worldwide, this translates to 46 million live births without adequate care.⁴⁰² A physician does not need to assist the birth of a child; a midwife or a trained labor and delivery nurse could attenuate maternal mortality and morbidity through her skills. Without trained professionals, women die unnecessarily in labor or suffer life-altering complications that could have been prevented. One of the reasons that women do not have sufficient health care professionals to attend to births is the under-use of existing

⁴⁰⁰ World Health Organization, "Density of Doctors," 2010, at http://www.who.int/hrh/fig_density.pdf?ua=1

⁴⁰¹ The "medicalization of pregnancy" is a reality in the developed world that should be viewed with a hermeneutics of suspicion. However, it is also a luxury that women in the developing world are forced to go without. Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford: Basil Blackwell, 1984).

⁴⁰² United Nations, *MDG* 2009, 29.

skilled workers.

In some large hospitals, women who have undertaken “midwifery preparation have not been able to utilize their skills even though the need for them exists.”⁴⁰³ These are lost opportunities for qualified workers—mostly female—to attend to those in underserved areas. Women are prevented from serving as birth attendants because of gender expectations that they should remain in the home, or, alternatively, are pushed out by professionalization and trends towards hospital births. The shortage of women’s medical care is at a critical level.

The global community must make strides to safely provide maternal care for the millions of women without. Because childbirth is so common the need to view it as a potentially medically dangerous endeavor is often overlooked. Taboos surrounding blood and birth also hinder many smaller villages from seeking maternal support.⁴⁰⁴ At the same time, it cannot be forgotten that maternal care benefits infants too. Benedict XVI called for, “a greater sense of intergenerational solidarity.”⁴⁰⁵ Maternal doctors link one generation to the next; a property of solidarity, to be sure.

To apply distributive justice to medical ethics, a general allocation of health care must be provided before special interest access. Current doctor misdistribution—by location and specialty—neglects just distribution around the world. Fundamentally, this is because of a number of factors ranging from individualist worldviews that put the self at the center of society, a drive to make as much money as possible, an economy that panders to those who can pay, and blindness to the plight of others in need. Of course,

⁴⁰³ Orvill Adams, *Round Table Discussion: Inequitable Distribution of Doctors: Can it be Solved?* (Geneva: World Health Organization), 26-28, at 27.

⁴⁰⁴ Hitomi Tonomura, “Birth-Giving and Avoidance Taboo: Women’s Body versus the Historiography of ‘Ubuya,’” *Nichibunken Japan Review* 19 (2007): 3-45.

⁴⁰⁵ Benedict XVI, *World Day of Peace Message*, 8.

neither just distribution of health needs, nor doctors, will matter unless society can come to a consensus about medical priorities. The third challenge to global health care distribution is medical misprioritization.

C. Medical misprioritization: the case of reproductive technologies⁴⁰⁶

Nearly everyone in the developing world is at a disadvantage when it comes to accessing basic health care, since medical prioritization is skewed towards financially lucrative, superfluous, and enhancing techniques for the developed world. Of course, even within the developed world there are health care disparities.⁴⁰⁷ Health care disparities also occur within national borders when entire groups of people in a developed country subsist as they would in a developing country, the so-called “Fourth World.”⁴⁰⁸ For instance, due to lack of health care access, black men in the United States have shorter life expectancies than white men in the U.S., and even shorter life expectancies than men in China and parts of India.⁴⁰⁹ Bioethicists urge health care workers to manage resources justly⁴¹⁰ and mitigate health care discrepancies.

Although those who can access medical goods in industrialized countries should not be punished because they happened to be born into a system that serves their health demands, bioethicists and policymakers cannot ignore the position of privilege that many

⁴⁰⁶ Portions of this section appear as Cristina Richie, “Global Health Care Justice, Delivery Doctors and Assisted Reproduction: Taking a Note From Catholic Social Teachings,” *Developing World Bioethics* 15, no. 3 (2015): 179-190.

⁴⁰⁷ Jean Pascal, Hélène Abbey-Huguenin and Pierre Lombrail, “Inégalités sociales de santé: quels impacts sur l'accès aux soins de prévention?,” *Lien social et Politiques-RIAC*, 55, *La santé au risque du social* (2006): 115-124.

⁴⁰⁸ John Paul II, *Sollicitudo Rei Socialis: For the Twentieth Anniversary of Populorum Progressio* (1987), 14; 16-17. Josef Fuchs describes the Fourth World as, “the situations of injustice in individual groups or states, in both the First and the Third Worlds.” Josef Fuchs, *Moral Demands and Personal Obligations*, Brian McNeil, trans. (Washington, DC: Georgetown University Press, 1993), 69.

⁴⁰⁹ See Amartya Sen, *Development as Freedom* (New York: Anchor, 1999), 22.

⁴¹⁰ Leonard J. Weber, “In Vitro Fertilization and the Just Use of Health Care Resources,” in *Reproduction, Technology, and Rights*, James M. Humber and Robert F. Almeder, eds. (New York: Springer, 1996), 75-89.

developed world citizens enjoy. According to Mary Jo Iozzio, ethicists should “remain suspicious of the continued large budgeting expense of scarce human and funding resources”⁴¹¹ that serve a select few in countries that already have ample material resources. Use and availability of elective treatments indicate gaps in health care access in the medical industry. These gaps exacerbate health disparities, but can be corrected through just medical prioritization.

In this section I look at assisted reproductive technologies (ARTs)/ fertility treatments as an elective treatment offered to, and used by, the financial elite. ARTs are intended to produce a pregnancy leading to live birth. While some people—indeed, even most—value biological reproduction for a variety of reasons, ARTs are not simply equivalent to natural biological reproduction because of the reliance on the medical industry to obtain conception, pregnancy, and birth. Fertility treatments also exacerbate doctor misdistribution by siphoning medical resources away from desperately needed primary care and maternal doctors. Fertility treatments do not address health care needs, nor do they facilitate maternal health. Indeed, fertility treatments physically harm women who undergo the procedure. ARTs are therefore an exemplary case study in medical misprioritization. It might be objected, however, that providing ARTs shows solidarity with the infertile and are therefore valuable.

Yet, showing solidarity with infertile couples can be done without reproductive technologies in a way that satisfied the claims of orphans to have homes, women in poor countries to have maternal care, and the health care system to supply lifesaving and life-preserving health care first, without undue burden on the environment. Solidarity does

⁴¹¹ Mary Jo Iozzio, “Genetic Anomaly or Genetic Diversity: Thinking in the Key of Disability on the Human Genome,” *Theological Studies* 66, no. 4 (2005): 862-881, at 878.

not entail furnishing any and every means necessary to enact the desires of a life project, however important it may seem. Current ART resource misdistribution fundamentally ignores the common good and is therefore a concern of distributive justice.

I begin by situating ARTs within the larger realm of misprioritized elective treatments in the developed world, holding in the background that the desire for children (however socially conditioned) should be immediately addressed through easier access to adoption for all adults of mental capacity, regardless of sexual orientation or partner status. It should be clear that the fertility industry—not infertility prevention, parenthood, or pregnancy—is the target of the following evaluation.

Several excellent books have successfully critiqued the fertility business while still supporting it at the same time.⁴¹² My objective here is to consider ARTs from an ecological perspective rooted in the common good. When environmental conservation becomes a part of medical care, society will be better able to adjudicate between what is really a medical necessity, and what can be done without. The follow sections offer some deliberations in this vein.

1. Resource use and elective treatments

In 2002 alone, United States citizens spent \$7 billion dollars on non-reconstructive plastic surgery.⁴¹³ This figure shot up to \$9.3 million in 2005.⁴¹⁴ Cosmetic

⁴¹² Maura Ryan, *Ethics and Economics of Assisted Reproduction: The Cost of Longing* (Washington, DC: Georgetown University Press, 2001); Laura Mamo, *Queering Reproduction: Achieving Pregnancy in the Age of Technoscience* (Durham and London: Duke University Press, 2007); Christine Overall, *Why Have Children? The Ethical Debate* (Toronto: Oxford University Press, 2012).

⁴¹³ Quoting the Association of Aesthetics 2002 Breast Surgery report, in Mitchell, et al., *Biotechnology and the Human Good*, 141.

⁴¹⁴ Arthur W. Perry, *Straight Talk About Cosmetic Surgery* (New Haven, CT: Yale University Press, 2007), xi.

surgeries are provided because of the demands of medical consumers,⁴¹⁵ who fuel the cosmetic surgery industry, and already have general health care needs met. As socially acceptable as elective treatments are, many bioethicists are concerned with a medical system that provides non-lifesaving treatments to some, while millions in the world suffer from preventable diseases. A statement on medical enhancement highlights this.

As for neuroenhancement, ethicists determined that “all statements by national or ethics commissions in regard to the prioritization of health care give the improvement of human qualities (i.e. personality) as either low or no priority whatsoever.”⁴¹⁶ I would argue the same is true of other elective, non-lifesaving treatments. Instead of access to a variety of medical procedures with a low success rate, a high cost, or an extensive experimental phase,⁴¹⁷ distributive justice must prioritize general access to health care for all people. The current reproductive technologies and fertility industry illustrate unjust distribution of health care resources, doctors, and health care delivery.

⁴¹⁵ Gunter Risse notes that although “patients everywhere have become purchasers of health care services,” the phrase “medical consumer” is somewhat of a paradox because “the term consumer denotes a measure of familiarity with the product or service... together with a dose of skepticism.” However, medical knowledge and understanding is usually beyond the average patient. Furthermore, the patient is not simply a consumer, but can be a broken body in need of healing. Medical consumer are disadvantaged by health status and vulnerability, but simultaneously are expected to take an active role in their health care. Guenter B. Risse, *Mending Bodies, Saving Souls: A History of Hospitals* (Oxford: Oxford University Press, 1999), 680-681.

⁴¹⁶ Andreas Heinz, Roland Kipke, Hannah Heimann, and Urban Wiesing, “Cognitive Neuroenhancement: False Assumptions in the Ethical Debate,” *Journal of Medical Ethics* 38, no. 6 (2012): 372- 375, at 374.

⁴¹⁷ I chose these criteria because they deplete a large amount of intellectual, financial, and communal resources without comparable benefits. Although I am not advocating utilitarianism, I do think that ethicists must attend to the difference between health care that has an immediate effect, is far-reaching, and low-cost, and that which is not. For instance, allogeneic bone marrow transplant (where the bone marrow is harvested from a donor) is “associated with extremely high mortality; up to 40 percent of patients die from complications of the transplant itself.” This must be considered in resource allocation. Jennifer Girod, “A Sustainable Medicine: Lessons from the Old Order Amish,” *Journal of Medical Humanities* 23, no. 1 (2002): 31-42, at 34.

2. The constellation of cosmetic procedures and ARTs

Assisted reproduction technologies (ART) are the umbrella term for various reproductive techniques in fetus making that include in-vitro fertilization (IVF), artificial insemination (AI), “savior siblings,” pre-implantation genetic diagnosis (PGD), surrogacy, “designer babies,” and up-to-the-minute advances that splice deficient mitochondria from an egg, replace it with healthy mitochondria from a donor that does not carry the targeted genetic anomaly, fertilize the egg, and then implant the zygote into the womb, resulting in three biological parents.⁴¹⁸

Fertility clinics and treatments are a multi-billion dollar industry, primarily in industrialized countries where couples and individuals have many options available to them in terms of how they would like their children to be conceived, gestated, and delivered. In contrast to the struggle for survival in the majority of the world, those in developed countries have morphed medical concerns from essential to cosmetic.

In the developed world, women have a wide variety of ob/gyns to choose for natural pregnancy care, trained personnel to attend births, and a much lower maternal mortality rate than the developing world. These forms of maternal care support the common good and demonstrate just use of medical resources. Yet, it is not enough for some women. Reproductive freedom has evolved from an essential, life-saving concern—the ability to prevent pregnancy and conception, or deliver safely—to a

⁴¹⁸ James Gallagher, “UK Government Backs Three-Person IVF,” *BBC News*, 28 June 2013, at <http://www.bbc.com/news/health-23079276>

nonessential, hazardous endeavor: the “right” to become pregnant on demand through medical involvement.⁴¹⁹

Whereas women in the developing world die more frequently from childbirth and are ostracized from maternity related fistulas,⁴²⁰ “boutique” in-vitro fertilization clinics have emerged in the U.S.⁴²¹ When a woman wants to use IVF, she can “shop” for the “perfect” child at one of the 443 fertility clinics nationwide, using a catalogue of donated gametes, or a rolodex of desirable surrogates. Then, in conjunction with her geneticist, she is impregnated in a clinic from zygotes created in laboratories. Once pregnant, the woman can schedule an appointment to deliver the child or children via cesarean section.

Cesarean sections are a cosmetic choice for many, but not all, women. If it is only done to retain the elasticity of the vagina, then it is clearly symptom of medical consumerism.⁴²² Delivery by cesarean is a threat to women’s health, as it is correlated with higher post partum antibiotic treatment, severe maternal morbidity and mortality, and worse outcomes for the infants.⁴²³ One 2012 presentation to the Society for Maternal-Fetal Medicine annual meeting in Dallas found that “small, premature infants born by

⁴¹⁹ Many times free access to fertility services are demanded irrespective of partner status, diagnosable infertility, parity, age, or health. See Cristina Richie, “Reading Between the Lines: Infertility and Current Health Insurance Policies in the United States,” *Clinical Ethics* 9, no. 4 (2014): 127-134.

⁴²⁰ Sandra Lane and Robert Rubinstein, “Judging the Other: Responding to Traditional Female Genital Surgeries,” *Hastings Center Report* 26, no. 3 (1996): 31-40, at 33.

⁴²¹ These clinics include The Advanced Fertility & Endocrinology Institute, LLC in Columbia, South Carolina, n.d., at <http://ivfwecare.com/html/testimonials.html> and Manhattan Reproductive Medicine, 2015, at <http://www.hannajesionowskamd.com/>

⁴²² In much more crass language, reporters write that “American surgeons, have been known to offer women... reassurance that a caesarean section will keep them ‘honeymoon fresh.’” Viv Groskop, “Do you Really Need a ‘Mommy Makeover’?” *The Guardian*, 4 August 2008, at <http://www.theguardian.com/lifeandstyle/2008/aug/05/women.healthandwellbeing>

⁴²³ Sylvia Burrow, “On the Cutting Edge: Ethical Responsiveness to Cesarean Rates,” *The American Journal of Bioethics* 12, no. 7 (2012): 44-52.

cesarean section are at 30 percent higher risk for serious breathing problems than those delivered vaginally.”⁴²⁴ Despite this, it remains a popular choice.

The United States has one of the highest number of elective cesarean sections in the developed world—at nearly a third of all deliveries—despite the fact that the World Health Organization cites overuse of unnecessary caesarean as a “barrier to universal (medical) coverage.”⁴²⁵ In the developed world, after the planned, elective, and internally aesthetic cesarean section,⁴²⁶ women emerge from the hospital having utilized a vast panoply of medical resources, doctors, and services. Contrast this with women who are denied prenatal care or cesarean sections because they are HIV positive. Although cesarean sections have a prophylactic purpose—reducing the risk of transmitting HIV during vaginal birth—fear and stigmatization, as well as ignorance of this method of HIV transmission-reducing birth, cause unnecessary HIV infection in infants.⁴²⁷ Again, disparities in access and motivation for a medical procedure are highlighted.

Some women in the developed world use the advent of childbirth to consider their next cosmetic procedure to rid themselves of any evidence that they had given birth or

⁴²⁴ Erika Werner, Presentation to the Society for Maternal-Fetal Medicine annual meeting, Dallas, TX. 9 February 2012. Cited in Karen N. Peart, “C-sections Linked to Breathing Problems in Preterm Infants, *Yale News*, 10 February 2010, at <http://news.yale.edu/2012/02/10/c-sections-linked-breathing-problems-preterm-infants>

⁴²⁵ Luz Gibbons, José M. Belizán, Jeremy A. Lauer, Ana P. Betrán, Mario Meriáldi and Fernando Althabe, *The Global Numbers and Costs of Additionally Needed and Unnecessary Caesarean Sections Performed per Year: Overuse as a Barrier to Universal Coverage: World Health Report* (Geneva, Switzerland: World Health Organization, 2010), table 3.

⁴²⁶ An unpublished interview with Gena Corea and Dr. Herbert from 1979 reads, in part: “deep down the American physician thinks he’s doing women a favor in preserving her vagina for sexual activities... they’re doing this in good part for the husband, but behind it if the wife can function better for the husband, she’s happier too.” Published in Andrea Dworkin, *Pornography: Men Possessing Women* (New York: Plume, 1981), 217-218.

⁴²⁷ See Donald Messer, *Breaking the Conspiracy of Silence* (Minneapolis, MN: Fortress Press, 2004), 88-89.

breast-fed a child. Mastopexy of post-nursing breasts and tummy tucks⁴²⁸ top the wish list of women who use the medical industry to both have a child, and then erase the physical effects of their chosen pregnancy.

Reproduction is also subcontracted to other women through surrogacy and ARTs. In this manner, financially well-off women can have a “child of their own” without the burden of gestating it on their own. Commercial surrogacy and reproductive tourism speak to the immense amount of disposable income fueling the multi-billion dollar reproductive industry.⁴²⁹ The multiplicity of options and add-ons in the fertility business reflects the consumerist use of ARTs and defiance of distributive justice.

Reproductive technologies are also marketed to fertile women and couples as a lifestyle choice. Data is not collected on how many fertile people utilize ARTs. By deduction, however, we might count couples that use donated sperm, since the woman undergoing AI/IVF is fertile. We might also count surrogate women, since the gestational carrier is usually chosen for her ability to bring a child to term, yet these fertile women are reported in cycles. We can also count 90% of single women and women in same-sex couples (the average distribution of women who are fertile) who use ARTs, as they are socially—not biologically—infertile. Finally, anyone using ARTs for “sex balancing”⁴³⁰ already has at least one child, otherwise there would be nothing to balance! Likewise, all people using PGD (and thus IVF) to prevent further genetic disease in offspring, as well

⁴²⁸ Rondi K. Walker, “After the Birth of Your Baby,” n.d., at

<http://www.walkerplasticsurgery.com/procedures/surgical-procedures/after-the-birth-of-your-baby/>

⁴²⁹ Gillian Crozier and Dominique Martin, “How to Address the Ethics of Reproductive Travel to Developing Countries: A Comparison of National Self-Sufficiency and Regulated Market Approaches,” *Developing World Bioethics* 12, no. 1 (2012): 45–54.

⁴³⁰ A misnomer since couples usually seek “sex balancing” after they have had two or more children of the same sex. Thus, they might have two, three or four boys and one girl. This is sex selection. See Sumathi Reddy, “Fertility Clinics Let You Select Your Baby’s Sex,” *The Wall Street Journal*, 17 August 2015, at <http://www.wsj.com/articles/fertility-clinics-let-you-select-your-babys-sex-1439833091>

as all people using PGD (and thus IVF) for savior sibling treatments already have at least one child. Couples in these latter two groups are fertile and pursuing a child without a specific disease, or with particular genetic characteristics. Furthermore, couples that have children, then intentionally terminate their own fertility (i.e., men who have vasectomies and women who have been sterilized), and later regret it also use ARTs, but are not biologically infertile. Another group of fertile couples with children utilize ARTs under the assumption of “secondary infertility.”⁴³¹ ARTs are not purely techniques to provide biological children to infertile childless couples as they are made out to be.

Internationally, attention to pregnancy via ARTs might be a priority in cultures where reproduction is seen as essential to adulthood and can determine livelihood.⁴³² Yet, when situated within the larger scope of health care needs, and indeed even women’s reproductive needs, ARTs are a low priority. Fertility treatments are a trivial priority in places like the United States where a woman’s social and financial well being are not dependent on the ability to produce a biological child. Furthermore, while infertility as a clinically diagnosable disease could be addressed by technological intervention when it can actually be resolved, ARTs only produce a pregnancy, but do nothing to remedy the underlying cause of infertility. Julien S. Murphy uses the dichotomous concepts of “replacing” or “restoring” reproductive capacity to make this distinction.⁴³³ ARTs temporarily replace—not restore—infertility. That is, if the person using ARTs is infertile, which is not always the case.

⁴³¹ Charles H. Davis III, Mary N. Hall, and Leonora Kaufmann, “What is the Best Way to Evaluate Secondary Infertility?,” *Clinical Inquiries: The Journal of Family Practice* 56, no. 7 (2007): 573-575.

⁴³² Even this would only be a Band-Aid on the systemic issues of patriarchy, misogyny, and discrimination against childless/childfree and unmarried women. See Dora R. Mbuwayesango, “Childlessness and Woman-to-Woman Relationships in Genesis and in African Patriarchal Society: Sarah and Hagar from a Zimbabwean Woman’s Perspective (Gen. 16:1-16; 21:8-21),” *SEMEIA* 78 (1997): 27-36.

⁴³³ Julien S. Murphy, “Is Pregnancy Necessary? Feminist Concerns about Ectogenesis,” *Hypatia* 4, no. 3 (1989): 66-84, at 81.

Reproductive technologies remain a fixture of the medical industry because income generated, in tandem with the technological imperative,⁴³⁴ make low-tech solutions to infertility and parenthood unappealing.⁴³⁵ Reproductive technologies are an aggressively marketed lifestyle choice used to fulfill the desire for biological children, in contradistinction to fulfilling the desire to be a parent, which can be secured by adoption and other means like fostering, alternative parenting, or raising younger siblings.⁴³⁶

ARTs are a special interest procedure, which highlights medical misprioritization. Fertility treatments are voluntary and could be avoided, but the popularization of ARTs by celebrities, governmental provision of reproductive technologies for virtually any adult,⁴³⁷ and coverage of ARTs by some private health care insurance companies⁴³⁸ are expanding the use of these procedures in the developed world.

Instead of being seen as opposed to distributive justice and affecting the common good, ARTs are thought to be “just another way” to have a child. Yet, when compared to the amount of intellectual resources like research and funding, the concentration of doctors working in fertility clinics, and the resources that are needed to attend to the medical externalities of women who have sought ARTs, the fertility business and all that

⁴³⁴ David Rothman, *Beginnings Count: The Technological Imperative in American Health Care* (Oxford: Oxford University Press, 1997).

⁴³⁵ Mayo Clinic, “Infertility: Causes of Infertility,” 2011 at <http://www.mayoclinic.com/health/infertility/DS00310/DSECTION=causes>

⁴³⁶ A similar ideology is at play when couples say they are “trying to start a family.” They really mean, “trying to get pregnant,” since families can be started by adoption or fostering. Indeed, I would argue that people come into the world with families, and should not use the phrase “starting a family,” since they are a part of a family first by birth, then by marriage or kinship.

⁴³⁷ Associated Press, “Same Sex Couples to Get IVF Help in Greater Manchester,” *BBC News*, 13 December 2010 at http://news.bbc.co.uk/local/manchester/hi/people_and_places/newsid_9282000/9282620.stm

On the other end of restrictions is France, where the government will refuse fertility treatments to same-sex couples, singles, and the obese. See Nicola Hebden, “Gay Couples ‘Could be Given Fertility Treatment,’” *The Local*, 12 October 2012 at <http://www.thelocal.fr/page/view/ivf-for-gay-couples-could-come-later-socialist-minister#.UM-oiL-d47A>

⁴³⁸ American Society for Reproductive Medicine, “State Infertility Insurance Laws,” 2013, at <http://www.asrm.org/insurance.aspx>

come with it is an unnecessary—and unjust—resource drain. This is compounded by the fact that ART pregnancies create more medical problems, which must be addressed by the health care industry. The multiplications of health care burdens associated with ARTs are a further indictment of global health care misprioritization and challenges to distributive justice.

3. Health care burdens of ARTs

Women seeking ARTs often choose to become pregnant with twins.⁴³⁹ This reflects the choice to transfer multiple embryos with the intention of multiple implantations. Many women prefer to go this route to “make up for lost time,” thus having two or more children in one pregnancy. Yet their reproductive project carries immense risks. Women with higher-order pregnancies are more likely to have hemorrhaging or die in childbirth than women who are only pregnant with one child at a time.⁴⁴⁰ Furthermore, twins or higher order pregnancies often result in premature and low-birth rate infants.

A 2013 report indicated that 8% of babies born in the US were low birth weight, and 11.4% were premature.⁴⁴¹ In the same year, *The Lancet* estimated that the total economic cost of each preterm birth in the USA in 2005 was \$51,600.⁴⁴² When all are combined, “preterm births places a multibillion-dollar burden on business, with

⁴³⁹ François Olivennes, “Avoiding Multiple Pregnancies in ART Double Trouble: Yes a Twin Pregnancy is an Adverse Outcome,” *Human Reproduction* 15, no. 8 (2000): 1661-1663.

⁴⁴⁰ Marie-Victoire Senat, Pierre-Yves Ancel, Marie-Helene Bouvier-Colle, Gerard Bréart, “How Does Multiple Pregnancy Affect Maternal Mortality and Morbidity?,” *Clinical Obstetrics and Gynecology* 41, no. 1 (1998): 79-83.

⁴⁴¹ Joyce Martin, Brady Hamilton, Michelle Osterman, Sally Curtin, T.J. Mathews, “Births: Final Data for 2013,” *National Vital Statistics Reports* 64, no. 1 (2015): 1-65, at 3.

⁴⁴² Hannah H. Chang, Jim Larson, Hannah Blencowe, Catherine Y. Spong, Christopher P. Howson, Sarah Cairns-Smith, Eve M. Lackritz, et al., “Preventing Preterm Births: Analysis of Trends and Potential Reductions with Interventions in 39 Countries with Very High Human Development Index,” *The Lancet* 381, no. 9862 (2013): 223-234.

employers billed more than \$12 billion annually in excess health care costs”⁴⁴³ reveals the March of Dimes. In addition to familial, business, insurance, and health care costs, the most recent Institute of Medicine report states “preterm births cost American society in general at least \$26 billion per year.”⁴⁴⁴

There is a direct correlation between ARTs and early birth, which burdens the medical industry needlessly. The *European Journal of Obstetrics & Gynecology and Reproductive Biology* indicates that “the incidence of twins after ART born at <32 weeks increased 27-fold from 1987 to 2010 and has not reduced from its peak incidence over the last decade.”⁴⁴⁵ These twins and higher-order multiple (HOM) births are extremely costly to health care. In 2014, *JAMA Pediatrics* determined that “the mean hospital costs of a singleton, twin, and HOM child to age 5 years were \$2,730, \$8,993, and \$24,411 (in 2009-2010 US dollars), respectively.”⁴⁴⁶ These economic hazards, which are also detrimental to the infant/s, are a predictable outcome of using ARTs; they can be avoided by not using the technology. The list of drains due to ARTs continues, with frightening medical outcomes.

Twins conceived using in-vitro fertilization had a longer birth admission to neonatal intensive care units (NICUs) in their first year of life. These infants were 60% more likely to be admitted to a NICU and had higher incidents of hospital admission later

⁴⁴³ March of Dimes, “Premature Birth: The Financial Impact on Businesses,” December 2013: 1-2, at 1.

⁴⁴⁴ Institute of Medicine of the National Academies, “Preterm Birth: Causes, Consequences, and Prevention,” 13 July 2006 at <http://www.iom.edu/Reports/2006/Preterm-Birth-Causes-Consequences-and-Prevention.aspx>

⁴⁴⁵ Natasa Tul, Miha Lucovnik, Ivan Verdenik, Mirjam Druskovic, Ziva Novak, and Isaac Blickstein, “The Contribution of Twins Conceived by Assisted Reproduction Technology to the Very Preterm Birth Rate: A Population-based Study,” *European Journal of Obstetrics & Gynecology and Reproductive Biology* 171, no. 2 (2013): 311-313.

⁴⁴⁶ Georgina Chambers, Evelyn Lee, Michele Hansen, Elizabeth Sullivan, Carol Bower, and Michael Chapman, “Hospital Costs of Multiple-birth and Singleton-birth Children During the First 5 Years of Life and the Role of Assisted Reproductive Technology,” *JAMA Pediatrics* 168, no. 11 (2014): 1045-1053.

in life.⁴⁴⁷ In these cases, NICU becomes one of the final stages of clinical conception and adds to the injustice of fertility treatments and environmental burden. Hansen, et al. frankly conclude, “Estimations of the cost of an ART twin delivery should include the extra 4 days on average spent in hospital at birth, the almost 4-fold increased risk of admission to a NICU and the increased risk of hospital admission in the first three years of life.”⁴⁴⁸ ARTs often result in children that have serious medical complications related to prematurity and being born at a low-birth rate. This can translate to the beginning of life spent in a neonatal intensive care unit, risking iatrogenic disease as well. Children are not the only ones whose health is affected by fertility treatments. Women face many health risks using ARTs as well.

Fertility drugs utilized as a precursor to multiple egg removal can lead to ovarian hyperstimulation syndrome (OHSS). OHSS “is one of the most important complications of ovarian stimulation with severe morbidity and is still a threat to every patient undergoing ovulation induction.”⁴⁴⁹ Venous thrombotic events are a further outcome of OHSS, placing women at risk for death.⁴⁵⁰ Moreover, fertility drugs are known carcinogenic and have been linked to increases in cancer in women following ART births.⁴⁵¹

In the case of future health conditions, women who undergo any pregnancy are also more likely to spend extra time on an organ transplant wait list due to “their higher

⁴⁴⁷ Michèle Hansen, Lyn Colvin, Beverly Petterson, Jennifer J. Kurinczuk, Nicholas de Klerk and Carol Bower, “Twins Born Following Assisted Reproductive Technology: Perinatal Outcome and Admission to Hospital,” *Human Reproduction* 24, no. 9 (2009): 2321-2331.

⁴⁴⁸ Hansen, et al., “Twins Born Following Assisted Reproductive Technology,” 2330.

⁴⁴⁹ Yechiel Mor and Joseph G. Schenker, “Ovarian Hyperstimulation Syndrome and Thrombotic Events,” *American Journal of Reproductive Immunology* 72, no. 6 (2014): 541-548.

⁴⁵⁰ Ibid.

⁴⁵¹ M. Reigstad, I. K. Larsen, T. Å. Myklebust, T. E. Rødsahl, N. B. Oldereid, A. K. Omland, S. Vangen, L. A. Brinton, and R. Storeng, “Cancer Risk among Parous Women Following Assisted Reproductive Technology,” *Human Reproduction* 30, no. 8 (2015): 1952-1963.

panel reactive antibody levels.”⁴⁵² Even more disturbing are the statistics on death and pregnancy, as they again point to unjust medical prioritization of preventable causes.

In 2011, 77% of homicides and 45% of suicides among women occurred while pregnant.⁴⁵³ Sadly, this statistic fits in a trend of verbal and physical abuse of pregnant women, another risk factor of conception.⁴⁵⁴ The journal *Obstetrics & Gynecology* found that “54.3% of pregnancy-associated suicides involved intimate partner conflict that appeared to contribute to the suicide, and 45.3% of pregnancy-associated homicides were associated with intimate-partner violence.”⁴⁵⁵

Furthermore, during the second trimester of pregnancy, “a woman’s odds of being behind the wheel in a multi-vehicle accident that was bad enough to send her to a hospital emergency room were 42% greater than they were in the three years before she became pregnant.”⁴⁵⁶ Homicide, suicide, abuse, and car accidents are seen as anomalies, and therefore not typically considered before attempting to become pregnant or continue a pregnancy. Nevertheless, any activity that requires medical services, like clinical pregnancy, must be evaluated in terms of material resources and global justice.⁴⁵⁷

Bioethicist Julien Murphy sums up her position in this regard. She poignantly says, “Feminists might argue that reproductive technology should not be used to offer women

⁴⁵² See Suditida Satayathum, Ronald L. Pisoni, Keith P. McCullough, Robert M. Merion, Bjorn Wikstrom, Nathan Levin, Kenneth Chen, et al., “Kidney Transplantation and Wait-listing Rates from the International Dialysis Outcomes and Practice Patterns Study (DOPPS),” *Kidney International* 68, no. 1 (2005): 330–337.

⁴⁵³ Georgia Health Sciences University, “Homicide, Suicide Outpace Traditional Causes of Death in Pregnant, Postpartum Women,” *ScienceDaily*, 20 October 2011.

⁴⁵⁴ Douglas A. Brownridge, Tamara L. Taillieu, Kimberly A. Tyler, Agnes Tiwari, Ko Ling Chan, and Susy C. Santos, “Pregnancy and Intimate Partner Violence: Risk Factors, Severity, and Health Effects,” *Violence Against Women* 17, no. 7 (2011): 858–881.

⁴⁵⁵ Christie Lancaster Palladino, Vijay Singh, Jacquelyn Campbell, Heather Flynn, and Katherine Gold, “Homicide and Suicide During the Perinatal Period: Findings from the National Violent Death Reporting System,” *Obstetrics and Gynecology* 118, no. 5 (2011): 1056–1063.

⁴⁵⁶ Donald A. Redelmeier, Sharon C. May, Deva Thiruchelvam, and Jon F. Barrett, “Pregnancy and the Risk of a Traffic Crash,” *Canadian Medical Association Journal* 186, no. 10 (2014): 742–750.

⁴⁵⁷ Indeed, even chosen natural pregnancy should be evaluated as an optional lifestyle choice that often requires use of the medical industry.

new ways to risk their lives in reproduction.”⁴⁵⁸

While no one will die from remaining nulliparous throughout life,⁴⁵⁹ hazarding pregnancy, especially when it is done via ARTs, absorbs resources and causes comorbidities. It siphons vital medical supplies, doctors, and health care into specialized services for the wealthy. It absorbs financial, medical, and intellectual resources. It damages infants and women. For all these reasons ethicists, exasperated, claim, “surely the man-hours (sic) and resources necessary to develop such a technique (as IVF) are hardly worth the results!”⁴⁶⁰ And, yet, ARTs are endorsed and pursued without attention to the global issue of women dying from the very experience that rich women in the developed world are pursuing: pregnancy.

4. Oncofertility

One further branch of assisted reproductive technologies that is seldom recognized is oncofertility. Oncofertility is concerned with possible fertility “loss” due to cancer treatments. It is primarily available in the developed world where people have a very good chance of surviving cancer. Oncofertility options for men have been developed,⁴⁶¹ but because the male role in assisted reproduction is limited, and there are no harmful medical side effects of sperm harvesting,⁴⁶² they cannot be contrasted with the medical use or need for, say, urologists in the developing world. Therefore I maintain my

⁴⁵⁸ Murphy, “Is Pregnancy Necessary?,” 74.

⁴⁵⁹ Contra the claim of the biblical matriarch Rachel, “give me children or I will die!” Genesis 30:1.

⁴⁶⁰ Stanley Hauerwas, *Suffering Presence: Theological Reflections on Medicine, the Mentally Handicapped, and the Church* (Notre Dame, IN: University of Notre Dame Press, 1986), 154.

⁴⁶¹ See Landon Trost and Robert Brannigan, “Oncofertility and the Male Cancer Patient,” *Current Treatment Options in Oncology* 13, no. 2 (2012): 146-160.

⁴⁶² Although there is a disconcerting connection between pornography use and fertility clinics. Associated Press, “NHS Criticised for Supplying Pornography to IVF Couples,” *The Independent U.K.*, 08 September 2010; Cristina Richie, “Feminist Bioethics, Pornography, and the Reproductive Technologies Business,” *Blog of IJFAB: the International Journal of Feminist Approaches to Bioethics*, 5 October 2015.

focus on women's reproductive options in this section.

Oncofertility for women includes embryo cryopreservation, oocyte cryopreservation, and ovarian tissue cryopreservation. As of 2007 there were “over 400,000 frozen embryos in cryopreservation storage facilities in the United States,”⁴⁶³ although not all were produced with oncofertility. Whereas embryo cryopreservation and oocyte cryopreservation can be used for women who are of reproductive age, ovarian tissue cryopreservation is available for females who are too young to be fertile. In 2012, the youngest girl to forcibly undergo ovarian tissue removal was two years old.⁴⁶⁴ Minors—especially toddlers—cannot consent to medical treatments and fertility cannot be *preserved* in children. Preservation implies a keeping of something that already exists. Since children are only potentially fertile, they can have procedures done that can aid them in medical reproduction later in life, but a child who is rendered infertile by cancer treatment does not actually lose anything that she ever had at the time.

Oncofertility has created new quandaries for practitioners and patients. In some cases, doctors and patients might actually delay lifesaving cancer treatment in order to stimulate hyper-ovulation and then retrieve gametes. Another ethical issue is regret over having eggs or sperm removed, and pressure to use the stored oocytes after preservation. The trend towards artificial reproduction and fertility preservation is expanding. It has recently been suggested that people who voluntarily seek sex-reassignment surgery—even after informed consent process indicating that fertility will be terminated after

⁴⁶³ Clarisa R. Gracia, Jorge J.E. Gracia, and Shasha Chen, “Ethical Dilemmas in Oncofertility: An Exploration of Three Clinical Scenarios,” in *Oncofertility: Ethical, Legal, Social, and Medical Perspectives* Teresa Woodruff, Laurie Zoloth, Lisa Campo-Engelstein, Sarah Rodriguez, eds. (New York: Springer, 2010), 195-208, at 198.

⁴⁶⁴ Gwendolyn P. Quinn, Daniel K. Stearsman, Lisa Campo-Engelstein, and Devin Murphy, “Preserving the Right to Future Children: An Ethical Case Analysis,” *American Journal of Bioethics* 12, no. 6 (2012): 38-43.

bilateral orchiectomy, or that natural conception and childbirth would be impossible—should nonetheless be offered fertility preservation.⁴⁶⁵ Additionally, *The Lancet* supported widely available egg freezing to all women for *non-medical reasons*.⁴⁶⁶ Thus, the larger issue for global justice in health care is provision of another elective reproductive offering. Fertility preservation sets into motion a set of wasteful medical procedures centered on reproductive technologies since the former cancer patient must use in-vitro fertilization for a chance of biological reproduction, unless ovarian tissue has been frozen and can be retransplanted into the woman's own body after cancer treatment.⁴⁶⁷

The American Pregnancy Association records that in the United States the live birth rate for one round of IVF, per age group, is as follows: 30 to 35% for women under age 35; 25% for women ages 35 to 37; 15 to 20% for women ages 38 to 40; 6 to 10% for women ages over 40.⁴⁶⁸ The low success rates of IVF are comparable to pregnancy by ovarian tissue transplantation, which offers only a 10-40% chance of pregnancy and birth, in the best cases.⁴⁶⁹ Yet the preservation, cost of storage, and actual IVF treatments use substantial medical, intellectual, and natural resources and may not result in the desired pregnancy. From a cost-analysis perspective, IVF is a total environmental and technical

⁴⁶⁵ Sumer Allensworth Wallace, Kiara L. Blough, and Laxmi A. Kondapalli, "Fertility Preservation in the Transgender Patient: Expanding Oncofertility Care Beyond Cancer," *Gynecological Endocrinology* 30, no. 12 (2014): 868-871.

⁴⁶⁶ *Italics mine.* Dominic Stoop, Ana Cobo, and Sherman Silber, "Fertility Preservation for Age-Related Fertility Decline," *The Lancet* 384, no. 9950 (2014): 1311-1319.

⁴⁶⁷ Laurie Zoloth and Alyssa Henning, "Bioethics and Oncofertility: Arguments and Insights from Religious Traditions," in *Oncofertility: Ethical, Legal, Social, and Medical Perspectives*, Teresa Woodruff, Laurie Zoloth, Lisa Campo-Engelstein, Sarah Rodriguez, eds. (New York: Springer, 2010), 261- 278, at 264.

⁴⁶⁸ The American Pregnancy Association, "In-Vitro Fertilization: IVF," 2007, at <http://americanpregnancy.org/infertility/ivf.html>

⁴⁶⁹ Teresa Woodruff, "The Oncofertility Consortium—Addressing Fertility in Young People with Cancer," *National Review of Clinical Oncology* 7, no. 8 (2010): 466-475.

drain without medical benefit since the inability to become pregnant does not threaten life or physical well being.

While certainly everything should be done to prevent, treat, and cure cancer in all parts of the world, oncofertility is a lifestyle choice and part of the reproductive technology business. I have considered oncofertility as one extreme example of unjust resource distribution within reproductive technologies; others examples might be more salient for different communities and societies. Each culture has a slightly different conception of the common good and the limits to the autonomy of people within the society. I am endeavoring to draw a picture of a global common good, where real and pressing medical needs are not being met. It seems, therefore, that this pursuit of elective and non-lifesaving fertility procedures—especially those with spectacularly low success rates—cannot be justified. Assisted reproduction, inclusive of oncofertility, is not in direct competition with maternal care in the sense that health care could only provide one offering or the other. But, elective procedures are in direct competition for nonrenewable natural resources, which are a zero sum game. Distributive justice indicates that adjuncts to oncology should not be provided before oncological medicine itself is available to everyone.

Stanley Hauerwas draws out this medical misprioritization in the health care industry. He states, “I simply do not understand why that particular problem (infertility) should be thought so severe that resources should be given to it before we have, for example, a cheap and effective clotting factor for hemophiliacs.”⁴⁷⁰ His proclamation gives two non-exclusive alternatives, but encourages ethicists to contemplate why certain medical developments are widely disseminated, and why others are exclusive. The world

⁴⁷⁰ Hauerwas, *Suffering Presence*, 154.

does have a “cheap and effective clotting factor for hemophiliacs,” but equivalent medical needs still remain absent while ARTs, such as womb transplantation, proliferate.⁴⁷¹ If I could place my concern in Hauerwas’ language I would say, more specifically, that I cannot fathom why the fertility industry is given priority over other pressing medical needs, especially ones that are for the physical good—not physical harm—of women.

In addition to rectifying maternal health care discrepancies across borders, an indomitable case could be made that just distribution of maternal care should include all women nationally,⁴⁷² before ARTs are given to some. Therefore I bring this section to a close by circling back to maternal care, this time focusing on maternal needs in the U.S. to underscore the injustice of medical misprioritization within the same country.

5. Maternal care and ARTs

The United States spends \$98 billion annually on hospitalization for pregnancy and childbirth of its own citizens, but the maternal mortality rates have not improved, despite increased funding.⁴⁷³ Maternal deaths are still appalling high in America and the U.S. ranks 136 out of 183 nations for maternal mortality. Even within the United States there are race-differential health outcomes. Black women die in higher numbers from pregnancy and pregnancy related complications than white women in the U.S.⁴⁷⁴ Outside

⁴⁷¹ Mats Brännström, Liza Johannesson, Hans Bokström, Niclas Kvarnström, Johan Mölne, Pernilla Dahm-Kähler, Anders Enskog, Milan Milenkovic, Jana Ekberg, Cesar Diaz-Garcia, Markus Gäbel, Ash Hanafy, Henrik Hagberg, Michael Olausson, and Lars Nilsson, “Livebirth After Uterus Transplantation,” *The Lancet* (October 5, 2014): 1-10.

⁴⁷² I will address the Affordable Care Act in chapter four.

⁴⁷³ George Washington University’s School of Media and Public Affairs, “Fact of the Day #26: Maternal Mortality Rate Rising Despite Expensive Care (INFOGRAPHIC),” *The Huffington Post*, 24 August 2012, at http://www.huffingtonpost.com/2012/08/24/maternal-mortality-rate-infographic_n_1827427.html

⁴⁷⁴ Andreea A. Creanga, Cynthia J. Berg, Carla Syverson, Kristi Seed, F. Carol Bruce, and William M. Callaghan, “Race, Ethnicity, and Nativity Differentials in Pregnancy-Related Mortality in the United States: 1993–2006,” *Obstetrics & Gynecology* 120, no. 2, part 1 (2012): 261-268.

of the U.S. other industrialized countries like the U.K., Switzerland, and Belgium and even developing countries like Estonia, Qatar, and the U.A.E. fare better in protecting pregnant women against death.⁴⁷⁵

While liberal bioethicists might see the health care burdens of ARTs as exceptional, and encourage “reproductive freedom”⁴⁷⁶ (i.e., fertility treatments), ethicists cannot deny that misprioritization of maternal care is one cause of maternal mortality. Pregnancy related complications are problematic worldwide, yet the need to prevent these health care needs is unmet. Action must be taken to remedy this basic misprioritization in medical access immediately. Reproductive technologies cannot be justified when maternal care is lacking for so many.

6. Summary

Women in developed countries generally have control over their fertility and can typically prevent multiple consecutive pregnancies that threaten life. They often give birth in clinical settings, attended by trained professionals, with the best medical technology available. These births are in contrast to unattended, rural deliveries by women in the developing world who suffer the physical consequences of maternal complications—including death. Beyond these “simple” cases of resource injustice, the fertility industry highlights the pressing need for distributive justice in health care and women’s reproductive care worldwide.

⁴⁷⁵ Central Intelligence Agency, “The World FactBook: Country Comparison: Maternal Mortality Rates,” n.d., at <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2223rank.html>

⁴⁷⁶ Although recently contested, both patient autonomy and reproductive freedom have been historically framed as negative, i.e. a person has the right not to be forced to submit to treatment, or the right not to continue a pregnancy. I maintain that reproductive freedom (and patient autonomy) are indeed negative rights, and should not be articulated as a positive right to fertility treatments, or the right to choose how to become pregnant. See *Schloendorff v. The Society of the New York Hospital* (105 N.E. 92) Court of Appeals of New York, 1914.

The difference between even a planned, natural pregnancy and an ART pregnancy raises many ethical issues such as the use of physical, intellectual, and material resources, global disparities, and medical waste. ARTs absorb medical resources, destroy the environment by producing unnecessary carbon emissions, reject altruistic alternatives to parenthood, display biological fetishization, and exhibit a flagrant disregard for any other person outside of their own world. In my opinion, these are all salient points in the distinction between the pregnancy that could have been prevented, or safely brought to term without extra medical resources, and the pregnancy that is chosen despite scarce resources and multiple ethical issues.

Challenges to distributive justice in the health care industry are concretely present in disparities in access to health care needs, doctor distribution, and misprioritization of health care services, especially maternal care. Once ethicists recognize these issues, we can move towards policies to provide basic health needs through reappropriation of medical resources. I argue that distributive justice, rooted in the common good, leads to conserving resources, thus greening the medical industry. The penultimate section of this chapter explains how the first principle of green bioethics—general allocation of medical resources before special interest access—will lead to resource conservation.

IV. Distributive Justice and Resource Conservation

The health care industry is not faced with a shortage of medical supplies for basic needs that must be rationed. Given that some regions experience medical oversaturation and a proliferation of elective treatments, while medical deserts and physician care-drain characterize other regions, it seems, rather, that the current health care system simply does not prioritize care for all. Medical resources are funneled into lifestyle procedures to

satisfy inconsequential demands, while other areas of health care have little support.⁴⁷⁷

The current Western health care industry displays a deep unwillingness to allocate resources equitably and an inability to grasp the seriousness of environmental destruction in the face of unnecessary medical resource use. Therefore, green bioethics seriously examines how much time, energy, resources, and how many health care professionals are misappropriated by providing special access to non-medical treatments while the majority of the world is without basic medical care.

To attend to environmental conservation, the medical industry must simultaneously enlarge the supply of essential medical resources to those in the developing world and reduce elective medical consumerism in the developed world. As Jürgen Moltmann comments, “The relationship between progress and equilibrium in human and natural systems must be brought to into coordinated, fluid equilibrium.”⁴⁷⁸ It is reckless to increase the consumptive lifestyle of the developing world until it matches that of the developed. That would result in exceeding current resource use.⁴⁷⁹ Rather, a redirection of medical resources through distributive justice is needed.

⁴⁷⁷ One might also consider how veterinarian medicine for domestic animals absorbs enormous amounts of intellectual labor, time, and money. Veterinarians could not supply health care to humans, but the amount of money that people spend on increasing the standard of their pets’ lives, and prolonging pets’ lives with surgeries, medication, specialty food, and even acupuncture, betrays an appalling misprioritization of wealth, health, and values. Given the nauseating state of factory farming, there is a deep cognitive dissonance in countries like America about the treatment of sentient, non-human animals. While I believe factory farming should be eliminated, there is virtually no “care” wasted on feed-animals because of their abysmal conditions, thus the resources squandered on mass meat production would only be addressed by green bioethics through elimination of animal products in health care facilities and cafeterias. See, for instance Elizabeth Bennett, “Obstacles in Legally Protecting Farm Animals in the United States as Animal Rights Abuses and Environmental Degradation Continue,” *Revista Brasileira de Direito Animal* 5, no. 7 (2014): 105-137.

⁴⁷⁸ Jürgen Moltmann, *God in Creation* (San Francisco: Harper Collins, 1991), 138.

⁴⁷⁹ Even if we did “merely” bring all the poor into a higher standard of health care, while continuing to offer elective treatments to the developed world, it is likely the rich would never be satisfied with their own standard of living. They would perpetually want to be “ahead” and would not be content with equal access to health care, always searching for more elective procedures. This compulsion could be dubbed “sin” or “greed.” The “the Aristotelian concept of *pleonexia* (the ‘insatiable desire for more’)” would be a fitting label as well. See Tim Jackson, “Live Better by Consuming Less: Is There a ‘Double Dividend’ in Sustainable Consumption?,” *Journal of Industrial Ecology* 9, no. 1-2 (2005): 19-36, at 20.

The final section of this chapter first describes conservationist strategies currently in use in the medical industry. I look at the expanding field of telemedicine and teleclinics, specifically. Then, I address lingering questions and concerns about distributive justice in health care. Telemedicine will again be used as an example, as concerns over privacy and accessibility are raised. Last, I provide suggestions for sustainability in health care for individuals, doctors, and institutions.

Policymakers should heed Willis Jenkins caution that “incremental policy improvements...seem to surrender criticisms of power structures and bad ideologies, thereby weaken possibilities for deeper cultural changes that the most challenging problems require.”⁴⁸⁰ Instead of ceding leverage to power structures by focusing on isolated, infinitesimally small changes, my suggestions are congruent with larger environmental bioethics proposals, signifying that structural change is already underway.

The examples in the next section highlight a “Technology as Liberator” model.⁴⁸¹ As I mentioned in chapter one, green bioethics does not assume that controlling and reducing consumption alone is a solution to climate change. Green bioethics also has misgivings about the use of technology to reduce resource consumption because, for example, the harvesting of scarce trace minerals for computers and personal electronic devices can lead to conflict and human death, thus jeopardizing the common good. At the same time, green bioethics must show sympathy with other ecological efforts in order to build consensus in effective conservationist actions, even if there is disagreement on the

⁴⁸⁰ Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (Washington DC: Georgetown University Press, 2013), 158.

⁴⁸¹ Ian Barbour writes that current views on technology are positive, negative, or ambiguous. These views correlate to the three headings: “Technology as Liberator, Technology as Threat, and Technology as Instrument of Power.” Ian Barbour, *Ethics in an Age of Technology* (New York: HarperCollins, 1992), 3.

best approach to conservation. I now explore two related strategies that uphold conservation and distributive justice: telemedicine and teleclinics.

A. What has been implemented elsewhere

Digital medicine, or “telemedicine,” is currently being promoted as a part of environmental sustainability within health care institutions. The National Institute for Health Research’s (NIHR) *Carbon Reduction Guidelines* recommends participating in telemedicine through “measuring outcomes remotely by phone, mail, or the internet whenever possible” and encouraging record linkage—with participant consent—to routine data.⁴⁸² Theological bioethicists can also encourage digital medicine as a way to promote distributive justice.⁴⁸³ Both telemedicine and teleclinics are examples of practices that support conservation.

1. Telemedicine

Telemedicine is defined as “the use of electronic information to communicate technologies to provide and support healthcare when distance separates the participants.”⁴⁸⁴ The concept of telecommunication in medicine, or telemedicine, predates the Internet by a few decades. Its original use can be traced to the National Aeronautics and Space Administration (NASA), which tracked vital physiological data of astronauts and transmitted the information from the spacecraft and spacesuits to a monitoring

⁴⁸² National Institutes for Health Research (NIHR), “Carbon Reduction Guidelines,” (October 2010): 1-20, at 12, at www.nihr.ac.uk/files/NIHR_Carbon_Reduction_Guidelines.pdf

⁴⁸³ There is a methodological difference in technological solutions to the environmental crisis (i.e. trust that the current and future technologies, such as geoengineering, can be implemented to mitigate climate change) and use of technology to assist in conservation, such as telemedicine. I believe that the latter approach is more in line with conservationist priorities, in the truest sense of the term “conserve.”

⁴⁸⁴ Aparajita Dasgupta and Soumya Deb, “Telemedicine: A New Horizon in Public Health in India,” *Indian Journal of Community Medicine* 33, no. 1 (2008): 3-8.

location on earth.⁴⁸⁵

Telemedicine encompasses both services and delivery mechanisms. The American Telemedicine Association, which was established in 1993, describes services of telemedicine as primary care and specialist referral services; remote patient monitoring; consumer medical and health information; medical education among telemedicine services, and networked programs that link tertiary care hospitals and clinics with outlying clinics. Delivery mechanisms of telemedicine include point-to-point connections using private high-speed networks; monitoring centers for in-home care; and web-based, e-health patient service sites as platforms.⁴⁸⁶

Telemedicine has the potential to green the medical industry by reducing travel to and from clinics. Streaming meetings by digital connections reduces the need for commuting—which often depends on fossil fuels to power trains, cars, and busses. The NHS advocates “provid(ing) incentives for low carbon transport; and promot(ing) care closer to home; telemedicine,” and of course, walking and biking when possible as a part of their *Carbon Reduction Strategy*.⁴⁸⁷

Telemedicine can also conserve paper through electronic medical records (EMR). In 2014, EMR Modernizing Medicine®, in Boca Raton, Florida, created EMA™ the electronic medical assistant.⁴⁸⁸ EMA saves immense amounts of paper by preventing

⁴⁸⁵ Patricia A. Armstrong, Zakhour I. Youssef, and Rashid L. Bashshur, *Telemedicine: Explorations in the Use of Telecommunications in Health Care* (Springfield, IL: Charles C. Thomas, 1975); R.L. Bashshur and Joseph Lovett, “Assessment of Telemedicine: Results of the Initial Experience,” *Aviation, Space, and Environmental Medicine* 48, no. 1 (1977): 65-70.

⁴⁸⁶ American Telemedicine Association, “What is Telemedicine?,” (2012), at <http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.VOSrC8ZcN4u> See also Touch Surgery, “Home,” (2015) at <https://www.touchsurgery.com/>

⁴⁸⁷ NHS Sustainable Development Unit, *Saving Carbon, Improving Health: NHS Carbon Reduction Strategy for England* (London: NHS Sustainable Development Unit, 2009), 11.

⁴⁸⁸ Modernizing Medicine, 2014, at <https://www.modmed.com/>

record printouts, streamlining health care, and aiding in better patient outcomes.⁴⁸⁹ EMA also has the potential to eliminate obstacles to health care access.⁴⁹⁰ The NHS *Carbon Reduction Strategy* recommends, “all NHS organisations should make training and equipment available that promote tele, video and web-conferencing.”⁴⁹¹ In addition to reducing carbon emissions, telemedicine and its adjunct—like teleclinics—can assist in distributive justice.

2. Teleclinics

Teleclinics are virtual health care centers that “provide an opportunity for standardization and equity in provision of healthcare, both within individual countries and across regions and continents.”⁴⁹² Teleclinics can mitigate physician shortages by remotely linking patients to doctors. They can also employ health care assistants to provide basic medical care under the supervision of a virtual doctor. Still, advocates of telemedicine warn that it “cannot be (a) substitute for physicians in developing countries where resources are scarce and public health problems are in plenty... however, it can supplement the current health scenario.”⁴⁹³ Telemedical clinics in India are a case study of distributive health care justice that also conserving resources.

Aparajita Dasgupta and Soumya Deb report that from 2005-2008 the Indian Space

⁴⁸⁹ However, due to glitches in the telemedical systems that control patient records and medical prescriptions, several people have died as a result of operator errors. These issues continue to be worked out as telemedicine moves forward. Christopher Rowland, “Hazards Tied to Medical Records Rush,” *Boston Globe*, 20 July 2014, at <http://www.bostonglobe.com/news/nation/2014/07/19/obama-pushed-electronic-health-records-with-huge-taxpayer-subsidies-but-has-rebuffed-calls-for-hazards-monitoring-despite-evidence-harm/OV4njIT6JgLN67Fp1pZ011/story.html>

⁴⁹⁰ Another example of telemedicine is e-ICU centers, where “care of patients during the stabilization process, evaluation for the appropriateness of transfer, and the prolonged provision of critical care during delays in transport” can be utilized. Randy S. Wax, “Canada: Where Are We Going?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David Crippen, ed. (New York: Springer, 2013), 123-129, at 126.

⁴⁹¹ NHS Sustainable Development Unit, *Saving Carbon, Improving Health*, 48.

⁴⁹² Dasgupta and Deb, “Telemedicine.”

⁴⁹³ Ibid.

Research Organisation telemedicine network “expanded to connect 45 remote and rural hospitals and 15 super-specialty hospitals.” And, with periods of overlap from 2006-2008, the pilot project in Karnataka provided more than 10,000 tele-consultations.⁴⁹⁴

India, in particular, is a dramatic beneficiary of teleclinics due to its urgent medical requirements, poverty, and large population. In some cities in India, specific groups have health care needs met through teleclinics.

World Health Partners, started in 2008, is an Indian-based organization that works primarily in reproductive health care for women.⁴⁹⁵ Within three years they “established 116 telemedicine clinics (SKY Clinics) providing health services to 1,293 villages with an estimated population in excess of 6 million people.”⁴⁹⁶ Patients travel to teleclinics to utilize the service and partake in the technology. Through the use of video conferencing—which included telemedical programs to read women’s blood pressure, temperature, heart rate, respiratory rate, and EKGs—over 288,000-couple years of contraception were delivered.⁴⁹⁷ Considering the vast need for contraceptive use among mothers and families in the developing world, the teleclinics of India will undoubtedly saved many lives, and improve the quality of life of millions of women.

Writing from the U.K., Andrew Thorniley believes that telemedicine “will allow instant access to all patient records, ongoing treatment and other consultations. The patient can, in some instances, be reviewed by a consultant elsewhere in the world... *The*

⁴⁹⁴ Ibid.

⁴⁹⁵ World Health Partners, “Background,” 2013, at <http://worldhealthpartners.org/?p=4>

⁴⁹⁶ Health Research for Action: U.C. Berkeley, “Telemedicine Social Franchising in Rural Uttar Pradesh, India,” 2012, at <http://www.healthresearchforaction.org/sph/telemedicine-social-franchising-rural-uttar-pradesh-india>

⁴⁹⁷ Health Research for Action: U.C. Berkeley, “Telemedicine.” Couple years of contraception, or couple-years of protection (CYP) refer to “the estimated protection provided by contraceptive methods during a one-year period.” See Jacqueline E. Darroch and Susheela Singh, “Estimating Unintended Pregnancies Averted by Couple-Years of Protection (CYP),” (New York: Guttmacher Institute, 2011): 1-10.

future is digital.”⁴⁹⁸ Telemedicine, inclusive of teleclinics, was not begun with sustainability in mind, but it will reduce carbon emissions from travel, limit pharmaceutical waste by monitoring adherence, and save thousands of pounds of paper from record printouts. And, if telemedicine was fueled by renewable sources, it could be totally carbon neutral. In addition to the many environmental benefits of telemedicine, the ability to reach those in developing and underdeveloped areas indicates distributive justice.

Telemedicine will be a feature of environmental bioethics in the 21st century,⁴⁹⁹ yet the potential for telemedicine is not without concern. Excitement about the possibility of telemedicine and teleclinics often overshadow the urgency to protect patients and serve the medical needs of vulnerable people without health care. Privacy and accessibility complicate the distribution and utilization of telemedicine and teleclinics. Vetting some lingering questions is the task of the next section.

⁴⁹⁸ Andrew Thorniley, “United Kingdom: Where Are We Going?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David Crippen, ed. (New York: Springer, 2013), 177- 183, at 181. Italics in original.

⁴⁹⁹ New developments include: Aetna’s collaboration with Teladoc, a “U.S. board-certified licensed (doctor) in your state,” that patients can contact 24-hours a day. A recent flyer advertising these services, for \$40 or less per consult note, “with your consent Teladoc will provide information about your consult to you primary care physician.” TripAdvisor, “Aetna: Teledoc,” mail. The 17 July 2014 issue of *Science* magazine also highlighted several new developments, including an artificial intelligence program that is a computerized therapist, and machine learning that analyzes new mother’s activity and posts on Facebook and Twitter to predict post-partum depression. John Bohannon, “The Synthetic Therapist,” *Science* (17 July 2015): 250-251. Manifestation, “Eliza, Computer Therapist,” 2006, at <http://manifestation.com/neurotoys/eliza.php3/> Eric Horvitz and Deirdre Mulligan, “Data, Privacy, and the Greater Good,” *Science* (17 July 2015): 253-255. Also of note is the “text4baby” program. Women can download an app and sign up to receive free text messages reminding them of neonatal appointments. The app also offers advice, tips, and links to further health information. Voxiva, “Text4baby,” 2015, at <https://www.text4baby.org/>

B. Lingering questions and concerns

In the previous section I detailed measures that have been implemented to redistribute health care resources and reduce the carbon impact of the medical industry. Telemedicine, in particular, appeared as an innovation that could address unequal resource distribution and reduce carbon emissions. Although telemedicine has the potential to transform health care delivery and services, and equalize access to doctors and medical care, some lingering issues remain.

There are two potential problems with telemedicine that I will examine. In the developed world, concerns over telemedicine revolve around privacy. In contrast, developing countries find barriers to accessing telemedicine. I argue that privacy can be addressed through supporting telemedical user guides and distributive justice includes making the technological infrastructure of telemedicine accessible. After addressing these top-down and bottom-up concerns, I conclude section IV with my own recommendations for distributive justice in health care. I first turn to concerns around telemedicine.

1. Telemedicine privacy

Telemedicine has the potential to reduce resource use and bring medical care to people in remote places, simultaneously assisting distributive justice and environmental conservation. But a digital era is also vulnerable to computer system hacking, data distribution to unauthorized users, and images that can go viral in a matter of minutes. The misuse of telemedicine could embarrass and endanger patients and clinics. “Figure 1,” a photosharing app for health care professionals, underlines potential privacy issues in telemedicine.

Figure 1 has revolutionized medical records sharing by allowing health care professionals to take pictures of patients for diagnostic purposes, which can then be shared with others in the medical industry.⁵⁰⁰ Figure 1 launched their program by fundraising two million dollars, although the program can be downloaded for free.⁵⁰¹ Known as the “the Instagram for doctors,” Figure 1 has been fraught with ethical issues in the developed world and threatens the dissemination of this potentially conservationist technology.

Concerns surrounding Figure 1 include patient privacy and secure data sharing. Differing privacy laws across hospital state lines challenge the ease of data sharing.⁵⁰² To complicate matters further, some hospitals have legal limitations on taking pictures within the walls of the hospital.⁵⁰³ In other cases, patients do not fully realize that their procedure or condition is being recorded for training purposes. Medical associations have had to work fast to address these unforeseen technological, legal, and ethical issues, and ensure that patient health records are safe and confidential.

In 2014, the Australian Medical Association published a pamphlet on the ethics and responsibilities of medical picture sharing programs like Figure 1. Among the topics covered in the document are deleting images from personal electronic devices, discretion on sharing images, and extra precaution for images that could be perceived as sexually

⁵⁰⁰ Figure 1 Inc., n.d., at <https://figure1.com/>

⁵⁰¹ Lora Kolodny, “Medicine’s Answer to Instagram, Figure 1, Raises C\$2M,” *Wall Street Journal*, 9 December 2013, at <http://blogs.wsj.com/venturecapital/2013/12/09/medicines-answer-to-instagram-figure-1-raises-c2m/>

⁵⁰² Victoria Crow, “‘Instagram for Doctors’: Figure 1 Medical Image Sharing App Raises Concerns about Patient Privacy,” *News.com.au*, 10 October 2014, at www.news.com.au/finance/work/instagram-for-doctors-figure-1-medical-image-sharing-app-raises-concerns-about-patient-privacy/story-e6frfm9r-1227085877092

⁵⁰³ Figure 1, “FAQ,” n.d., at <https://figure1.com/sections/faq/>

explicit.⁵⁰⁴ Privacy issues are not stopping the latest technological revolution in health care, but other reservations still remain. Outside of a Western context, bioethicists are confronted with a different set of obstacles for implementing telemedicine.

2. Telemedicine inaccessibility

Telemedicine is currently inaccessible to those in the two-thirds world for a number of reasons. Obstacles to implementing telemedical clinics include the financial cost of modern buildings, consistent electricity, and compatible electronics to run teleclinics.⁵⁰⁵ But even this shared-technology is more feasible than personal electronic devices equipped with telemedical platforms.⁵⁰⁶ Outfitting each person with an iPad, computer, or smartphone would be even more demanding than teleclinics. These logistical challenges reveal a tension in the Western exportation of solutions to global problems. Just as “leap-frog” technology was suggested for developing countries to move beyond rudimentary energy production—like burning wood and coal— thus bypassing carbon-intensive energy production,⁵⁰⁷ so too is telemedicine out of reach for many countries.

The very poor require food and water, sanitation facilities, and basic protection from violence before sophisticated medical industry capabilities like telemedicine are considered. Gaps in medical need and available options for medical distribution reiterate the inequalities in global distribution. It is not enough to simply present telemedicine to the developing world; rather, the basic structures necessary for human life and medical

⁵⁰⁴ Australian Medical Association, “Clinical Images and the Use of Personal Mobile Devices,” (2014): 1-14.

⁵⁰⁵ Dasgupta and Deb, “Telemedicine.”

⁵⁰⁶ Such as like “Zipnosis” an “easy way to access health care expertise from anywhere...(with) internet connection.” Zipnosis provides online diagnosis and treatment for routine conditions such as cold, allergies, bladder infections, pink eye, etc. See Fairview, “Zipnosis frequently asked questions: What is Zipnosis?,” 2015, at <https://fairview.zipnosis.com/faq>

⁵⁰⁷ José Goldemberg, “Leapfrog Energy Technologies,” *Energy Policy* 26, no. 10 (1998): 729-741.

care must be in place as well. Distributive justice includes creating the infrastructures that support best-practice medicine, and in this case, the technology that the West has developed. A comprehensive package of health care aid would need to include electricity, buildings, running water, and staff if medical teleclinics were seriously offered as a solution to health care access.

In general, telemedicine has the potential to work towards distributive health care justice by connecting patients to doctors worldwide. Those outside of urban areas, in very remote places, and in underserved countries, could have contact with general and specialized doctors on computers. The problems that telemedicine are confronting are not insurmountable, especially when the infrastructure to deploy telemedicine is brought to developing countries. Through policy implementation and global initiative telemedicine can effectively meet health care needs and reduce resource use. Having addressed these lingering concerns about telemedicine, I conclude this section with suggestions for distributive justice in health care.

C. Policy suggestions

In order for the National Health Services to meet the *Carbon Reduction Strategy* of curtailing their carbon footprint 10% by 2015, “current levels of growth of emissions (will need) to not only be curbed, *but the trend to be reversed* and absolute emissions reduced.”⁵⁰⁸ Distributive justice in health care is a necessary step toward reducing carbon emission. Since the ability of the planet to provide for its inhabitants is jeopardized, focusing on general allocation of health care before special interest access is essential. Support for carbon-reduction strategies can solicit democratic engagement and

⁵⁰⁸ NHS Sustainable Development Unit, *Saving Carbon, Improving Health*, 8. Italics mine.

deliberation⁵⁰⁹ to reach consensus about the most valued health care for particular communities,⁵¹⁰ all within the bounds of conservation. In these cases, the Catholic concept of subsidiarity is instructive for policymaking.

The principle of subsidiarity requires a process of dialogue with people from all areas of society and places limits on governmental, or top-down, decision-making by “insisting that no higher level of organization should perform any function that can be handled efficiently and effectively at a lower level of organization by persons who, individually or in groups, are closer to the problems and closer to the ground.”⁵¹¹ Concomitantly, institutions are not exempt from distributive justice, especially when they oversee national resources. Subsidiarity “asks not for the most local, but the most appropriate level of organization and response.”⁵¹²

Lisa Sowle Cahill views the principle of subsidiarity within the medical industry as a means toward “responsible stewardship of health resources” and “an obligation to seek equitable care and to promote the health of all in the community.”⁵¹³ In this final sub-section, I provide consumer, doctor, and institutional suggestions in accordance with subsidiarity. These suggestions will require the review and deliberation of policymakers,

⁵⁰⁹ Leonard M. Fleck, *Just Caring: Health Care Rationing and Democratic Deliberation* (New York, NY: Oxford University Press, 2009); Rebecca A. Bruni, Andreas Laupacis, and Douglas K. Martin, “Public Engagement in Setting Priorities in Health Care,” *Canadian Medical Association Journal* 179, no. 1 (2008): 15-18; Hillary Wicai Viers, “What is Democratic Deliberation? A Q&A with Bioethics Commission Chair Amy Gutmann,” *blog.Bioethics.gov: The blog of the Presidential Commission for the Study of Bioethical Issues*, 10 September 2014, at <http://blog.bioethics.gov/2014/09/10/what-is-democratic-deliberation-a-qa-with-bioethics-commission-chair-amy-gutmann/>

⁵¹⁰ See, for example, Oregon Health Plan, *Prioritized List of Health Services*, 1 January 2015, at <http://www.oregon.gov/oha/herc/Pages/PrioritizedList.aspx>

⁵¹¹ William J. Byron, “Ten Building Blocks of Catholic Social Teaching,” *America* (31 October 1998): 9-12, at 11.

⁵¹² Larry L. Rassmussen, “Next Journey: Sustainability for Six Billion and More,” in *Ethics for a Small Planet: New Horizons on Population, Consumption, and Ecology*, Daniel C. Maguire and Larry L. Rassmussen (New York: State University of New York, 1998), 67-140, at 123.

⁵¹³ Lisa Sowle Cahill, *Bioethics and the Common Good* (Milwaukee, WI: Marquette University Press, 2004), 44.

organizations, physicians, patients, communities, and other well-informed people.

Distributive justice, as the first principle of green bioethics, will benefit both the poor and the earth.⁵¹⁴

1. Consumer suggestions

Medical consumers in the West often control how much they utilize the medical industry. While certainly people should access general health care, many times doctor visits and medical procedures are unrelated to preventing or treating physical diseases. Individuals can choose to limit elective medical developments, techniques, and procedures by taking a virtue approach to health care and being temperate. This will reduce the amount of resources the medical industry expends, shrink the gap in health care use between rich and poor, and show solidarity with those in medical need.

Virtue is necessarily located in a community.⁵¹⁵ Within this community are individuals who are interconnected; individuals can only act virtuously in relation to others in their community. As I argued in chapter two, I believe the common good incorporates the entire planet and includes the biotic world. The common good is disrupted when individuals act viciously by taking too much, or by having access to too little. Instead, the habituation of the virtue of temperance in individuals is essential to the common good and can be strengthened by the first principle of green bioethics.

Aristotle claimed that only training in virtue could orient a person towards the mean instead of excess. “The wickedness of human beings is insatiable... men are always wanting more and are never contented until they get it to infinity... (the remedy is) a

⁵¹⁴ The reference is to Leonardo Boff, *Cry of the Earth, Cry of the Poor* (Maryknoll: Orbis Books, 1997).

⁵¹⁵ Alasdair MacIntyre, *After Virtue*, 3rd edition (South Bend, IN: University of Notre Dame Press, 2007); Stanley Hauerwas, *A Community of Character: Towards a Constructive Christian Social Ethic* (South Bend, IN: University of Notre Dame Press, 1981).

method of training which ensures the better sort of people have no desire to make themselves richer.”⁵¹⁶ Human nature translates across disciplines; what Aristotle observed for land ownership is rightly applied to the medical industry as well.

Although most medical consumers in the developed world are not consciously attempting to medically outpace those in the developing world, there is a sense of competition among those within industrialized countries. Whether it is a cutting-edge development like Google Glass, the latest at-home neuroenhancement,⁵¹⁷ or undergoing one of the nearly ten million cosmetic procedures performed per year in the U.S.,⁵¹⁸ the virtue of temperance is lacking in the lives of many wealthy citizens. Furthermore, since health insurance can give the appearance of “free” medical procedures, it is more difficult for individuals to discriminate between medical goods that are generally accessible to all and those that are special interest. Nonetheless, individuals must cultivate temperance with the support of their communities, in order to take only what is needed, doing their part for just conservation. This will require reflection, deliberation, conversation, and then conversion.

Returning to Aristotle, policymakers see that “it is not enough for the legislator to establish the equality (of property): it is also necessary to aim at a moderate amount... it is more necessary to equalize people’s desires than their properties.”⁵¹⁹ The question then remains, how do ethicists convince individuals in affluent parts of the world to control their use of medical resources? Virtue may appeal to the philosopher, but the average

⁵¹⁶ Aristotle, *Politics*, II. 7 1267 a.

⁵¹⁷ Daniel L. Kirsch and Francine Nichols, “Cranial Electrotherapy Stimulation for Treatment of Anxiety, Depression, and Insomnia,” *Psychiatric Clinics of North America* 36, no. 1 (2013): 169-176.

⁵¹⁸ Arthur W. Perry, *Straight Talk About Cosmetic Surgery* (New Haven: Yale University Press, 2007), xi.

⁵¹⁹ Aristotle, *Politics*, II. 7, 1266 b.

person, perhaps, lacks the initiative to inconvenience herself by striving for moderation⁵²⁰ or refusing elective medical options because people of equal dignity are without basic health care in other parts of the world. However, the concept of the common good locates the virtue approach in a theological tradition, which appeals to many.

The common good supports individual virtue by emphasizing the situatedness of the person within the community. Working from an African context, Jacquineau Azétsop demonstrates that the very structures of health care must be adapted to a manner befitting of the common good.⁵²¹ Theologian James Keenan notes that Azétsop “showed that an autonomy based ethics inhibits our understanding of patients’ interconnectedness with others and their biological environments... autonomy based ethics is, at least in global health, a moral siphon.”⁵²² Health care oriented towards the common good corrects individualism by upholding the value and dignity of all human beings.

Concern and care for those living without basic health care cannot be overlooked. Individuals cannot ignore the misdistribution of medical resources and must use the medical industry in moderation. Through consideration and formation of virtue, I believe this is possible. Global justice as participation, by sharing in basic material goods, and as a social or political goal must be a top priority for health care.⁵²³ In addition to individuals voluntarily curtailing their use of medical procedures, incentivizing doctor redistribution will lead to distributive justice of health care.

2. Doctor suggestions

⁵²⁰ Although see James Keenan, *Virtues for Ordinary Christians* (Lanham, MD: Rowman & Littlefield, 1996).

⁵²¹ Jacquineau Azétsop, “New Directions in African Bioethics: Ways of Including Public Health Concerns in the Bioethics Agenda,” *Developing World Bioethics* 11, no. 1 (2011): 4-15.

⁵²² James Keenan, “Developing HIV/AIDS Discourse in Africa and Advancing the Argument for Universal Health Care,” in *AIDS: Thirty Years Down the Line: Faith Based Reflections about the Epidemic in Africa*, Paterne Mombe, Agbonkhianmeghe Orobator, and Danielle Vela, eds. (Nairobi: Paulines, 2013), 63-82.

⁵²³ Cahill, “Germline,” 150.

The discrepancies in concentration of doctors worldwide can partially be addressed through inviting all doctors to participate in policymaking that makes practicing medicine in underserved countries more appealing. The Catholic Social Teaching on justice provides the foundation for doctor redistribution and equality in health care. Indeed, the United States Bishops' Resolution on Health Care Reform acknowledged that, "reform of the health care system which is truly fundamental and enduring must be rooted in values which reflect the... claims of the poor."⁵²⁴ The rich minority-world simply cannot continue to provide services that remove health care resources from places already suffering from medical scarcity. One suggestion for doctor redistribution are incentives—either nationally or internationally—to work in developing countries. Incentives provide doctors a real choice about where to work, limiting choice because of financial pressure to work in high-income, low-need areas.

For instance, incentives could take the form of medical scholarships that are tied to a commitment to work in medically underserved areas upon graduation.⁵²⁵ This could redistribute doctors from global North to South, or within developing countries. Investing money into fortifying the medical training of doctors in the developing world is another option. This would provide jobs and skills to disadvantaged countries. A further option is accepting international medical students to be trained at developed country universities and then encourage them to return to their own countries to practice medicine.

In some cases, doctors valiantly choose to go into medical school knowing they will be placed in underserved locations. In 1968, the Thai government imposed "compulsory contracts with medical students so that they had to perform three years of

⁵²⁴ United States *Conference of Catholic Bishops*, "Resolution," 97.

⁵²⁵ Nir Eyal and Till Bärnighausen, "Precommitting to Serve the Underserved," *The American Journal of Bioethics* 12, no. 5 (2012): 23-34.

public work after graduation or face high fines.”⁵²⁶ This was a reaction to “external brain drain” that siphoned native doctors to the U.S. and U.K. Predetermining the location of employment partially equalized doctor distribution. Financial compensation is another factor that can incentivize doctors to practice in the neediest places.

Doctors should be compensated for their time and skill that is, oftentimes, of benefit to humanity. In countries where the salaries of doctors are not competitive, there is migration towards nations with lucrative remuneration.⁵²⁷ Offsetting the incomes of physicians in the developing world via funds from the developed would show solidarity with the poor and make medical practice in these areas more attractive. This could be done through alternate financial schemes, whereby “luxury and nonessential pharmaceutical products”⁵²⁸ could be taxed at a higher rate, with proceeds going to areas with fewer resources, for instance.

Putting pressure on national and international political leaders to make policies in accordance with distributive justice must come from physicians who hold positions of respect and privilege.⁵²⁹ Developed world citizens are obligated to share a greater part of the financial burden of securing global health care justice for all. The United States Conference of Catholic Bishops believe, “Individual nations must measure their own self-interest against the greater common good and contribute equitably to global solutions.”⁵³⁰

⁵²⁶ Suwit Wibulpolprasert and Paichit Pengpaibon, “Integrated Strategies to Tackle the Inequitable Distribution of Doctors in Thailand: Four Decades of Experience,” *Human Resources for Health* 1, no. 1 (2003): 1-17.

⁵²⁷ Onyebuchi Arah, “The Metrics and Correlates of Physician Migration from Africa,” *BMC Public Health* 7, no. 1 (2007): 83.

⁵²⁸ Martin, “Intervention,” 9-10, no. 7.

⁵²⁹ Matthew Wynia, “Advocate as a Doctor or Advocate as a Citizen?,” *AMA Journal of Ethics* (Formerly *Virtual Mentor*) 16, no. 9 (2014): 694-698.

⁵³⁰ United States Conference of Catholic Bishops, “Climate Change: A Plea for Dialogue Prudence and the Common Good,” 15 June 2001, at <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/global-climate-change-a-plea-for-dialogue-prudence-and-the-common-good.cfm>

Those with more resources must collaborate with those with less to make health care accessible, thus addressing “the international context, asking whether and how justice can be well-served between developed and underdeveloped countries.”⁵³¹ Doctor redistribution can be accomplished when policymakers engage physicians in constructing incentives to work in underserved areas. Finally, institutions can be selective about medical offerings and focus on distributing basic health care.

3. Institutional suggestions

The NHS indicates, “carbon reduction should be a regular item on Board agendas.”⁵³² Carbon reduction in the medical industry can be achieved by offering fewer unnecessary services that do not address health, but absorb medical resources. Pope Paul II insisted that there are sufficient resources for everyone, but institutional structures prevent the very poor from utilizing their share.⁵³³ I believe this statement can be applied to health care as well, where “every year 20 percent of earth’s people in the rich nations use 75% of the world’s resources and produce 80% of the world’s waste.”⁵³⁴ This abysmal fact is clearly an affront to distributive justice.

Theologians have been putting pressure on governments and religious, political, and medical institutions to serve the common good through global justice for many years. While theological appeals to distributive justice have not been motivated by sustainability, they have produced excellent suggestions that can reduce the gap in health

⁵³¹ Peterson-Iyer, “Pharmacogenomics,” 39.

⁵³² NHS Sustainable Development Unit, *Saving Carbon, Improving Health*, 15.

⁵³³ With regards to economics he writes, “The chief problem is that of gaining fair access to the international market, based not on the unilateral principle of the exploitation of the natural resources of these countries, but on the proper use of human resources.” John Paul II, *Centesimus Annus*, 33.

⁵³⁴ Elizabeth Johnson, *Quest for the Living God: Mapping Frontiers in the Theology of God* (New York: Continuum, 2007), 186.

care access. One suggestion that I highlight, in keeping with my ethical foundation for this chapter, is solidarity through financial sharing.

Religious leaders have called for positive—or enforced—policies targeted at institutions to work towards distributive justice. In 1967, under the growing realization of economic globalization and massive poverty, Paul VI wrote *Populorum Progressio*. The Pope did not shy away from economic redistribution. He targeted the State and called for drastic changes to secure distributive justice for the common good, imploring “government leaders... (to) draw your communities into closer ties of solidarity with all men, and to convince them that they must accept the necessary taxes on their luxuries and their wasteful expenditures in order to promote the development of nations and the preservation of peace.”⁵³⁵

In health care financial sharing might take the form of taxing pharmaceuticals to generate revenue for global health care needs, as suggested by Diarmuid Martin,⁵³⁶ or a “one-for-one” approach to prosthetics, in line with the TOMS shoe philosophy.⁵³⁷ There are numerous agreements that can be made between the wealthy and the needy to equalize medical care. It seems clear that both carrots and sticks are needed to secure distributive justice in the health care industry and ensure environmental sustainability for the future. While not impossible, this goal may be unpopular. That is, unless people act with a theological conviction on behalf of the common good.

V. Conclusion

The medical industry is caught in an ethical quagmire: utilizing too many natural

⁵³⁵ Paul VI, *Populorum Progressio*, 84.

⁵³⁶ Martin, “Intervention,” 9-10, no. 7.

⁵³⁷ TOMS shoes donates one pair of shoes to humanitarian organizations for each pair of shoes purchased. See TOMS, “One for One,” 2015, at <http://www.toms.com/>

resources for lifestyle choices of healthy individuals, yet seemingly unable to supply health care for all in need. Simultaneously, the planet is ravished by excess use; yet there is a growing lust for consumerism. “Given the enormity of the health risks associated with environmental health burdens, and given the attention that bioethics has devoted historically to questions of distributive justice, it is a glaring omission that bioethics, generally, and public health ethics, as a subfield, have devoted so little attention to questions of environmental justice to date.”⁵³⁸ It is time that the connections between excess medical use and environmental destruction, global justice and sustainability, are made in academic bioethics and clinical practice.

When the marginalized, the poor, and especially women suffer because of a lack of basic health care, while others receive access to elective, lifestyle treatments, bioethicists and policymakers must make every effort to find viable avenues to enlarge the supply of essential resources to those in the two-thirds world in a stand of solidarity. Gustavo Gutierrez proclaims, “when a system ceases to promote the common good and favors special interests, the Church must not only denounce injustice but also break with the evil system.”⁵³⁹ Modern humans cannot break completely from the health care industry, but we can ask that special interest access does not occur before the general allocation of medical resources.

Limits on health care “will need to be set; and justice demands that those limits do not shortchange those who already struggle at the economic and health margins of society.”⁵⁴⁰ Indeed, justice demands that a general allocation of health care is provided

⁵³⁸ Nancy Kass, “Public Health Ethics: From Foundations and Frameworks to Justice and Global Public Health,” *Journal of Law, Medicine and Ethics* 32, no. 2 (2004): 232-242, at 236.

⁵³⁹ Gustavo Gutierrez, *A Theology of Liberation* (Maryknoll, NY: Orbis Books, 1973), 115.

⁵⁴⁰ Peterson-Iyer, “Pharmacogenomics,” 41.

for all first, enacting the claims of the common good. One person cannot consume without affecting another. Balancing the priorities of ecology and health care can, in part, be accomplished through just distribution of medicine, medical doctors, and medical resources resulting in environmental conservation. The first principle of green bioethics can accomplish this task.

In next chapter I will narrow my focus from macroallocation of medical resources—inclusive of health care and doctors—to mesoallocation of health care through medical developments, techniques, and procedures. Chapter four will propose my second principle of green bioethics—current humans needs should take priority over current human wants—and explain what that will mean for environmental conservation.

CHAPTER 4

Current Humans Needs before Current Human Wants: Environmental Conservation

I. Introduction

Once we acknowledge that general allocation of medical resources should be prioritized before special interest access—my first principle of green bioethics outlined in chapter three—theological bioethicists must discern which medical developments, techniques, and procedures are among those most beneficial to the common good. The second principle of green bioethics narrows its focus in health care and advances human health care needs first, while health care wants are checked in order to conserve resources, thus providing extensive health care while minimizing resource use. That is, quite simply, a medical industry that provides health care needs of all people instead of health care needs *and* wants for some people will require fewer resources. This medical conservation will lower the amount of carbon emissions of the medical industry, and hence the carbon footprint, resulting in a benefit for people and planet. Determining what constitutes a minimal standard of health for all and which health care offerings can be curtailed are the focus of this chapter.

In chapter four I will argue for my second principle of green bioethics: human health care needs should be given lexical priority before human health care wants in medical developments, techniques, and procedures.⁵⁴¹ Prior to the assessment of health care wants and needs, I will underscore human needs and wants in general. My ethical and theological foundations for the chapter include three strands, which taken aggregate, present a starting point for delineating between health care needs and health care wants.

⁵⁴¹ This echoes early work of David Hollenbach, that the needs of the poor should take priority over the wants of the rich. See David Hollenbach, *Claims in Conflict: Retrieving and Renewing the Catholic Human Rights Tradition* (New York: Paulist Press, 1979), 204.

First, I will outline one way of understanding the difference between human wants and human needs using some of Martha Nussbaum's insights.⁵⁴² Once her description of requirements for basic human existence—through the capabilities model—is established, I will move on to medical wants. Again, returning to Martha Nussbaum, I will highlight capabilities germane to medicine such as food, shelter, and mobility, as well as pain management and life expectancy. Then, second, I will provide an example from Catholic health care. Kevin O'Rourke, in particular, lists four categories of human needs in medicine. These are instructive for my project. Finally, third, I will explore the four "traditional goals of medicine" in public bioethics, which also indicate consensus around medical need. Nussbaum, O'Rourke, and the goals of medicine are foundational for discerning medical wants and medical needs.

In the following section I will address situations where medical developments, techniques, or procedures are not immediately apparent as a health care need or a health care want. For these unclear cases I will propose two paradigms for distinguishing the difference. The first paradigm emerges from bioethics and attends to the contested demarcation between medical enhancement and medical function. I will argue that, in the medical industry, enhancement correlates to health care want, while function correlates the conception of health care need formulated in section II. The second paradigm comes from theological ecology and distinguishes between quality of life and standard of living. I argue that, under the ecological/medical rubric, quality of life indicates health care need,

⁵⁴² Numerous philosophers have taken up the arduous and contested task of defining universal human need. Van Rensselaer Potter included "food, shelter, clothing, space, privacy, leisure and education, both moral and intellectual" as "basic needs that can be satisfied with effort." Van Rensselaer Potter, *Bioethics: Bridge to the Future* (New Jersey: Prentice-Hall, 1971), 144.

but standard of living indicates health care want.

In the penultimate section of this chapter I will demonstrate how my second principle of green bioethics could be implemented to reduce resource use in the medical industry. Certain governmental and independent organizations provide health care needs, demonstrating that priority can be given to essential medical services. I will highlight two examples that provide preventive health care in the United States: the Affordable Care Act (ACA) and Planned Parenthood's provision of health care needs. Even though delivering health care needs might be considered noncontroversial, the policies that support distribution of health care needs and attenuation of health care wants in order to conserve natural resources have lingering concerns, which must be addressed.

Among the objections to providing health care wants are potential legal conflicts with personal beliefs, highlighted by the Hobby Lobby lawsuits and the ACA. Among the objections to curtailing health care needs are the possible emotional conflicts between familial desires and doctors who deny medically futile treatments, indicated by the tragic Jahi McMath case. I will briefly meet these objections before moving on to a subsidiarity approach for resource conservation that stresses needs before health care wants.

I will conclude the penultimate section of this chapter by proposing avenues to prioritize health care needs in service to the common good. Suggestions for patients, doctors, and private health care insurance or national healthcare will be addressed. First, patients must see themselves as beings who are not defined by medical purchases; that is, as relational beings with dignity in an interconnected world. Removing focus from self to

the common good would reduce the desire for medical procedures that do not address disease or prevention of premature death. Second, doctors must reject a business model of health care delivery and legally be empowered to halt medically futile treatment. Third, insurance companies or nations that provide health insurance must prioritize health needs. By providing for health care needs, and eliminating or severely truncating health care wants, environmental conservation in the medical industry can partially be accomplished.

Environmental theologian Rosemary Radford Reuther declares, “Today’s eco-spiritual crisis demands a synthesizing creativity of even greater expansiveness.”⁵⁴³ We clearly saw this in Willis Jenkins’ work on practical strategies for conservation in chapter two. Now I continue to develop my own proposal for green bioethics. The second principle of green bioethics states that environmental conservation can, in part, occur when theological bioethicists understand the difference between health care wants and health care needs, and provide health care needs first and foremost. I now lay the foundations for this principle.

II. Ethical and Theological Foundations

As a prerequisite to the second principle of green bioethics, theological ethicists must decipher between human needs and wants. From there, the distinction between health care needs and health care wants can be partially defined. The goal of these deliberations is to prioritize medical developments, techniques, and procedures that are human needs. Human dignity must be safeguarded through an understanding of “wants” and “needs,” ensuring a sustainable medical industry with minimally decent health care

⁵⁴³ Rosemary Radford Reuther, “Healing the World: The Sacramental Tradition,” in Charles Curran, Margaret Farley, and Richard McCormick, eds. *Feminist Ethics and the Catholic Moral Tradition* (New York: Paulist Press, 1996), 560-585, at 561.

for all. This section first introduces the concept of human wants and needs by relying on Martha Nussbaum's capabilities approach. Nussbaum claims that capabilities are universal and begin to articulate factors constitutive of human existence; that is, human needs.

Once an understanding of human wants and needs is established, medical needs and wants can be outlined. I utilize three distinct, but commensurable, contributions to placing parameters around human medical needs articulated philosopher Martha Nussbaum, Catholic theologian and bioethicist Kevin O'Rourke, and the traditional goals of medicine described by Joseph H. Howell and William Frederick. Consensus can be established by affirming that human medical needs exist and they can be identified in some foundational way. These ethical and theological foundations form the basis of this chapter and lead to practical strategies for implementing the second principle of green bioethics. I now turn to some basic considerations on human wants and human needs, using Martha Nussbaum's conception of capabilities.

A. Introduction to wants and needs

The demarcation between human wants and needs is not precise, but some heuristic generalization can be attempted. A universal or comprehensive list of human wants and needs that reaches full unanimity is quite unlikely, even within nations, religions, and health care systems. Nonetheless, an adequately considered judgement can provide some guidelines. In common parlance, "need" is used in a loose manner. A person might say "I need coffee in the morning." But, empirically, coffee is not a need. In contrast, one could accurately declare, "I need insulin to regulate the glucose in my blood." An assessment of discernable data must drive deliberations on needs and wants.

Insulin is a need. Coffee in the morning is not. Using the terms “objective” and “subjective” to consider needs and wants are illuminating.

Returning to the example above, insulin is a need for the human body. In a normal body, insulin is produced in the pancreas. In a diabetic person, however, insulin is not produced and insulin shots are required to supplement the deficiency. Insulin is an objective need of the body, but insulin shots are subjective needs for certain people—namely diabetics. Thus, even in the conversation about needs, we must recognize the difference between objective and subjective needs. This too is debated, and litigious and insurance claims are filed against companies when objective needs and subjective needs conflict. The contraceptive mandate of the Affordable Care Act, which will be detailed in section IV, is one example of a disputed subjective need (i.e., for women at risk of pregnancy to prevent conception). A further way to examine wants and needs comes from the medical profession itself.

The term “medically indicated” assists in defining a particular health service as a need. Insulin shots are a medically indicated need, but only for a diabetic person. In contrast, a non-diabetic person could not demand insulin shots as medically indicated. There is no clinical basis (and much harm and waste) that would occur if a non-diabetic started injecting insulin. Philosophical border wars occur over what is medically indicated and what is not. These often surface when health care developments that were intended to treat a medically indicated condition are later are offered as elective, enhancing, or lifestyle procedures. For instance, hormonal contraception is effective in safeguarding women from a life-threatening pregnancy. Contraception is a medically indicated health care need when utilized this way. However, when hormonal

contraception is taken so that one may avoid a menstrual period during vacation, there is not a correlative medical indication. Objective and subjective needs are medically indicated and maintain homeostasis by protecting or correcting functioning.⁵⁴⁴

Even as a clearer concept of wants and needs emerges, many of these terms are open to interpretation, debate, and resource availability. Furthermore, the common good and human dignity must be at the forefront of deliberations. Context is essential to the discussion on wants and needs. My aim is not to provide a definitive list of wants and needs in this chapter, but rather to identify extremes in order to guide ethicists to the areas in between. The essence of the second principle of green bioethics is more important than debates about the minutia of its articulation in this project.

While there are greater and lesser needs, it is immediately apparent that purchases like automobiles, entertainment-based electronics, and recreational drugs are human wants. Human wants are superfluous, above what is necessary for a human life, and occupy a large conceptual space above human need. Human wants are often purchased in the marketplace and drive the economy. Ecotheologian Michael Northcott regrets, “in order to maintain constant growth the distinction between needs and wants has to be erased.”⁵⁴⁵ Even as wants multiply, there remains a sense of objective human need.

While there will never be a complete list of human needs that all theologians or ethicists can assent to, many physical needs are collectively recognized across cultural,

⁵⁴⁴ One important area of health care that I am not going to address directly is mental equilibrium. The medical industry partially attends to intangible mental needs through psychology, hospice care, and chaplains at hospitals. These are not my primary concerns. When psychological disorders have a physical basis, medical intervention may be a subjective need. However, due to the history of abusing the concept of mental illness—for instance by labelling communists, homosexuals, and intelligent non-conforming women as mentally ill—and subsequent coerced medical torture—such as electric shock, lobotomies, and hysterectomies—I would caution that health care professionals approach mental disorders, even those with a presumed physical basis, cautiously.

⁵⁴⁵ Michael S. Northcott and Peter M. Scott, eds. *Systematic Theology and Climate Change: Ecumenical Perspectives* (Florence, KY: Taylor and Francis, 2014), 17.

religious, and geographical differences as basic to human life. As such, it is helpful to draw on an academic outside the Christian faith to support the universality of these human needs and recognize it broadly.

While John Rawls' "overlapping consensus"⁵⁴⁶ and John Courtney Murray's "pluralism"⁵⁴⁷ are congruent with describing a comprehensive human condition of need, I find some of Martha Nussbaum's insights compelling, as she demonstrates sensitivity to the hazards of gender essentialism and religious dogma, thus providing theological ethicists with fresh eyes to undertake an exploration of human need. I am not arguing that everything she describes is a human need. However, her attention to human "capabilities," based on the work of Amartya Sen, presupposes one conception of universal human need and provides a starting point for practical ethics oriented to the common good.

1. Martha Nussbaum's capabilities

In 1979, Indian economist Amartya Sen first proposed the concept of capabilities to identify human potential. That is, a person's ability to achieve certain things, relevant to their own capacities, is "a morally relevant dimension taking us beyond utility and primary goods" for financial distribution.⁵⁴⁸ It is not enough for economists to crunch numbers to determine quality of life, or examine the gross domestic product. Rather, assessing the life of individuals within the country is fundamental to determine real equality through opportunities to live a life worthy of human beings. Sen won the Nobel Memorial Prize in Economic Sciences in 1998 and remains a persuasive advocate for

⁵⁴⁶ John Rawls, "The Idea of an Overlapping Consensus," *Oxford Journal of Legal Studies* 7, no. 1 (1987): 1-25). See also John Rawls' major work, *Theory of Justice* (Cambridge: Harvard University, 1971).

⁵⁴⁷ John Courtney Murray, *We Hold These Truths* (New York: Sheed and Ward, 1960).

⁵⁴⁸ Amartya Sen, "Equality of What? Tanner Lectures on Human Values," Stanford University, 22 May 1979, 197-220, at 218.

human rights and development. His work has been modified and expounded upon, but no one has brought such vitality and importance to the capabilities approach as Martha Nussbaum.

Martha Nussbaum received her BA from New York University and her MA and PhD from Harvard. She has taught at Harvard University, Brown University, and Oxford University.⁵⁴⁹ She is currently the Ernst Freund Distinguished Service Professor of Law and Ethics at the University of Chicago and highly renowned for her numerous publications and humanitarian work. She is, perhaps, most well-known for her development of Amartya Sen's "capabilities approach" which identifies ways of being that are foundational to human existence and flourishing.

Nussbaum's capabilities are not simply equivalent to needs. However, her approach does point to the shared human condition, and, in her own words

aims to be as universal as possible, and its guiding intuition, in fact, directs it to cross religious, cultural, and metaphysical gulfs. For it begins from two facts: first, that we do recognize others as human across many divisions of time and place... Second, we do have a broadly shared general consensus about the features whose absence means the end of a human form of life.⁵⁵⁰

Martha Nussbaum articulates a human expression of life that highlights universal human needs. There are two levels to her conception of human life. Nussbaum's first human expression of life is "the Shape of the Human Form of Life." Her second human expression of life is "Basic Human Functional Capabilities." The first level details the

⁵⁴⁹ University of Chicago Law School, "Martha Nussbaum," n.d., at <http://www.law.uchicago.edu/faculty/nussbaum>

⁵⁵⁰ Martha C. Nussbaum, "Human Functioning and Social Justice," *Political Theory* 20, no. 2 (1992): 202-246, at 215.

aspects of human life that make it *human*, recognizing the limits and possibilities of embodied anthropological existence. I provide these as paradigms for theological ethicists to work through rather than definitive lists of well-defined needs. Since my concern is human wants and needs in the medical industry, I provide Nussbaum's work on capabilities as a propaedeutic to the remainder of the chapter.

The Shape of the Human Form of Life includes: mortality; the human body; capacity for pleasure and pain; cognitive capability (perceiving, imagining, thinking); early infant development; practical reason; affiliation with other human beings; relatedness to other species and to nature; humor and play; separateness.⁵⁵¹ These are more descriptive than prescriptive. The aforementioned list makes life worth living, but not all "shapes" are necessary to exist biologically. In the next section I retain the first three items—mortality; the human body; capacity for pleasure and pain—to situate human medical needs. For now, the contribution of Nussbaum is to recognize that each of these "shapes" is a necessary precursor to her second level of Basic Human Functional Capabilities.

Nussbaum's Basic Human Functional Capabilities include: being able to live to the end of a complete human life, as far as is possible; being able to have attachments to things and persons outside ourselves; and being able to laugh, play, and enjoy recreational activities.⁵⁵² Since these forms of human life are foundational—and in

⁵⁵¹ Ibid., 216-221.

⁵⁵² The full list follows. "1. Being able to live to the end of a complete human life, as far as is possible; not dying prematurely, or before one's life is so reduced as to be not worth living. 2. Being able to have good health; to be adequately nourished; to have adequate shelter; having opportunities for sexual satisfaction; being able to move from place to place. 3. Being able to avoid unnecessary and non-beneficial pain and to have pleasurable experiences. 4. Being able to use the five senses; being able to imagine, to think, and to reason. 5. Being able to have attachments to things and persons outside ourselves; to love those who love and care for us, to grieve at their absence, in general, to love, grieve, to feel longing and gratitude. 6. Being able to form a conception of the good and to engage in critical reflection about the planning of one's own

Nussbaum's mind, universal—they can be referred to as touchstones for assessing what comprises human needs in a theological anthropology. They can also identify what might be a human want by contradistinction. While some of her capabilities are relevant to health care—such as being able to live to the end of a complete human life, as far as is possible—others are not. Nussbaum's capabilities are offered as a discursive tool for theological ethicists working from an environmental bioethics framework.

While Martha Nussbaum does an excellent job at describing similarities across human cultures, one of the limitations of her approach is that it is not tempered by environmental considerations. Certain capabilities require carbon and financial expenditures—like shelter and food—and some do not—like imagination and laughter. Nussbaum writes as if natural resources were unlimited and as if the earth could support innumerable amounts of people. This approach is not sustainable, but can be corrected with a theologically based ecological consciousness, such as the one presented in this dissertation. A capabilities approach is therefore compatible with, but not fully satisfactory for, a Christian worldview.⁵⁵³ Therefore a theological view of human needs, as a complement to Martha Nussbaum's capabilities, will be presented later in this section.

Leaving my environmental objection to Nussbaum's capabilities approach aside, I concur with Nussbaum that her description of human existence is comprehensive and

life. 7. Being able to live for and with others, to recognize and show concern for other human beings, to engage in various forms of familial and social interaction. 8. Being able to live with concern for and in relation to animals, plants, and the world of nature. 9. Being able to laugh, to play, to enjoy recreational activities. 10. Being able to live one's own life and nobody else's; being able to live one's own life in one's very own surroundings and context." Ibid., 222.

⁵⁵³ However, Nussbaum's work has found cache in the ideas of feminist theology. Catholic Cristina Traina draws on Nussbaum for a normative anthropology that is telic, inductive, and flexible. See Cristina L. H. Traina, *Feminist Ethics and Natural Law: The End of the Anathemas* (Washington, DC: Georgetown University Press, 1999), chapter one.

universal, but not a complete view of foundational human capabilities. Her identification of capabilities as both “thick” and “vague”⁵⁵⁴ recognizes the endless permutations of functioning across human cultures and time and therefore is able to ground various basic human needs worldwide. From here, theological bioethicists can define medical needs.

B. Defining human medical needs

In the medical industry there is a difference between medical wants and medical needs, expressed by a sort of overlapping consensus, revealed in a variety of ways like articles published in peer-reviewed journals, general sentiments, and health insurance coverage. Medical procedures that necessitate disproportionate,⁵⁵⁵ extraordinary,⁵⁵⁶ or unusual care, as defined in medical literature, physician attitudes, and health coverage could be considered wants. A vast majority of doctors and average citizens would consider liposuction; laser eye surgery; reproductive surrogacy; voluntary amputation of health limbs and tissue; teeth bleaching; and elective joint replacement surgery health care wants. Health insurance policies generally do not cover these treatments, even in the developed world. Furthermore, medical wants can also be defined from an ecological perspective by determining the amount of resources they absorb. Medical developments, techniques, and procedures that do not draw attention from humanitarian organizations—such as the ones listed in later in this chapter—assist ethicists and policymakers in conceptualizing want as well. For the purposes of green bioethics, medical wants absorb

⁵⁵⁴ Nussbaum, “Human Functioning and Social Justice,” 214.

⁵⁵⁵ See, for example, Congregation for the Doctrine of the Faith, *Declaration on Euthanasia*, 5 May 1980, part IV.

⁵⁵⁶ See, for example, Joanne Lynn and James F. Childress, “Must Patients always be Given Food and Water,” in *Life Choices: A Hastings Center Introduction to Bioethics*, 2nd ed., Joseph H. Howell and William Frederick Sale, eds. (Washington DC: Georgetown, 2000), 291-304 at 297.

environmental resources with little concomitant medical benefit to the consumer, or concern for the common good.

Likewise there is a list of basically uncontested health care needs in medical literature, physician attitudes, and health coverage that provide proportionate, ordinary, and usual care. Some items that can be included here are: vaccines; vitamins; immunizations; pain relief; and clean water. Again, these needs might also be defined by humanitarian interest. In places where health care needs are scarce, organizations make concerted efforts to distribute them. These items do use resources, but with a tremendous return in value to human health.⁵⁵⁷

While resource use and medical care are in tension with each other, environmental bioethicists Jessica Pierce and Andrew Jameton propose, “Along with society at large, health care should accept a responsibility to meet current needs in ways modest and clean enough to be sustainable for centuries.”⁵⁵⁸ They utilize a common refrain that echoes the well-cited “Bruntland Report.” In the “Bruntland Report” sustainable development is defined as “meet(ing) the needs of the present without compromising the ability of future generations to meet their own needs.”⁵⁵⁹ A reconfiguration of health care that prioritizes needs and attenuates wants must be inscribed within environmental boundaries.

⁵⁵⁷ I am aware of the disability, feminist, queer critique about homogenizing concepts of health. Chapter five, in fact, will take up the issue of medicalization. However, the items that I am referring to as basic health care needs should neither be controversial, nor too narrow to be applied to any critique of “health,” be it from a disability, feminist, queer, or other perspective. See Kim Q. Hall, “Toward a Queer Crip Feminist Politics of Food,” *philoSOPHIA* 4, no. 2 (2014): 177-196.

⁵⁵⁸ Jessica Pierce and Andrew Jameton, “Sustainable Health Care and Emerging Ethical Responsibilities,” *Canadian Medical Association Journal* 164, no. 3 (2001): 365-369, at 367. Later published under the same title in Michael McCally, ed., *Life Support: The Environment and Human Health* (Boston: MIT Press, 2002), chap. 8.

⁵⁵⁹ Gro Harlem Brundtland, *Report of the World Commission on Environment and Development: “Our Common Future”* (New York: United Nations, 1987), 16.

In our shared world, resources are limited, but medical care is not distributed by need for the benefit of the common good. Rather, medical wants are issued by consumer demand and financial lucrativeness. This manner of health care delivery places undue pressure on the environment, while at the same time defying the common good which would ensure that all people have general access to health care before the rich receive special interest access to superfluous medical developments, techniques, and procedures. Health care needs must take priority and, I believe, will not conflict with environmental conservation if health care wants are limited. Since health wants tend to be technologically intensive and resource heavy, redistributing resources towards health needs, which tend to be simple and require few resource, should result in a net savings for the medical industry and planet. In economics, this is known as “efficiency.”⁵⁶⁰ As the old adage—attributed to Mahatma Gandhi—goes, “there is enough for everyone’s need, but not anyone’s greed.”

This section analyzes the three models of health care needs in order to provide a foundational list of widely accepted health care needs that can be prioritized in medical distribution. I again turn to Martha Nussbaum and continue to outline the implications of her capabilities for medical needs. Second, I provide a theological perspective on human needs through Kevin O’Rourke’s work in Catholic medical ethics. Christianity has a long history of providing medical care in line with human dignity and the common good. Third, I affirm both Nussbaum’s philosophy, and O’Rourke’s Catholic medical theology, by acknowledging the traditional “goals of medicine” which cut across public and

⁵⁶⁰ See Geoffrey Heal, “New Strategies for the Provision of Global Public Goods: Learning from International Environmental Challenges,” in *Global Public Goods: International Cooperation in the 21st Century*, Inge Kaul, Isabelle Grunberg, and Marc A. Stern, eds. (New York: United Nations Development Programme, 1999), 220-239.

religious bioethics in the Western world.⁵⁶¹ These three voices do not identify exactly the same human needs, but they do express consensus. In this way, human needs are established in some measure in order to enact environmental conservation by prioritizing human medical needs before medical wants.

1. Martha Nussbaum

For Martha Nussbaum, there are three capabilities that are relevant for health care. Since our human form of life includes mortality, Nussbaum believes that a basic capability is “being able to live to the end of a complete human life, as far as is possible; not dying prematurely, or before one’s life is so reduced as to be not worth living.”⁵⁶² In the world of health care this capability could translate to medicine that ensures preventable afflictions are avoided. For instance, diet management can reduce the risk of Type II diabetes and hypertension. Nussbaum’s capabilities—implemented in medicine—could also focus on avoiding accidental death that occurs due to negligence (such as drunk driving or traumatic head injury as a result of not wearing a helmet while riding a motorcycle). A further application of Nussbaum’s capabilities could manifest in health care measures, which make strides to prevent infant and child mortality.

Second, since we have a human body, a basic capability is being “able to have good health; to be adequately nourished; to have adequate shelter; having opportunities for sexual satisfaction; being able to move from place to place.”⁵⁶³ Food, shelter, sex, and mobility are components of “good health” for Nussbaum, rather than something medicine

⁵⁶¹ For a consideration of bioethics outside of Western academia, see Angeles Tan Alora and Josephine M. Lumitao, eds. *Beyond a Western Bioethic: Voices from the Developing World* (Washington DC: Georgetown University Press, 2001).

⁵⁶² Nussbaum, “Human Functioning and Social Justice,” 222.

⁵⁶³ *Ibid.*, 222.

can prescribe.⁵⁶⁴ Yet, the health care industry can facilitate access to some of these health needs. For instance, mobility is a basic human need because it is often a precondition to obtaining the other basic needs. Without mobility one cannot gather food or feed oneself. Without mobility one cannot construct or take refuge in shelter. Nussbaum analogizes, “human beings are, as the old definition goes, featherless bipeds—that is, creatures whose form of life is in part constituted by the ability to move from place to place in a certain characteristic way, not only through the aid of tools that we have made but with our very own bodies.”⁵⁶⁵ Therefore crutches, a wheelchair, or even a prosthetic leg might be considered medical needs since mobility enacts requirements for life essentials like food, shelter, and clothing.⁵⁶⁶

Nussbaum’s third basic capability that relates to medicine is “being able to avoid unnecessary and non-beneficial pain and to have pleasurable experiences,”⁵⁶⁷ since human beings can experience pleasure and pain. Here, the health care industry can participate in this capability through terminal sedation or palliative care, which mitigates pain. Other less drastic forms of pain relief and care might also emerge as a health care

⁵⁶⁴ Here I part with Nussbaum in the classification of “having opportunities for sexual satisfaction” as a basic capability related to embodiment. Nussbaum does clarify that sexual desire, “though less urgent as a need than the needs for food, drink, and shelter (in the sense that one can live without its satisfaction), sexual need and desire are features of more or less every human life.” Nussbaum, “Human Functioning and Social Justice,” 217. Nevertheless, the potential to exploit others in the face of this capability is too large to support. How many brothels, sexually transmitted diseases, rapes, sex trafficking victims, and pornographic films have been sanctioned under the false ideology that (men) must have opportunities for sexual satisfaction! Therefore I would argue that sexual satisfaction is not so essential to describing human capabilities that it ought to be listed along side food, shelter, and mobility.

⁵⁶⁵ Ibid., 217-218.

⁵⁶⁶ However, I want to be clear that including mobility in the list of human needs neither makes any type of mobility a human need, nor does it make unconditional mobility essential to human functioning. Access to a bicycle, a used Honda, or a new Maserati are preferences, not needs. But motion necessary to obtain food and shelter are needs. These can be achieved without technological intervention for many people, but not for all. Therefore mobility is a human need contingent, and tailored to, an individual person. The purpose of Nussbaum’s capabilities approach is to elevate each person to a basic level of functioning, which includes some sort of physical motion, not to provide unlimited mobility based on personal whims.

⁵⁶⁷ Nussbaum, “Human Functioning and Social Justice,” 222.

need—such as aspirin, anesthetics or opiates. At the same time, the second feature of this capability is beyond the reach of the health care sector. Pleasure is not an experience the medical industry can provide, but we might say the absence of pain facilitates the availability of positive experiences.

Nussbaum's capabilities related to medicine will be kept in mind as the discussion of health care needs continues. Catholic health care also provides a list of health care needs that are broadly agreed upon. Theologically based health care resonates with Nussbaum's catalogue of human capabilities. This provides her philosophy with a Christian direction to direct health care priorities and allows for fuller dialogue in a pluralistic context.

2. Kevin O'Rourke

Theological bioethicists claim that when we recognize "human dignity as inherent and equal, (it) restores medicine and the health professions to their true and proper activity."⁵⁶⁸ Father Kevin O'Rourke has articulated a view of human medical needs, based on Christian theology, which has the utmost concern for the holistic well being of the person. This approach can be added, and compared with, Martha Nussbaum's capabilities.

In 1979 Kevin O'Rourke, OP, JCD, founded the Center for Health Care Ethics (CHCE) at Saint Louis University (SLU). A part of the Department of Internal Medicine, "its original mission was to provide education and consultations particularly within the

⁵⁶⁸ Marina Casini, Joseph Meaney, Emanuela Midolo, Anto Cartolovni, Dario Sacchini, Antonio G. Spagnolo, "Why Teach 'Bioethics and Human Rights' to Healthcare Professions Undergraduates?," *JAHHR: European Journal of Bioethics* 52, no. 10 (2014): 349-368, at 353.

School of Medicine and throughout Catholic health care.”⁵⁶⁹ O’Rourke had a long and influential career. He was the founding editor of *Health Care Ethics USA* in 1993 and retired in 1999 after twenty years of service,⁵⁷⁰ while continuing to work in Catholic health care and writing and editing numerous books on theological medical ethics. His experience led to a theologically robust and well considered proposal for defining and addressing human medical needs.

In the second edition of *A Primer for Health Care Ethics: Essays for a Pluralistic Society*, O’Rourke identifies four categories of human needs and corresponding functions. For Christians in health care, these needs and functions have been thought to determine the “quest for health and limits of health care.” They are physiological, psychological, social, and creative/ spiritual needs.⁵⁷¹

Physiological aspects of health are met by food, shelter, clothing, and mobility. But, in a more specific medical way, physiological aspects of health include function of vital organs and pain management. Physiological health supports the means to achieve human needs; the purpose of medical need is therefore closely tied to human need. Various branches of internal medicine confirm this. Cardiologists and gastrointestinal physicians ensure that the blood stream can clear out toxins and the body can process nutrients. Dermatologists might address painful skin sores, or help to heal scars and wounds. The medical industry is primarily concerned with physiological health.

⁵⁶⁹ Saint Louis University, “Albert Gnaegi Center for Health Care Ethics: CHCE History,” 2015, at <http://www.slu.edu/bioethics/about/chce-history>

⁵⁷⁰ Ibid.

⁵⁷¹ Kevin O’Rourke, *A Primer for Health Care Ethics: Essays for a Pluralistic Society*, 2nd ed. (Washington DC: Georgetown University Press, 2000), 17.

Second, O'Rourke indicates humans have psychological needs, which may include rest and absence of stressful noises and situations.⁵⁷² Physicians must be aware of these needs, but often cannot affect the conditions needed to satisfy these needs; they cannot write a prescription for a quiet neighborhood. At the same time, doctors must not assume all health issues are only related to the body and never to the environment. The proliferation of psychologists, pastoral counselors, therapists, and social workers, which are adjuncts to the health care industry, may contribute to addressing these needs.

Third, there are social needs met through family, friends, and community.⁵⁷³ Again, the utilization of health care paraprofessionals is highlighted as medical doctors have little control over interpersonal relationships. Social medical needs are closely related to public health. Aspects of social health would then include proper sanitation facilities and clean, accessible water. It might also include freedom from polluted air and water, or enough vital nutrients in childhood to support a healthy body and mind suitable for social engagement and political involvement.

Fourth, and finally, O'Rourke believes that humans have spiritual and creative needs. These are mostly intangible, and relate to values or concepts like "love," "truth," or "knowledge."⁵⁷⁴ Medical doctors are less likely to address these needs, since they are not trained in philosophical disciplines. But again, doctors can be aware of the interplay between soul and body. Correlative aspects of spiritual health may include religious

⁵⁷² Ibid., 3.

⁵⁷³ Ibid.

⁵⁷⁴ Ibid.

imagination through prayer and meditation and can even be supported by a hospital chaplain,⁵⁷⁵ or the “physicians of the soul”—ministers and priests.

In sum, the Catholic articulation of health care originates from a theological view of the human being who has dignity, deserves respect and protection, and has needs. Once this theological anthropology has been expressed, bioethicists can then proceed to a medical view of how these needs can be addressed in medicine. O’Rourke believes that physiological function are connected to the other three functions, even if the health care industry does not regard them as symbiotic. O’Rourke readily admits, “physicians who do not realize the interrelatedness of all human functions might... be directed only to the betterment of physiological functions without regard for their relation to psychological, social, or spiritual functions.”⁵⁷⁶ While he is correct, modern medical specialization is also a function of the health care industry and citizens hardly expect a pluralistic society to meet every health need, while at the same time facilitating other human, non-medical needs. Therefore, I continue the focus on health care needs in the medical industry and conclude this section by providing a public conception of human medical needs. The traditional goals of medicine have been proposed by bioethicists at the Hastings Center and are a standard for the health care industry. When linked with Nussbaum and O’Rourke, a thicker catalogue of human health care needs emerges.

3. Traditional goals of medicine

In 1995 the Hastings Center published a first edition of *Life Choices: A Hastings Center Introduction to Bioethics*. In 2000, a second edition appeared. In the collected

⁵⁷⁵ George Fitchett, Kathryn A. Lyndes, Wendy Cadge, Nancy Berlinger, Erin Flanagan, and Jennifer Misasi, “The Role of Professional Chaplains on Pediatric Palliative Care Teams: Perspectives from Physicians and Chaplains,” *Journal of Palliative Medicine* 14, no. 6 (2011): 704-707.

⁵⁷⁶ O’Rourke, *A Primer for Health Care Ethics*, 18.

volume, the editors Joseph H. Howell and William Frederick Sale specified that the goals of medicine are intimately tied to a notoriously hard to define concept of “health.” Indeed, to even understand the concept of “health,” a constellation of ideas that revolve around notions of “disease,” “illness,” and “sickness” must also be defined.⁵⁷⁷ Yet it is still possible to work within these concepts to define the goals—or core values—of medicine, given a general conception of “health.”

In 1947, the World Health Organization (WHO) defined health as “complete physical, social and mental well being, and not merely the absence of disease or infirmity.”⁵⁷⁸ Howell and Sale depart from the standard WHO definition of health for the same reasons Kevin O’Rourke’s human needs cannot be fully realized by the medical industry: they are simply too large and expansive for health care to address. Certain aspects of health are contingent on factors outside of the medical industry’s jurisdiction. Instead, Howell and Sale strategically focus on health in the medical arena, and propose four basic goals of medicine, which are interlocking, and “have a greater or lesser importance under different circumstances.”⁵⁷⁹

The goals of medicine, as outlined by Joseph H. Howell and William Frederick Sale, include: the prevention of disease and injury, and the promotion and maintenance of health; the relief of pain and suffering caused by maladies; the cure of those with a malady, and the care of those who cannot be cured; and the avoidance of premature death and the pursuit of a peaceful death.

⁵⁷⁷ Joseph H. Howell and William Frederick Sale, “Specifying the Goals of Medicine,” in *Life Choices*, 62-73, at 62.

⁵⁷⁸ Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

⁵⁷⁹ Howell and Sale, “Specifying the Goals of Medicine,” 64.

The first goal—the prevention of disease and injury, and the promotion and maintenance of health—relate to both public health and preventive care. The authors note that smoking cessation programs would fall under this heading.⁵⁸⁰ I would also add many other public health measures like minimizing the use of pesticides,⁵⁸¹ requiring seatbelts, and curtailing obesity fall under this goal. The authors note that the economic benefits of these approaches need not be minimized when promoting these health measures, thus making them more likely to be accepted.

The second goal is the relief of pain and suffering caused by maladies. This has been a part of physician practice for centuries, yet pain relief is currently disrupted by inadequate resources in some areas, and under-treatment due to gender bias, as Diane E. Hoffmann and Anita J. Tarzian, pointed out in 2001.⁵⁸² The authors of *Life Choices* also include mental anguish and mental disease and disorders within this goal of medicine, noting that the failure of physicians to consider their patients as holistic beings, and not just bodies, “means psychological suffering may be overlooked altogether, or considered unimportant if noticed.”⁵⁸³ While I do not deny that mental suffering may be treated by the medical industry if there is a clinical-biological cause, we must not ignore that much mental suffering, especially in the developed world, is, from a Christian perspective, a matter of anxiety that is “the nature of man,” to quote Reinhold Niebuhr.⁵⁸⁴ The medical industry cannot address these spiritual tribulations.

⁵⁸⁰ Ibid.

⁵⁸¹ Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962).

⁵⁸² Diane E. Hoffmann and Anita J. Tarzian, “The Girl Who Cried Pain: A Bias Against Women in the Treatment of Pain,” *Journal of Law, Medicine and Ethics* 29, no. 1 (2001): 13-27.

⁵⁸³ Howell and Sale, “Specifying the Goals of Medicine,” 67.

⁵⁸⁴ Reinhold Niebuhr, *The Nature and Destiny of Man*, vol. 1 (New York: Scribner, 1964).

The third goal of medicine is the cure of those with a malady, and the care of those who cannot be cured. Under this goal, “medicine seeks to cure the malady, and return a patient to a state of normal wellbeing and function.”⁵⁸⁵ This goal of medicine is relevant for the next section on enhancement and function. At the same time, it should be noted that the “caring” aspect of this goal is especially important because it can encompass end of life issues, rehabilitation, support of those with chronic illness like HIV/AIDS, and the elderly. This adds a distinctly human aspect to the goals of medicine and reiterates the universality of human needs.

Fourth and finally, the avoidance of premature death and the pursuit of a peaceful death are listed as a goal of medicine. Death is inevitable for all people. Therefore doctors and patients alike must accept the limitations of medicine. The most obvious limitation of medicine and health care is that they can only delay—but never evade—death. The authors summarize this in a poignant way when they say it is “the primary duty of medicine and health care systems to help the young become old, and then... to help those that are old to live out the remainder of their lives in dignity and comfort.”⁵⁸⁶ The fourth goal of medicine coalesces with the other three, as medical care related to death may involve components of public health to prevent premature death—from the first goal; palliative care at the end of life—from the second goal; and a sensitivity and care for those who are dying—from the third goal. Human needs can be defined within the proposals of Nussbaum, O’Rourke, and Howard and Sale.

The intertwined concepts of capabilities, theologically articulated needs, and goals of medicine express basic human health care needs. For Nussbaum, these

⁵⁸⁵ Howell and Sale, “Specifying the Goals of Medicine,” 68-69.

⁵⁸⁶ Ibid., 71.

theologians, and bioethicists, human existence requires pain management, prevention of disease and premature mortality, adequate nutrition or nutritional supplements when necessary, clean drinking water, a functioning muscular-skeletal system, working vital organs, and mobility, as well as vaccinations for common diseases, a painless death and the management, treatment, and care of diseases that threaten life.

These human health care needs are meant as a floor and not a ceiling. For theologians, the “ontological notion of dignity marks a threshold, a kind of respect and care beneath which the treatment of any human being should never fall.”⁵⁸⁷ Certainly these health care needs can be elaborated upon. And, hopefully, they would continue to grow and expand as health care wants are curtailed, within the parameters of sustainability. Hospitals, in many instances, have recognized the dignity of humans and embodied the goals of medicine by caring for the sick and vulnerable.⁵⁸⁸ In the developed world this alone is no longer the case.

At this point in medical history, hospitals and health care facilities are overshooting the traditional goals of medicine, and have become unsustainable, and some would argue, unjust. Apart from a theological motivation for providing health care needs for the infirm, hospitals have moved towards commercialization. Human health care needs must form the basis of sustainable health care, superseding the current model of health care wants. The environmental crisis is an opportunity to return to health care for the common good: prioritization of human health care needs should be integrated to sustainable health care.

⁵⁸⁷ Casini, et al., “Why Teach ‘Bioethics and Human Rights,’” 360.

⁵⁸⁸ Guenter B. Risse, *Mending Bodies, Saving Souls: A History of Hospitals* (Oxford: Oxford University Press, 1999).

C. Summary

It should be asserted at this point that *prioritization* of health care wants, not rationing of health care needs is being proposed. There is no reason to believe that medical rationing of health care needs is either desirable or necessary for environmental conservation. Rather, “prioritization should lead to a definition of procedures that have either a high or a low priority. If resources are scarce, medically and democratically legitimated prioritization lists should be available from which doctors could decide which procedures to perform.”⁵⁸⁹ Health care needs like pain medication, vaccines, clean water and nutritious food, and devices that assist in mobility would not need to be prioritized under green bioethics;’ they should be available for all. In the next section, these needs appear under the headings of “function” and “quality of life.” Provision of these needs should not result in a diminishment of human capabilities or functioning, since these health care needs are intimately tied to the human condition.

A rational, discerning mind considers human needs, goals of medicine, and environmental limitation to support ethicists in creating categories for health care needs and health care wants. In theological terms, this is “prudential judgment.” The United States Conference of Catholic Bishops, in fact, describes prudence as “a thoughtful, deliberate, and reasoned basis for taking or avoiding action to achieve a moral good.”⁵⁹⁰ Using reason, which has been thought to be the unique attribute of humankind, prudential ethicists can encourage the medical industry to focus on health care needs instead of

⁵⁸⁹ In contrast, “Rationing, as the second step, would come into effect when prioritization is no longer an option because of even more scarce financial resources.” Thomas Kerz, “Germany: Where Are We Going?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (Springer: New York, 2013), 131-138, at 133.

⁵⁹⁰ United States Conference of Catholic Bishops, “Climate Change A Plea for Dialogue Prudence and the Common Good,” 15 June, 2001, at <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/global-climate-change-a-plea-for-dialogue-prudence-and-the-common-good.cfm>

health care wants for the sake of the common good and the integrity of the earth. And, if reason is regarded as too calculating, then I implore the reader to use emotions to consider the plight of the impoverished around the world, underscoring global justice and solidarity—as was shown in chapter three—and the preferential option for the poor. The task of theological ethics is ever changing with the new dilemmas of society; green bioethics must be adaptive to the realities of the current state of the medical industry, challenging as it can be at times. In the next section I address the difficulty in determining medical wants and medical needs beyond the list enumerated above.

III. Unclear Cases

There is, and will be, resistance to implementing conservation-based medicine as proposed. Undoubtedly, drawing the line between needs and wants in health care will not be simple. There will not always be a clear demarcation. Some objections to medical prioritization are made with a spirit of selfishness and existential anxiety for material luxuries, that is, the anxiety around limiting or refusing opportunities for consumerism. Other objections might come from the “merchants of doubt:” climate change deniers.⁵⁹¹ These are arguments that I consider irrational. There is almost no way that logic can change the mind of someone dogmatically set on consumption at any cost,⁵⁹² so I will not engage these arguments. However, other protests to medical prioritization come from ethicists who foresee logistical issues with the dichotomy of human and health care needs and want itself. This concern is worthy consideration.

⁵⁹¹ Naomi Oreskes and Erik Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (London: Bloomsbury Publishing, 2010).

⁵⁹² There are essentially two types of climate change deniers. Those who deny that climate change is human caused and those who deny that it exists. If the former is held, solutions such as climate change prevention and mitigation are still possible. If the latter, is the case, there are no opportunities for dialogue. Ken Wilson and Tri Robinson, “A Seven Year Plan for American Evangelicalism: The Challenges and Opportunities of the American Evangelical Awakening to Environmental Concern,” (Vineyard Community of Churches, 2009): 1-8, at 6. At <http://www.arcworld.org/downloads/Christian-Vineyard-Evangelical-7YP.pdf>

An appropriate resistance to speaking in terms of “health care wants” and “health care needs” comes from the recognition that there are cases where medicine is not at first glance a need or a want. For example, some medical offerings, such as prosthetics and wheelchairs may not seem “necessary,” since not every person requires them. However, since wheelchairs and prosthetics can address the human need for mobility,⁵⁹³ they should be regarded as medical needs under green bioethics. Furthermore, what may be extraordinary technology in developing countries, e.g., respirators for critically ill newborns,⁵⁹⁴ is generally not extraordinary in developed countries. Hence, contextualization plays into perceptions of needs and wants as well. Unclear cases—such as breast implants after mastectomy (not reconstruction of pectoral muscles), synthetic growth hormones, pharmaceuticals for “attention deficit disorder,” and amniocentesis—require attention because the improper categorization risks the provision of unnecessary and resource-draining health care wants, while also endangering access to health care needs.

To counter this humanitarian and ecological minefield, I propose two rubrics for distinguishing between human health care wants and needs in unclear cases. These rubrics recognize the continuum of medical developments, techniques, and procedures on the “want” / “need” scale. The first rubric distinguishes between enhancement and function and is commonly used in bioethics. The second is the difference between standard of living and quality of life. It is commonly used in theological ecology. These philosophical systems of bioethics and theological ecology approach green

⁵⁹³ James F. Keenan, “Enhancing Prosthetics for Soldiers Returning from Combat with Disabilities: The War Industry’s Impact on Bioethics,” *ET-Studies* 4, no. 1 (2013): 69-88.

⁵⁹⁴ Ingrid Miljeteig and Ole Frithjof Norheim, “My Job is to Keep Him Alive, but What about his Brother and Sister? How Indian Doctors Experience Ethical Dilemmas in Neonatal Medicine,” *Developing World Bioethics* 6, no. 1 (2006): 23–32.

bioethics from two different, but complementary, directions. They are not meant to produce a definitive catalog of human health care wants and needs, but rather move theological ethicists towards conservation by making the very amorphous concept of “wants” and “needs” a little more concrete. I argue that function and quality of life indicate medical need, while enhancement and standard of living indicate medical wants. The consideration of these rubrics occupies my next section. I first turn to a bioethical approach to this dilemma, which is continually being refined across medical sub-disciplines, including theology. My discussion is framed within the parameters of the health care industry. I am not concerned with enhancement outside of medical systems—whether through non-prescription drugs or vitamins, spiritual experiences, weight lifting at a gym, or the like.

A. Enhancement vs. function: the voice of bioethics

The bioethics model of enhancement and therapy is first way to differentiate between health care need and want in the medical industry. Currently, the “the four main (that is, most widely discussed) areas of human enhancement (are): emotional enhancement, cognitive enhancement, moral enhancement, and life extension.”⁵⁹⁵ As a foil to enhancement, which is generally regarded as non-medical, bioethicists have worked with the category of “therapy,” or “restoration of function,” which is generally deemed within the goals of medicine. Andrea Vicini relates,

Frequently, in bioethical discourse, the discussions on technological incorporation have been formulated in terms of the distinction between therapy and

⁵⁹⁵ Michael Hauskeller, “A Cure for Humanity: the Transhumanisation of Culture,” presented to 2nd International Conference on Medical Imaging and Philosophy: Medical Images and Medical Narratives in Late Modern Popular Culture, (Ulm, Germany, 12 September 2014) page 8 of pdf, at https://www.academia.edu/9517910/A_Cure_for_Humanity_The_Transhumanisation_of_Culture

enhancement. As this dyad goes, at least in most cases, therapies should not raise ethical concerns, because they aim at promoting healing and, as such, human flourishing. Enhancement, on the contrary, requires more careful discernment.⁵⁹⁶ The discussion surrounding these terms in America traces back to the 1990s.

In 1998 the distinction between enhancement and therapy was made for non-genetic research.⁵⁹⁷ The next year the journal *Christian Bioethics* addressed the subject. Editor Gerald P. McKenny favored the use of the terms “therapeutic” and “nontherapeutic” over “enhancement” and “therapy.”⁵⁹⁸ In the same volume of *Christian Bioethics*, James Keenan considered the concept of “virtuous perfection”—an even higher standard than enhancement.⁵⁹⁹ Recently Michael Hauskeller contended that the distinction between enhancement and therapy has been dissolved because the public perception is that enhancement *is* a type of therapy.⁶⁰⁰ Bioethics retains the distinction, however.

While the debate about these categories has hinged on the bioethical appropriateness of specific therapies, for the purposes of green bioethics the differentiation between enhancement and *function* will be used as it is more precise, and therefore less subject to misinterpretation, than “therapy.” Moreover, Howell and Sale’s third goal of medicine included “return(ing) a patient to a state of normal wellbeing and

⁵⁹⁶ Andrea Vicini, “Is Transhumanism a Helpful Answer to Contemporary Bioethical Challenges?,” Presented to *Ethics Grand Rounds* at the University of Texas Southwestern Medical Center, Dallas, TX. (11 March 2014), 21.

⁵⁹⁷ Erik Parens, “Is Better Always Good? The Enhancement Project,” in *Enhancing Human Traits: Ethical and Social Implications*, ed. Erik Parens (Washington, DC: Georgetown University Press, 1998), 1-28.

⁵⁹⁸ Gerald P. McKenny, “Enhancements and the Quest for Perfection,” *Christian Bioethics* 5, no. 2 (1999): 99-103, at 102. In his 1997 book he used the categories of frivolous (enhancement) and serious (therapy). Gerald P. McKenny, *To Relieve the Human Condition: Bioethics, Technology, and the Body* (Albany: State University of New York Press, 1997), 73.

⁵⁹⁹ James Keenan, “‘Whose Perfection is it Anyway?’: A Virtuous Consideration of Enhancement,” *Christian Bioethics* 5, no. 2 (1999):104-120.

⁶⁰⁰ Hauskeller, “A Cure for Humanity,” page 2 of pdf.

function.”⁶⁰¹ Further, function is also more pragmatic than enhancement and aligns with the broad notion of human medical needs.

I argue that medical developments, techniques, and procedures that provide functioning (including but not limited to capabilities related mobility; the prevention of injury and the promotion and maintenance of health; the relief of pain and suffering caused by maladies; and the care and cure of those with a malady) are health care needs. In contrast, medical developments, techniques, and procedures that aim above what is necessary for human functioning, as stated above, are wants. Functioning brings a person’s body⁶⁰² to a level necessary for satisfying physical human needs, in a way appropriate to age and other limits of the individual. This was apparent in Howell and Sale’s third goal of medicine, discussed above.

Function does not have to be perfect, but as Daniel Callahan would say, “decent.”⁶⁰³ While even the term “decent” is open to interpretation—as are other words I am utilizing in this chapter—it is pithy enough to convey a general sense of use, without digressing into long, qualifying sentences at each turn. Likewise, enhancement is difficult to define, but in general denotes a base line of needs already met, that is then added to over and above the level for “decent” biological functioning using the medical system, broadly conceived. The approach that I propose to determining function or enhancement has two parts. The first is grounded in human need and the second is connected to the

⁶⁰¹ Howell and Sale, “Specifying the Goals of Medicine,” 68-69.

⁶⁰² I am choosing not to address mental function here because I have serious reservations about the potential to medicalize mental “disorders” and I feel that some clinically accepted forms of maladjustment can be embellished (such as “trauma”). See Thomas Szasa, *The Medicalization of Everyday Life: Selected Essays* (Syracuse: Syracuse University Press, 2007); Didier Fassin and Richard Rechtman, *The Empire of Trauma: An Inquiry into the Condition of Victimhood*, trans. Rachel Gomme (Princeton, NJ: Princeton University Press, 2009).

⁶⁰³ Daniel Callahan, “Sustainable Medicine,” *Project Syndicate*, 20 January 2004, at <http://www.project-syndicate.org/commentary/sustainable-medicine>

framework of enhancement versus function.

This two-step consideration is important because in some cases a medical development, technique or procedure seems likely to meet the criteria for medical need, but it is actually a want. One illustration is “hormone replacement therapy” (HRT), a “medical” treatment given to pre-, peri-, or post-menopausal women to “restore” female hormones, like estrogen and progesterone, that decline in the later years of life. While these hormonal decreases are a natural part of the lifecycle which every woman who lives to maturity will encounter, in the developed world it has been suggested that providing women with synthetic hormones will alleviate some of the symptoms of menopause—like sweating, decreased libido, and bone density loss—by manipulating hormonal levels. HRT does not eliminate menopause itself.

HRT prescribed for menopause clearly stimulates the endocrinological function by ingestion of synthesized hormones, but in this case does not provide function of a human need, that is, a need for nutrition, shelter or mobility, cure or care for disease. (I do not consider the natural effects of aging and menopause a disease.) At the same time, HRT highlights health disparities worldwide. Women who die before they are 40 are never offered HRT for menopause because they do not live long enough to feel the effects of menopause. It is largely an offering for women who have secured an extended lifespan and desire medical intervention for a non-medical inconvenience. HRT is a low priority, even within medical care, because the basic needs that are a prerequisite for avoiding a premature death have already been provided to these women while other women do not have the opportunity for longevity.

HRT is, furthermore, harmful and carcinogenic.⁶⁰⁴ It is linked to an increase in the risk of stroke and venous thromboembolic events, and “has little if any benefit” according to the *Cochrane Heart Group* journal.⁶⁰⁵ HRT is thus not only outside of the goals of medicine; it creates medical problems as well. This treatment, on the surface, appears to address a medical need related to functioning, but upon deeper investigation it is a mirage. HRT does not address a human need—the first of my two-step consideration—and is therefore enhancement. HRT does not need to move on to the second of my two-step consideration. Medical developments, techniques, or procedures that address a human need in the first part of the definition do require analysis of the second step. In the second part developments, techniques, or procedures must be assessed for each person in their stage of life and balanced with the resources available.

In both function and enhancement, age is an important consideration because it harmonizes bioethics with human limitation—an existential matter that cannot be alleviated by medicine. Martha Nussbaum warns that “we cannot assume that the correct evaluative conclusion to draw is that we should try as hard as possible to get rid of the limit altogether.”⁶⁰⁶ Likewise, theologian Nancy M. Rourke reminds us, “humans can flourish when certain elements are weaker than average or even absent (such as arms, legs, eyesight, hearing ability, tonsils, fertility, to name a few).”⁶⁰⁷

⁶⁰⁴ Collaborative Group on Epidemiological Studies of Ovarian Cancer, “Menopausal Hormone Use and Ovarian Cancer Risk: Individual Participant Meta-Analysis of 52 Epidemiological Studies,” *The Lancet* Published Online 13 February 2015, DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)61687-1](http://dx.doi.org/10.1016/S0140-6736(14)61687-1)

⁶⁰⁵ Henry Boardman, Louise Hartley, Anne Eisinga, Caroline Main, Marta Roqué i Figuls, Xavier Bonfill Cosp, Rafael Gabriel Sanchez and Beatrice Knight, “Hormone Therapy for Preventing Cardiovascular Disease in Post-Menopausal Women,” *Cochrane Heart Group* published Online 10 March 2015, DOI: 10.1002/14651858.CD002229.pub4

⁶⁰⁶ Nussbaum, “Human Functioning and Social Justice,” 220.

⁶⁰⁷ Nancy M. Rourke, “The Environment Within: Virtue Ethics,” in *Green Discipleship: Catholic Theological Ethics and the Environment*, Tobias Winright, ed. (Winona, MN: Anselm Academic, 2011), 163-182, at 166 note 5.

Human limitation as a framework for comprehending the discussion of enhancement and function in bioethics is especially pertinent when age-related conditions like “low testosterone,” “infertility,” and “slow metabolisms” are defined as a medical deficiency, thereby requiring medical intervention for “function.” I believe that, given our limited resources, the drastic need for just distribution of medical care, and the current environmental crisis, technological treatments for these conditions should not be prioritized in the medical industry; they are ways of enhancing life and not related to health care needs. Of course, non-medical, low-carbon approaches, like changes in diet and exercise, homeopathy, and alterations in lifestyle should be commended. I will discuss medicalization of age-related conditions in more detail in chapter five. For now, I am concerned with “decent” function of the individual within the health care industry because of the need for environmental conservation and support of the common good. As a side note, even if conservation was not an urgent priority, ethicists could still make an argument for prioritizing function above enhancement based on justice, access, preference for the poor, or a theological anthropology of human dignity. Here, I maintain the conservationist strand in arguing for “decent” function as a human need.

Returning to the task of defining “function” for individuals, we observe that, positively, each person is a mixture of endowed, natural (biological, genetic) characteristics, capabilities, and developed strengths. Of course, people are also limited in various ways. Each patient must be assessed relative to her own functioning that is either natural or developed, against others in a similar state of life, and people across the globe. A young girl might have an aptitude for speed, but she can also become a fast runner through coaching and determination. Naturally, certain physical abilities will be out of

range for some people. A paraplegic could not become a fast runner through training (at this time in medical history), although she might be an Olympic wheelchair race athlete through training.⁶⁰⁸ The goals of medicine are not to homogenize people into one mold of “ability,”⁶⁰⁹ but rather work with what Jean-Jacques Rousseau would consider to “natural inequalities”⁶¹⁰ to bring a person to “decent” functioning. It is important to keep this at the forefront of discussions on medical needs so that the medical industry does not permit some people to become “super-human” (or transhuman) while others languish without health care needs met.

In addition to these natural and developed capacities, bioethicists must recognize that the ability of a body changes over time. Therefore, doctors should not provide health care, which exceeds the bounds of a naturally deteriorating body in the quest for eternal life, vitality, and vigor. Middle adulthood modifies the body. A slower metabolism, decreased fertility, aching joints, and altered hormonal levels are biological inevitabilities, although certainly the agent plays a role in hastening or hindering these gerontological outcomes, some of which are welcomed, others may be resisted.⁶¹¹ Then, late adulthood is often accompanied by further physical change, e.g., osteoporosis and

⁶⁰⁸ The “disabled hero” does not have to be the goal of “decent” functioning. Susan Wendell writes, “Disabled heroes are people with visible disabilities who receive public attention because they accomplish things that are unusual even for the able-bodied.” Susan Wendell, “Toward a Feminist Theory of Disability,” *Hypatia* 4, no. 2 (1989): 104-124, at 116. The paraplegic Olympic wheelchair race athlete is illustration of an upper limit that does not cross over into enhancement, unlike a case of voluntary amputation where “one soldier returned to his doctor thirty months after his first amputation asking for an additional nine inches to be removed so that he could benefit from a new prosthesis.” Keenan, “Enhancing Prosthetics,” 77.

⁶⁰⁹ Mary Jo Iozzio, “Genetic Anomaly or Genetic Diversity: Thinking in the Key of Disability on the Human Genome,” *Theological Studies* 66, no. 4 (2005): 862-881.

⁶¹⁰ Jean-Jacques Rousseau, *Discourse on the Origin of Inequality*, trans. Donald A. Cress (Indianapolis: Hackett, 1992).

⁶¹¹ The freedom from the fear of unwanted pregnancy due to menopause is often cited as a great advantage of bodily “decline” among women. For instance, the Presbyterian Church (United States of America) acknowledges, “Menopause is a potentially liberating experience and many women experience it as such, enjoying a new found freedom from the worries of pregnancy and childrearing.” Presbyterian Church (U.S.A.) 203rd General Assembly, *Presbyterians and Human Sexuality* (Louisville, KY: Office of the General Assembly Presbyterian Church (U.S.A.), 1991) 1-129, at 60.

dulling of the physical senses, in addition to mental decline. Therefore, medical consumers cannot demand a full reversal what is a normal, natural part of life, although certainly health care may offer simple treatments, in line with the third principle of green bioethics proposed in the next chapter.

Likewise, there may be many impairments or conditions related to ageing such as Alzheimer's, or decreases in stature due to decreased bone density, that can be addressed as a human need, but only once we recognize that the prevalence of certain "diseases" and "disorders" among elderly populations are disproportionately distributed throughout the world, indicating that there are cultural, personal, and social components attached to some age-related degenerations.⁶¹² This situatedness of the person within a community is often lacking in individualistic discussions of enhancement, which only consider a person's medical desires.⁶¹³ Both situatedness and medical need must be pondered to adjudicate between function and enhancement, again reiterating the difficulty in defining wants or needs absolutely.

In fact, the case of Alzheimer's illustrates the connections between country of residence (which is related to many other aspects of life like education, nutrition, environmental health of the country, medical access, and personal agency) and health care needs. "Worldwide, nearly 36 million people have Alzheimer's or a related dementia. Alzheimer's and dementia are most common in Western Europe (North

⁶¹² Many studies are done on aging each year. I will highlight one, which connects a person's dietary choices with arthritic development, thus demonstrating the connection between natural decline and person agency in disease and disability development in some cases. Pradeep K. Sacitharan, Sarah J.B. Snelling, James R. Edwards, "Aging Mechanisms in Arthritic Disease," *Discovery Medicine* 14, no. 78 (2012): 345-52.

⁶¹³ Although Juengst does distinguish between enhancement and prevention (instead of function), there is no international awareness (i.e. global justice) in articles like Eric T. Juengst, "Can Enhancement be Distinguished from Prevention in Genetic Medicine?," *The Journal of Medicine and Philosophy* 22, no. 2 (1997): 125-142.

America is close behind) and least prevalent in Sub-Saharan Africa.”⁶¹⁴ Causes of Alzheimer’s are still being studied, and it is too early to determine if these medical treatments will address function or enhancement. At this time, the health care system can mitigate these disparities through public and population health that are constitutive of what I consider a health need and as a goal of medicine, while remembering that the distinction between enhancement and “decent” functioning depends not only on demographics, but also individuals. Doctors are not obligated to exceed the bounds of health care by providing enhancement for an individual or a group. Nor would it be ecologically expedient to do so.

In another example, we might look at elective hip and joint replacement. Oftentimes, these are considered “routine” procedures for a person (usually a white, middle-upper class person with health insurance) who begins to have joint pain. Joint pain is oftentimes lifestyle related, and more prevalent in the overweight and obese who carry extra weight, thus putting undue pressure on their joints and bones.⁶¹⁵ Again, it is a “medical” problem for people who live past a certain age, and also have many other health needs—from health care access to ample food—available to them.

Elective hip and joint replacement does attend to the human need for mobility and therefore could be considered a medical need.⁶¹⁶ It is not unethical *per se*. However, human mobility can be achieved in less resource heavy ways—like prevention first,

⁶¹⁴ Alzheimer’s Statistics, “Alzheimer’s Worldwide,” 2014, at <http://www.alzheimers.net/resources/alzheimers-statistics/>

⁶¹⁵ National Institute for Health and Care Excellence (NICE), “Offer Weight Loss Surgery to Obese People with Diabetes,” *Nice*, 27 November 2014, at <https://www.nice.org.uk/news/article/offer-weight-loss-surgery-to-diabetics>

⁶¹⁶ Sarah Derrett, Charlotte Paul and Jenny M. Morris, “Waiting For Elective Surgery: Effects on Health-Related Quality of Life,” *International Journal for Quality in Health Care* 11, no. 1 (1999): 47-57.

weight loss second, and then non-invasive physical therapies⁶¹⁷—and still achieve the need for mobility. Therefore, it appears that this type of medical procedure is generally used for enhancement, as defined in this chapter. The elective nature of some hip and joint replacement indicates enhancement as well. It might also be noted that elective hip and joint replacement challenge the first principle of green bioethics discussed in the last chapter. That is, special interest access should not be given to some in the industrialized world before those in the developing world have general access to rudimentary devices to activate mobility, like manual wheelchairs and crutches.

Green bioethics must consider what can reasonably be expected from health care, given that we live in a global society with shared resources. Lisa Sowle Cahill verifies, “practices that favor the privileged and enable their free choices and access to resources carry a negative impact for global health patterns and the resources and choices of the poor.”⁶¹⁸ Thus, any given medical procedure must be set in the context of an ethical system rooted in the common good, with a comprehensive look at the individual aptitudes and capabilities, stage of life, and social location. These factors would assist in determining enhancement or function of a particular medical procedure, in a particular time and locale, for a specific person.

Finally, it might also be observed that many times enhancements have negative externalities that require medical attention. One *BMJ* article reports, “Major elective surgery contributes to intensive care occupancy, with a significant mortality rate.”⁶¹⁹

⁶¹⁷ Brigham and Women’s Faulkner Hospital, “From the Simple to the Complex, Patients Find Complete Foot and Ankle Care at Brigham and Women’s Foot and Ankle Center,” Marketing and Public Affairs Newsletter, Boston, MA. n.d.

⁶¹⁸ Cahill, *Theological Bioethics*, 3.

⁶¹⁹ Jonathan Wilson, Ian Woods, Jayne Fawcett, Rebecca Whall, Wendy Dibb, Chris Morris, and Elizabeth McManus, “Reducing the Risk of Major Elective Surgery: Randomised Controlled Trial of Preoperative Optimization of Oxygen Delivery,” *BMJ* 318, no. 7191 (1999): 1099-1103, at 1099.

Iatrogenic and nosological infections, side effects, and damage to the person—both physical and psychologically—accompany surgery, drugs, and manipulations of the body—such is the case with HRT, indicated by reports of increased cancer, blood clots, and stroke.

While additional medical problems may be present in procedures that address medical functioning as well,⁶²⁰ the risk involved in exposure to other diseases and mortality for the sake of enhancement are disproportionate to the medical benefit, which is always zero for enhancement, since by definition it is not a *medical* concern.⁶²¹ Moreover, pastors and hospital chaplains ought to consider the spiritual ramifications of consumer-based, elective medical enhancement.

Pope Paul VI rightly noted in *Populorum Progressio* that, “the exclusive pursuit of material possessions prevents man’s (sic) growth as a human being and stands in opposition to his true grandeur. Avarice, in individuals and in nations, is the most obvious form of stultified moral development.”⁶²² Theologians and philosophers question what the unlimited acquisition and manipulation of the body does to the soul.⁶²³ Medical enhancements fester in a culture that sees everything, and everyone, as infinitely upgradeable. In this mindset, Pope John Paul II wrote, “‘consumption’ or ‘consumerism’ involves so much ‘throwing-away’ and ‘waste’. An object already owned but now

⁶²⁰ Ibid.

⁶²¹ Bioethicists recently grappled with the ethics of allowing a penis transplant that is not lifesaving and so cannot “balance the risk of the operation against a certain death.” That is, there are only risks in the surgery, without addressing a life-threatening condition or extending life span. The procedure was controversial, but performed anyway. James Gallagher, “South Africans Perform First ‘Successful’ Penis Transplant,” *BBC News*, 13 March 2015, at <http://www.bbc.com/news/health-31876219>

⁶²² Pope Paul VI, *Populorum Progressio: On the Development of Peoples* (26 March 1967), 19.

⁶²³ Kathy McReynolds, *Enhancing Our Way to Happiness?: Aristotle Versus Bacon on the Nature of True Happiness* (Lanham MD: University of American Press, 2004), 2.

superseded by something better is discarded, with no thought of its possible lasting value in itself.”⁶²⁴

In bioethics, this economic mindset turns the body into a repository for purchases and the medical industry into the store of our desires. I believe the question theological bioethicists must address is not whether, as James Keenan asks, the “anthropological vision” for humanity can include enhancement,⁶²⁵ but rather if the ecological vision for humanity can include unlimited medical offerings. Even in cases where enhancement is offered as a means to conservation,⁶²⁶ green bioethics does not assume more medical consumption is a solution to climate change, as discussed in chapter two. Theological ecology indicates that bioethicists can separate medical developments, techniques, and procedures by function and enhancement as well as quality of life or standard of living. This discernment is the objective of the next section.

B. Quality of life vs. standard of living: the voice of theological ecology

It is undeniable that the earth has a limited amount of resources. Consequently, it is necessary to curtail some of the environmental “spending” in the developed world health care system. Removing basic human needs would be monstrous, but ceasing to offer certain unnecessary, desired, and superfluous treatments that satisfy the wants of certain well-off humans is not unethical. Catholic theologian Joseph Blenkinsopp

⁶²⁴ John Paul II, *Sollicitudo Rei Socialis: For the Twentieth Anniversary of Populorum Progressio*, 1987, 28.

⁶²⁵ Keenan, “Whose Perfection,” 114.

⁶²⁶ Matthew Liao, Anders Sandberg, and Rebecca Roache, “Human Engineering and Climate Change,” *Ethics, Policy and the Environment* 15, no. 2 (2012): 206-221. Liao, et al.’s approach could reflect the relational anthropology that James Keenan suggests above, but I would be cautious about the “Technology as Liberator” paradigm that promotes geo-engineering and genetic intervention, rather than taking a precautionary approach to technology, and maintaining the conservationist philosophy. For a panorama of views on technology itself, from a theological perspective, see Ian Barbour, *Ethics in an Age of Technology* (New York: HarperCollins, 1992), 3. Barbour writes of the three views of technology (positive, negative and ambiguous), which correlate to three headings: “Technology as Liberator, Technology as Threat, and Technology as Instrument of Power.”

contended, “If we take the biblical tradition seriously, we will conclude that the moral goal of retrenchment is... also inseparable from some degree of equity in the distribution of wealth and resources.”⁶²⁷ This includes excessive distribution of health care wants in a time of ecological crisis. Theologians concerned with climate change have utilized various lexicons to arbitrate necessary and desired goods. A second way to differentiate between health care need and health care want, therefore, emerges from a theological environmental model.

Pope John Paul II warned against consumptive impulses, lamenting, “the values of *being* are replaced by those of *having* (and) the only goal which counts is the pursuit of one’s own material well-being. The so-called ‘quality of life’ is interpreted primarily or exclusively as economic efficiency, inordinate consumerism.”⁶²⁸ Likewise, environmental conservationist Paul Ehrlich differentiates between “standard of living” and “quality of life.”⁶²⁹ Undoubtedly, “standard of living” and “quality of life” have some overlap in the general sense.

A certain “standard of living,” which includes safe housing, transportation, nutrient-dense food, and opportunities for recreation also indicates a “quality of life.” It is not the minute degrees between “standard of living” and “quality of life” which is the concern, but rather the understanding that in both theology and ecology, standard of living is concerned with the *systematic pursuit* of increase of material possessions—wants—while quality of life focuses on authentic humanity: love, enjoyment of nature,

⁶²⁷ Joseph Blenkinsopp, “Global Stewardship: Toward an Ethic of Limitation,” in *The Challenges of Global Stewardship: Roman Catholic Response*, Maura Ryan and Todd David Whitmore, eds. (Notre Dame, IN: University of Notre Dame Press, 1997), 38-53 at 50.

⁶²⁸ John Paul II, *Evangelium Vitae: To the Bishops, Priests and Deacons Men and Women Religious Lay Faithful and All People of Good Will on the Value and Inviolability of Human Life*, 1995, 23.

⁶²⁹ Paul Ehrlich, “Ecoethics: Now Central to all Ethics,” *Bioethical Inquiry* 6 (2009): 417-436.

health, and inner peace (needs). This framework of “quality of life” and “standard of living,” used in theological ecology, must inform the medical industry. The medical dichotomy of “standard of living” and “quality of life” can indicate medical wants or need.

Here it must be noted that using the phrase “quality of life” in ecological discussions differs from the typical use of the phrase in the medical industry. In ecology, quality of life is contrasted with consumerism and lifestyles of luxury, or “standard of living.” In the medical industry, quality of life sometimes refers to end of life issues, especially Physician Assisted Suicide (PAS) and euthanasia.⁶³⁰ I am using the ecological model of “quality of life” in this section to determine if a particular medical development, technique, or procedure fits within green bioethics, and not to say anything about the acceptability of PAS or euthanasia. Even within the conservationist approach to quality of life and standard of living, however, there is debate about what can be included in these two categories, just as in the division between enhancement and function.

For instance, penicillin might treat an ailment of an employee, thus allowing her to work and earn money to provide for herself. In this case, the medicine has increased her quality of life, as she can return to productive labor. But penicillin has a second and simultaneous effect of increasing the employee’s standard of living, as she is able to purchase consumer goods from her wages. This example indicates how a health care need can increase standard of living and quality of life, since it addresses “having” and “being.” The primary use of penicillin, however, is quality of life and it is therefore a health need, with secondary (medically irrelevant) effects. Yet there are other medical

⁶³⁰ Luka Tomašević, “Development and Perspectives of Theological Bioethics,” *Croatian Medical Journal* 54, no. 1 (2013): 86-88, at 86.

procedures that are primarily wants and are purchased beyond the pursuit of quality of life.

Offerings of the medical industry that increase standard of living, and are provided to satisfy medical wants, tend to be linked with economics, acquisitiveness, and luxury goods. A person might consume pills that mask his lactose-intolerance, so he can indulge in rich, dairy foods. Another person might use hormonal contraception to ensure she does not menstruate during her beach honeymoon.⁶³¹ An 84-year old retiree might seek shoulder surgery so he can play golf in his gated retirement home.⁶³² These desires are not inherently immoral, but rather cannot be conscientiously fulfilled in a world with global health disparities, limited ecological resources, and unmet health care needs. The aforementioned offerings are medical wants and indicate standard of living.

As the American retail analyst Victor Lebow notoriously put it in 1956:

Our enormously productive economy...demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek out spiritual satisfaction, our ego satisfaction, in consumption...we need things consumed, burned up, worn out, replaced and discarded at an ever increasing rate.⁶³³

Medical purchases that drive standard of living are detrimental to the environment because they use resources unnecessarily.

⁶³¹ In less trivial situations, such as combat, menstrual suppression could be considered quality of life and medical need, especially when women are in extreme geographical locations without sanitation facilities. The threat of rape and unwanted pregnancy also may indicate a reason to take contraception. See N.C. Powell-Dunford, A.S. Cuda, J.L. Moore, M.S. Crago, A.M. Kell, P.A. Deuster, "Menstrual Suppression for Combat Operations: Advantages of Oral Contraceptive Pills," *Women's Health Issues* 21, no. 1(2011): 86-91; Aline H. Kalbian, *Sex, Violence, and Justice: Contraception and the Catholic Church* (Washington DC: Georgetown University Press, 2014), 117.

⁶³² Brigham and Women's Faulkner Hospital, "From the Simple to the Complex."

⁶³³ Quoted in Northcott and Scott, *Systematic Theology and Climate Change*, 17.

In other cases, medical wants are not covered by insurance because they are categorized as elective and not relevant to physical or mental health. For instance, health care policies do not cover a surrogate gestational carrier because, among other reasons, using a surrogate mother does not cure, treat, or prevent disease. This is an accurate assessment of a health care want. Gestational surrogacy may be used by heterosexual couples, same-sex female couples, and single women if a woman cannot or does not want to not carry a pregnancy to term. It may also be used by same-sex male couples and single men who do not have a uterus with which to gestate a fetus. It is a part of the elective assisted reproductive technologies industry and relies on in-vitro fertilization (IVF) or artificial insemination (AI), depending on the desires and sex-configuration of the people/ person purchasing the services of the surrogate mother.

About 1% of known assisted reproductive technologies use surrogates in the United States, and nearly 750 surrogacy contracts are reported each year.⁶³⁴ Numbers for international surrogacy, or “reproductive tourism,” are much higher. Although difficult to get an accurate number on international surrogacy, some have estimated 2,000 babies are born each year through Indian surrogate women alone.⁶³⁵ International reproductive tourism, just like domestic surrogacy, is undoubtedly a health care want. It neither addresses health care needs of the person who holds the health insurance policy, nor the woman undergoing IVF/AI.

⁶³⁴ Stephanie Saul, “21st-Century Babies: Building a Baby, With Few Ground Rules,” *The New York Times*, 12 December 2009 at

http://www.nytimes.com/2009/12/13/us/13surrogacy.html?pagewanted=1&_r=1&th&emc=th

⁶³⁵ Jennifer Kirby, “These two Americans want Babies through Indian Surrogates. It’s not Been Easy,” *New Republic*, 10 December 2013, at <http://www.newrepublic.com/article/115873/fertility-tourism-seeking-surrogacy-india-thailand-mexico>

While IVF or artificial insemination is considered by some to be a medical procedure to remedy infertility⁶³⁶ surrogate motherhood is a third party contract. Surrogate mothers do not make the individual or couple who want biological children any healthier. Neither does it make the surrogate healthier! Pregnancy can only cause physical harm,⁶³⁷ no matter how emotionally desirable it is. Pregnancy and childbirth can never make a person healthier⁶³⁸ and women are fortunate if they emerge from pregnancy and childbirth unscathed by damage to organs, stitches, prolapsing, or other hazards. Many of these were documented extensively in chapter three.

Assisted reproductive technologies are beyond the traditional goals of medicine. They are not health care needs, but rather a lifestyle choices which feed into the social capital⁶³⁹ of having biological, usually white, children⁶⁴⁰ and avoids the social stigma of being childless/childfree.⁶⁴¹ Lisa Sowle Cahill warns that these reproductive technologies are bought and sold “in a rarified atmosphere of medical sophistication, consumer power,

⁶³⁶ The American Society for Reproductive Medicine, “State Infertility Insurance Laws,” 1996-2013, at <http://www.asrm.org/insurance.aspx>

⁶³⁷ *People of the State of Michigan v. Jason William Cathey* (261) Mich. App. 506. Submitted 4 February 2004. Decided 6 April 2004, II. C. 666. The decision states, in part “by necessity, a woman’s body suffers ‘physical damage’ when carrying a child through delivery... Apart from the nontrivial discomfort of being pregnant (morning sickness, fatigue, edema, back pain, weight gain, etc.), giving birth is intensely painful’... These types of physical manifestations to a woman’s body during pregnancy and delivery clearly fall within the definition of ‘bodily injury,’ for the manifestations can and do cause damage to the body.”

⁶³⁸ Studies indicate the nulliparousness is associated with breast cancer diagnosis after 40. However, it is unclear what the connection is and, conversely, multiple full-term pregnancies, which seem to decrease breast cancer diagnosis after 40, increase diagnosis before 40. Given the other hazards of pregnancy, not to mention the intense obligation to raise a child to maturity, it would be reckless to recommend pregnancy as a prophylaxis to later-life breast cancer. See J. L. Kelsey, M. D. Gammon, and E. M. John, “Reproductive Factors and Breast Cancer,” *Epidemiological Review* 15, no. 1 (1993): 36-47.

⁶³⁹ Julian Gill-Petersen, “The Value of the Future: The Child as Human Capital and the Neoliberal Labor of Race,” *WSQ: Women’s Studies Quarterly* 43, nos. 1 & 2 (2015): 181-196.

⁶⁴⁰ Willis Jenkins rightly notes that in our world children are often made for instrumentalized reasons, such as “to display social status.” Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (Washington DC: Georgetown University Press, 2013), 253.

⁶⁴¹ Kristin Park, “Stigma Management among the Voluntarily Childless,” *Sociological Perspectives* 45, no. 1 (2002): 21-45.

free-form family building, and for-profit healthcare.”⁶⁴² And yet commercial surrogacy stands under the umbrella of the medical industry because it requires medical intervention.⁶⁴³ Using a surrogate mother enhances the standard of one’s living situation, as the person who has hired the surrogate retains full freedom from gestation for nine months, avoids the physical pain of breast-feeding, and of course, does not put her body through a physically altering and injurious condition like pregnancy. Surrogacy is a medical want.

Multiple other examples of “medical” developments, techniques, and procedures are offered under the aegis of medicine, but are not really such. Any sort of “aesthetic medicine” is included here, although they vary in moral egregiousness defined in terms of resource use, harm to women, and disregard for the common good. There are a proliferation of “cosmetic dentistry,” “aesthetic dermatology,” “aesthetic vein centers,” surgery, body sculpting, spas and “bootcamps” for medical consumers to choose from.⁶⁴⁴ Of course, society puts immense pressure on people, especially women, to cultivate a polished outward appearance. Bioethicists and clinical ethicist should bring this to light, while at the same time being clear that aesthetic medicine increase standard of living and not quality of life. They are, in general, medical wants and a part of human “having.” And aside from environmental waste, perhaps the saddest part of this form of medical consumerism is that these health care wants are purchased under the belief that they will

⁶⁴² Cahill, *Theological Bioethics*, 193.

⁶⁴³ It might be objected that any procedure done by a doctor in a health care facility, like surrogacy, can be considered a health care need. It would seem that the very presence of physicians and health care clinics necessarily entail medicine. Many people believe any and all procedures that physicians perform are medical “needs.” Fertility treatments do depend on the research of scientists and training of doctors, but are luxury goods; they are mis-categorized as medicine.

⁶⁴⁴ Boston alone has hundreds of these places. Among them are: Centre Dermatology in Newton, n.d., at <http://www.badenmd.com>; Vein and Aesthetic Center of Boston, n.d., at <http://veinfix.com/>; the Aesthetic Wellness Center, n.d., at <http://www.awcenter.com/>; and Dental Arts of Boston, n.d., at <http://www.bostoncosmeticdentistma.com/>.

address the need for a higher quality of life and contribute to a sense of “being.” Yet medical consumerism fails these objectives because quality of life is never satisfied merely by accumulation. Breast augmentation, or mammoplasty, is case-in-point.

Mammoplasty is one type of service that is offered by the “medical” industry, loosely defined, that is clearly standard of living and not quality of life. It is an out-of-pocket expense that women (both “cisgender” and transgender) seek to enhance their image to others and themselves. Feminist objections to breast implants notwithstanding,⁶⁴⁵ it has been established that breast augmentation does not increase the happiness of a cisgender or transgender woman’s life. In fact, some studies have demonstrated that both cisgender and transgender women who seek breast augmentation have higher levels of diagnosable body dysmorphic disorder with comorbidity of psychiatric disorders like depression, obsessive compulsion disorder, and social phobia.⁶⁴⁶ Other studies have shown that both women and transwomen who undergo voluntary non-reconstructive breast surgery have higher incidences of suicide and death from drug and alcohol abuse and dependence.⁶⁴⁷ In one particularly distressing incident,

⁶⁴⁵ Kathy Davis, *Reshaping the Female Body: The Dilemma of Cosmetic Surgery* (New York: Routledge, 1995); Henri Wijsbek, “The Pursuit of Beauty: The Enforcement of Aesthetics or a Freely Adopted Lifestyle?,” *Journal of Medical Ethics* 26, no. 6 (2000): 454-458.

⁶⁴⁶ Randy A. Sansone and Lori A. Sansone, “Cosmetic Surgery and Psychological Issues,” *Psychiatry* 4, no. 12 (2007): 65–68, at 67; World Professional Association for Transgender Health (WPATH), *Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People* (WPATH, 2012), 5.

⁶⁴⁷ Lipworth Loren, Olof Nyren, Weimin Ye, Jon P. Fryzek, Robert E. Tarone, and Joseph K. McLaughlin, “Excess Mortality From Suicide and Other External Causes of Death Among Women with Cosmetic Breast Implants,” *Annals of Plastic Surgery* 59, no. 2 (2007): 119-123; Cecilia Dhejne, Paul Lichtenstein, Marcus Boman, Anna L. V. Johansson, Niklas Långström, and Mikael Landén, “Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden,” *PLoS ONE* 6, no. 2 (2011): e1688.

in 2013 a transindividual chose physician assisted suicide due to unsatisfactory sex reassignment surgery.⁶⁴⁸

These studies and statistics suggest that, from a clinical perspective, individuals who are emotionally unstable may seek cosmetic surgery. Time and again they are devastatingly mistaken, since results often do not lead to happiness.⁶⁴⁹ Money cannot buy life satisfaction. The purchase of breasts is standard of living that does not ensure quality of life. It is a medical want. Furthermore, the link between body dysphoria, drug and alcohol abuse, suicide, and breast augmentation among cis- and trans-gender women indicate that there are larger societal issues driving mammoplasty. Radical feminist analysis attributes the pursuit of plastic surgery to attempts to conform to hegemonic notions of gender presentation.

Yet these structures of heterosexism, transnormativity, and patriarchy cannot be dismantled by individuals siphoning health care resources away from the needy. When a principal concern in one's day is how they will present a body in a way that is appealing to the objectifying male gaze, not what they will eat, where they will sleep, or how they will obtain these things, the vast discrepancy between health care need (food, shelter, mobility) and health care want (elective plastic surgery) is highlighted.⁶⁵⁰ Surgery cannot fix what, at its root, is a social obsession that equates large amounts of breast fat with

⁶⁴⁸ Although he underwent double mastectomy, not mammoplasty. Tracy Miller, "Belgian Transsexual Dies by Euthanasia after Unsatisfactory Sex Change Operation," *New York Daily News*, 2 October 2013, at <http://www.nydailynews.com/life-style/health/belgian-transsexual-dies-euthanasia-botched-sex-change-article-1.1473875>

⁶⁴⁹ More nuanced studies have shown that self-esteem affects the outcomes of satisfaction with breast augmentation (in cisgender women) in various ways. Even so, there is not a one-to-one correlation of purchase of cosmetic surgery, or any elective medical treatment, and happiness. Cynthia L. Figueroa-Haas, "Effect of Breast Augmentation Mammoplasty on Self-Esteem and Sexuality: A Quantitative Analysis," *Plastic Surgical Nursing* 27, no. 1 (2007): 16-36.

⁶⁵⁰ I recognize that in some cases being able to "pass" as a woman can be a matter of life and death for transwomen. Transphobia kills many transpeople each year. And yet, the illusion of breast can still be achieved without surgery, thus balancing the need to preserve life, conserve resources, and achieve medical justice.

femininity. I do not want take lightly of the stress that women in these situations experience, but breast size is largely a first world problem that has been capitalized on by the medical industry to the detriment of the common good, shared resources, and environment.

The modern medical economy that markets techniques to bolster standard of living are, as theologian Jürgen Moltmann elucidates, “pacts with death. They are deadly games with human anxiety. They are bets placed on the craving for life, and they are sucking people dry.”⁶⁵¹ Developed world medical purchasing is depleting resources without attention to integral humanism.⁶⁵² As Pope John Paul II reflected, “The mere accumulation of goods and services...is not enough for the realization of human happiness.”⁶⁵³ We are misled if we think that simply purchasing children born from another woman, white teeth, smooth skin, or silicone breasts will increase the quality of our lives.

C. Summary

Theological bioethicists have a moral imperative to conserve resources in the medical industry, while also benefiting the common good. Currently, the provision of medical developments, techniques, and procedures that fulfill human desire for enhancement and standard of living absorb health care and natural resources. At the same time, health care needs go unmet. In response, green bioethics upholds health care needs as a priority. This does demand that resources are used for humans on earth today. “If one cares about autonomy, then one must care about the rest of the form of life that supports

⁶⁵¹ Jürgen Moltmann, *The Source of Life: The Holy Spirit and the Theology of Life* (Minneapolis, MN: Augsburg Press, 1997), 107.

⁶⁵² See Jacques Maritain, *Integral Humanism* (New York: Charles Scribner’s Sons, 1968); Paul VI, *Populorum Progressio*, 14.

⁶⁵³ John Paul II, *Sollicitudo Rei Socialis*, 28.

it and the material conditions that enable one to live that form of life.”⁶⁵⁴ At the same time, examining distribution of these resources and distinguishing between quality of life and standard of living, or “being” and “having,” keeps medical priority in focus, and strives for protecting human dignity. A proper theological stance claims, “human dignity belongs to every human being, since it is rooted in ‘being’ and not in the having.”⁶⁵⁵

As theological ecologists contemplate ways to conserve medical resources—without reducing the distribution of health care needs or jeopardizing the quality of life of human beings—eliminating developments, techniques, and procedures that only amplify standard of living is one proposal for medical resource conservation. Determining health care needs or wants can be based in part on using the theological ecological model of standard of living or quality of life. Medical developments, techniques, and procedures that increase standard of living are health care wants and should not be provided until health care needs are met.

When material and intellectual resources, and research and distribution of luxury health care wants are placed over basic human needs and the sustainability of the planet, they contradict the common good. But if, for the sake of conservation, providing human needs for nutritious food, clean water, and preventive medicine before spinning into the realm of human wants is ethical, then modifying the availability of certain medical developments, techniques, and procedures—which do not affect function or quality of life—is justifiable. Indeed, these “soft” measures may prevent draconian policies in the future, should the environmental crisis continue on its current trajectory. Environmental discourse must play a role in discerning between health care wants and needs.

⁶⁵⁴ Nussbaum, “Human Functioning and Social Justice,” 225.

⁶⁵⁵ Casini, et al., “Why Teach ‘Bioethics and Human Rights,’” 361.

Thus far I have argued that definitions of health care wants and needs have common ground by examining Martha Nussbaum, Kevin O'Rourke, and the goals of medicine. Yet, there are still medical offerings like hormone replacement therapy, hip replacement, penicillin, surrogacy, and mammoplasties that present a complex interplay between wants and desires, enhancement and function, standard of living and quality of life. I have addressed these ambiguities by relying on bioethics and theological ecology. Now that a clearer picture of medical needs and wants is apparent, I move on to the connection between conservation and prioritization of medical needs. The penultimate section of this chapter applies the arguments I have made above to a framework for conservation in the medical industry based on medical needs.

IV. Needs and Resource Conservation

In this chapter I have outlined some distinctions between health care wants and needs. The objective has been to ascertain the difference in order to prioritize health care needs and attenuate or diminish health care wants. I propose that doing so will result in environmental conservation as resources—both medical and natural—are reappropriated. Environmental bioethicists Jessica Pierce and Andrew Jameton emphatically state, “It is time for environmental ethics and medical ethics to reopen a dialogue and seek an ethically appropriate balance between immediate individual health needs and sustainability.”⁶⁵⁶ Quantifiable measures of sustainability in the medical industry are somewhat elusive since not every procedure has been assigned a carbon footprint, yet theological bioethicists cannot tarry in policies that support conservation.

It is especially urgent to move forward with conservation-based policies for countries with high carbon footprints. Pope Francis proclaims, “Reducing greenhouse

⁶⁵⁶ Pierce and Jameton, “Sustainable Health Care,” 366.

gases requires honesty, courage and responsibility, above all on the part of those countries which are more powerful and pollute the most.”⁶⁵⁷ As shown in chapter one, the carbon footprint of the medical industry in the U.S. is enormous and the country has one of the biggest carbon footprints in the world. “The world’s largest consumer of medical services, in both private practice and academic medicine is the United States.”⁶⁵⁸ Yet, with initiative and determination, America also stands to be a leader in environmental conservation. Prioritizing health care needs for all before health care wants are given to some can result in resource conservation. I demonstrate this by highlighting what has been implemented elsewhere to prioritize medical needs, answering objections to the second principle of green bioethics, and providing my own suggestions for delivering human needs before human wants.

Although medical consumers, and indeed the doctors and medical institutions, would challenge the concept of medical priority by claiming the right to medical enhancement, standard of living, and “self-determinism run amok,”⁶⁵⁹ Dr. Whetstine, an ethicist at Walsh University, “suggested that saying ‘no’ does not violate traditional ethical canons but would be a significant practical problem for a society that has become accustomed to entitlement. Expected customer service may trump resource allocation.”⁶⁶⁰ When human health care needs are securely at the forefront of distribution, Christian ethicists safeguard other medical values like public health, justice, and equity.

There is evidence from developed nations and “from less developed nations that good public health can be maintained on minimal resources when these resources are

⁶⁵⁷ Pope Francis, *Laudato Si': On Care for Our Common Home* (Rome: Vatican Press, 24 May 2014), 169.

⁶⁵⁸ Crippen, *ICU Resource Allocation in the New Millennium*, 336.

⁶⁵⁹ The reference is to Daniel Callahan, “When Self-Determination Runs Amok,” *The Hastings Center Report* 22, no. 2 (1992): 52-55.

⁶⁶⁰ *Ibid.*, 337.

appropriately directed at basic public health infrastructures such as clean air and water, sanitation, education and stable food supplies.”⁶⁶¹ And, at all times, it should be remembered that green bioethics must remain firmly within the bounds of health care ethics and theological bioethics. Resource conservation may include withdrawal of overtreatment, but “never withdrawal of *care*.”⁶⁶² I turn first to medical programs already in place, which address human health needs as a priority.

A. What has been implemented elsewhere

Across the globe bioethicists are grappling with resource allocation, health care distribution, and the desire to increase health care resources to those in need. Pope John Paul II considered “the ecological question which accompanies the problem of consumerism and which is closely connected to it.” He noted, “in their desire to have and to enjoy rather than to be and to grow, people consume the resources of the earth and their own lives in an excessive and disordered way.”⁶⁶³ Keeping this in mind, examining some of the established programs that have successfully prioritized human health care needs illustrates the many routes to green bioethics, in line with Willis Jenkins’ notion of religious creativity. I highlight three examples: the provision of preventative services under the United States Affordable Care Act (ACA) and Planned Parenthood’s sliding scale.

⁶⁶¹ Pierce and Jameton, “Sustainable Health Care,” 368. See John Caldwell, “Routes to Low Mortality in Poor Countries,” *Population Development Review* 12, no. 2 (1986): 171-220 and S. B. Halstead, J. A. Walsh, K. S. Warren, eds. *Good Health at Low Cost* (New York: Rockefeller Foundation, 1985).

⁶⁶² Ross Hofmeyr, “South Africa: Where Are We Going?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (Springer: New York, 2013), 169-176, at 176.

⁶⁶³ John Paul II, *On the Hundredth Anniversary of Rerum Novarum: Centesimus Annus* (1 May 1991), 37.

1. United States Affordable Care Act

The 2011 United States Affordable Care Act mandated that employers “offer insurance coverage of certain ‘essential’ health benefits, including coverage of ‘preventative’ services.”⁶⁶⁴ Among the preventative services are nineteen forms of Food and Drug Administration (FDA) approved contraception.⁶⁶⁵ The ACA contraception mandate covers male and female sterilization and anti-conception drugs like Ella and Plan B to prevent pregnancy, without co-pay.⁶⁶⁶ The ACA does not include non-FDA forms of contraception, or abortion. Contraception is a health need and is correctly prioritized under the ACA.

Unprotected sexual intercourse results in death for many women worldwide due to human papillomavirus (HPV) which causes cervical cancer;⁶⁶⁷ HIV transmission;⁶⁶⁸ conception that results in fatal abortion or life-ending complications during pregnancy;⁶⁶⁹ and maternal mortality from childbirth, or in the months following.⁶⁷⁰ The 2014 outbreak of Ebola highlighted the use of condoms as a health need to prevent transmission of this

⁶⁶⁴ United States Affordable Care Act, “Coverage of Preventive Health Services,” (2011), 42 U.S.C. 300gg-13.

⁶⁶⁵ They include: Male Condom; Female Condom; Diaphragm with Spermicide; Sponge with Spermicide; Cervical Cap with Spermicide; Spermicide Alone; Oral Contraceptives (Combined Pill); Oral Contraceptives (Progestin-only); Oral Contraceptives (Extended/Continuous Use); Patch; Vaginal Contraceptive Ring; Shot/Injection; Plan B, Plan B One-Step and Next Choice (Levonorgestrel); Ella (ulipristal acetate); Copper IUD; IUD with progestin; Implantable Rod; Sterilization Surgery for Men (Vasectomy); Sterilization Surgery for Women Surgical Implant (also called trans-abdominal surgical sterilization); Sterilization Implant for Women (Transcervical Surgical Sterilization Implant). United States Food and Drug Administration, “Birth Control: Medicines to Help You,” May 2013, at <http://www.fda.gov/ForConsumers/ByAudience/ForWomen/FreePublications/ucm313215.htm>

⁶⁶⁶ Sabriya Rice, “HHS Oks Birth Control with No Co-pay,” *CNN News*, 1 August 2011, at <http://www.cnn.com/2011/HEALTH/08/01/free.birth.control/>

⁶⁶⁷ M. Schiffman, P. E. Castle, J. Jeronimo, A. C. Rodriguez, S. Wacholder, “Human Papillomavirus and Cervical Cancer,” *Lancet* 370, no. 9590 (2007): 890-907.

⁶⁶⁸ Jon Fuller and James Keenan, “Church Politics and HIV Prevention: Why is the Condom Question So Significant and So Neuralgic?,” in *Between Poetry and Politics: Essays in Honour of Enda McDonagh*, Linda Hogan and Barbara Fitzgerald, eds. (Dublin: Columba Press, 2003), 158-181.

⁶⁶⁹ World Health Organization, *Global Health Risks: Mortality and Burden of Diseases Attributable to Selected Major Risks* (Geneva: WHO Press, 2009), 10.

⁶⁷⁰ The World Health Organization, “Maternal Mortality.”

potentially deadly virus.⁶⁷¹ If contraception can prevent mortality and morbidity associated with heterosexual sex, then it is a health need as much as a vaccine or antibiotic.

Despite the inclusion of contraception in the United States Affordable Care Act as a medically indicated health care need, several lawsuits attempted to defy mandated provision of contraception under company health insurance. These lawsuits are addressed more fully in the next section on objections to prioritizing health care wants. For now, it only needs to be stated that the judges—who ruled in favor of the closely held companies to restrict their coverage of contraception—nevertheless confirmed that birth control is a health care need.

Indeed, “the majority assumed that the government has a compelling interest to promote free access to contraceptive agents.”⁶⁷² This is a radical change from the moral reasoning of the previous 1900 years, which tied population expansion with economic growth⁶⁷³ and national security.⁶⁷⁴ The ACA confirms that contraception is now widely viewed as a health care need, and therefore eligible to be provided by health insurance.

Although birth control can be considered a form of green health care because it reduces population growth and therefore resource consumption,⁶⁷⁵ this is only a secondary outcome of contraception. Rather, the very fact that pregnancy causes pain, infirmity, and mortality—even when the pregnancy may be desired— verifies that

⁶⁷¹ Lenny Bernstein and Joel Achenbach, “Sex in a Time of Ebola,” *The Washington Post*, 8 October 2014, at <http://www.washingtonpost.com/news/to-your-health/wp/2014/10/08/sex-in-a-time-of-ebola/>

⁶⁷² I. Glenn Cohen, Holly Fernandez Lynch, and Gregory D. Curfman, “When Religious Freedom Clashes with Access to Care,” *New England Journal of Medicine* 371, no. 7 (2014): 596-599, at 598.

⁶⁷³ D. M. “The Incredible Shrinking Country,” *The Economist*, 25 March 2014, at <http://www.economist.com/blogs/banyan/2014/03/japans-demography>

⁶⁷⁴ Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford: Basil Blackwell, 1984), 108 quoting a text from the year 1849.

⁶⁷⁵ Nina Rastogi, “What’s the Greenest Form of Birth Control?” *Slate*, 3 March 2009, at http://www.slate.com/articles/health_and_science/the_green_lantern/2009/03/treehumper.single.html

prevention of pregnancy is a health care need for all women.⁶⁷⁶ Contraception is therefore in line with the goals of medicine and should be widely accessible for all people—nationally and internationally.⁶⁷⁷ The ACA is one model of prioritization of health care need. In years before the ACA mandated health insurance coverage, many women and men in the United States turned to the government-subsidized Planned Parenthood for health care, a second example of prioritization of health care need.

2. Planned Parenthood

Planned Parenthood is not “an abortion clinic.” Planned Parenthood is a national health care organization that specializes in medical and preventative services for low-income men and women. Under United States law, Title X allows Planned Parenthood “to supplement birth control, gynecological care, and other reproductive health services for women who cannot pay full price for health care services. This program does not pay for abortions.”⁶⁷⁸ Some clinics do offer abortion services, but they are not subsidized by the government. When abortions are provided, they are still a minority of the procedures.⁶⁷⁹

Planned Parenthood provides many services that are health care needs including pre-natal care, mammograms, diabetes and breast cancer screening, pap smears, and flu

⁶⁷⁶ We live in a world where women cannot simply choose to abstain from sexual intercourse even if we want to. And even in a relationship where sexual activity is implied, such as marriage, we often lack the power to negotiate for contraceptive use. Women are vulnerable to the patriarchy, sex roles, gender scripts, and violence. We are not immune to rape, abuse, and coercion even if it is our desire to avoid these things. We cannot therefore consider sexual intercourse or pregnancy *only* a lifestyle choice for straight, sexually active women.

⁶⁷⁷ Jane Dreaper, “The One Dollar Contraceptive Set to Make Family Planning Easier,” *BBC News*, 15 November 2014, at <http://www.bbc.com/news/health-30026001>

⁶⁷⁸ Planned Parenthood, “About Our Fees,” (Planned Parenthood of Central and Western New York, 2014), at <http://www.plannedparenthood.org/planned-parenthood-central-western-new-york/patient-resources/paying-your-health-care/about-our-fees>.

⁶⁷⁹ Data from 2011 showed that 12% of Planned Parenthood clients received abortion services. They also estimate that 291,000 abortions were *averted* thanks to contraceptive services. Planned Parenthood Federation of America, “Planned Parenthood® by the Numbers,” (New York, 2011): 1, at 1.

vaccines.⁶⁸⁰ These comprehensive health care needs have a free or sliding scale attached to them, indicating that inability to pay should never prevent health care needs from being accessed. Planned Parenthood's various health care services are clear examples of health care needs being a priority not only for individual women and men, but also for couples. It also demonstrates that governments can make preventive health care a priority through funding various programs in line with the goals of medicine. Furthermore, the fact that abortions are not subsidized demonstrates that governments can have a legitimate reason to refuse to offer elective procedures that are health care wants.⁶⁸¹

If all regions of the country, and all parts of the world, made health care needs like contraception, pre-natal care, mammograms, diabetes and breast cancer screening, pap smears, and flu vaccines readily available, health care distribution could be more equitable arranged, serve the common good, and demand fewer resources from the environment.

Focusing on health care needs has continuing, expansive benefits in the realm of resource conservation, financial savings,⁶⁸² and stabilization of countries.⁶⁸³ Making

⁶⁸⁰ Planned Parenthood, "Learn: Categories," (Planned Parenthood Federation of America Inc., 2014), at <http://www.plannedparenthood.org/health-nfo>

⁶⁸¹ While abortion when the life of the mother is in danger—very broadly interpreted—is a medically suggested health care need, I do not consider *elective* surgical abortion—in contradistinction to contraception—a health care need for several reasons. First, elective surgical abortion addresses pregnancy, not prevention of conception or implantation. Second, abortions at any stage can cause infection, injury or death in greater amounts than simple contraception. Third, abortion is not the simplest solution to preventing pregnancy that results in birth; abstinence, non-procreative sexual expression or contraception are. This does not mean that abortions should be rendered illegal or difficult to obtain. Rather, I want to be clear that I am arguing that abortions are not health care needs, strictly speaking, but contraception is. Abortions might be very close to a health care need, but are still in the realm of wants.

⁶⁸² "Expanding access to contraception has also been shown to be a particularly cost-effective investment... If all women wanting to avoid pregnancy used modern family planning methods, unintended pregnancies would decline by 71%. At present, providing health care related to unintended pregnancies costs about US\$ 5.7 billion annually." Joint United Nations Programme on HIV/AIDS (UNAIDS), *Gap Report* (Geneva: UNAIDS, 2014), 234.

⁶⁸³ See James Keenan and Enda McDonagh, "Instability, Structural Violence and Vulnerability: A Christian Response to the HIV Pandemic," *Progressio* (2009): 1-10.

health care needs a priority can be achieved when willing individuals, governments, and health care institutions include health care needs and environmental conservation in the common good. In general, most people concur that health care needs should be distributed or accessible to all, hence the ACA and Planned Parenthood. Philosophically, provision of health care needs is not problematic. Rather, the implementation of the second principle of green bioethics will be met with objections. Answering these lingering questions and concerns is the objective of the next section of this chapter.

B. Lingering questions and concerns

Objections to prioritizing health care wants above health needs occur on several fronts.⁶⁸⁴ Even after the distinction between want and need, enhancement and function, standard of living and quality of life have been outlined, practical application of green bioethics may face legal and emotional challenges. In this section I address the potential legal conflicts with personal beliefs if governments mandate that certain health care needs should be provided by the employer using the ACA as an example. ACA lawsuits resulted in health care needs that were not prioritized. However, these litigations could have been avoided with a proper understanding of preventative medicine and denominational teaching.

A second concern is the potential emotional conflicts if a doctor refuses a medically futile treatment, even if the family desires it. I use the heartbreaking Jahi McMath case, where a 13-year old girl was declared brain dead, yet the family demanded prolonged interventions that could not restore her life. A values approach to medicine

⁶⁸⁴ Jason Lee Fishel insightfully aligns these objections within the language of the Georgetown mantra. He notes tension often occurs between sustainable medicine, autonomy, and justice. Jason Lee Fishel, *The Green Staff of Asclepius: Envisioning Sustainable Medicine*, Ph.D. dissertation, University of Tennessee, Knoxville, 2014, ch. 3.

would focus on the family accepting and healing instead of medical futility. In both the ACA and the McMath situation, definition of medical need came into conflict with objectives of those responsible for distributing health care. I turn now to potential legal conflicts with personal beliefs.

1. Legal conflicts with personal beliefs

Contraception has a long history of moral and legal controversy, owing to many different factors. These contentions have made access to contraception difficult, if not illegal,⁶⁸⁵ at various times in history, and influenced popular ideas about its purposes as a medical desire, instead of necessity. “If people don’t wish to be pregnant, they should find a way to pay for birth control,” so the logic goes.

Religion has also influenced medical views on contraception.⁶⁸⁶ Christians have traditionally held that sexual intercourse is only appropriate in matrimony and must be directed towards the procreation of children.⁶⁸⁷ Contraception thwarts this end of sexuality and therefore this end of marriage, breaking the inseparable bond between intercourse and conception that God intended.⁶⁸⁸ If it were the case that artificial birth control is against the will of God, then it would certainly not be considered a health care need, except, perhaps, in extreme situations when the mother’s life is in jeopardy. Even

⁶⁸⁵ Before 1965 contraception was banned in the United States, even for those legally wed. Then it was concluded that the Constitution protected a right to privacy, which included the use of contraceptives. *Griswold v. Connecticut* (381 U.S. 479. Decided 7 June 1965. *Roe v. Wade* (1973) decriminalized abortion and therefore gave women the right not to be pregnant. *Roe v. Wade* (410 U.S. 113. Argued: 13 December 1971. Decided: 22 January 1973.

⁶⁸⁶ John T. Noonan, *Contraception: A History of Its Treatment by the Catholic Theologians and Canonists* (Cambridge, MA: Harvard University Press, 1966).

⁶⁸⁷ Augustine, “On the Excellence of Marriage,” in *Marriage and Virginity (Works of Saint Augustine: A Translation for the 21st Century)*, David G. Hunter, ed. (Hyde Park: New City Press, 1997), ch. 3 (3).

⁶⁸⁸ Congregation for the Doctrine of the Faith, *Humanae Vitae* (Washington, DC: United States Conference of Catholic Bishops, 1968), 12.

then abstinence, not artificial contraception, has been promoted.⁶⁸⁹

Once the discovery of sperm and egg made clear that conception, implantation, and term pregnancy were separate occurrences, debates about contraception and health became nuanced. Many Christians still object to certain forms of artificial contraception and do not want to be “forced” into following government policies which offer contraception to all women and men, married or not. The 2014 *Burwell v. Hobby Lobby Stores*⁶⁹⁰ and *Conestoga Wood Specialties Corp. v. Burwell*⁶⁹¹ cases highlighted the potential conflicts with policies prioritize health care needs.

In 2014, Hobby Lobby, owned by Evangelical Protestants, moved to obtain a religious exemption from provision of all contraception under the Religious Freedom Restoration Act of 1993.⁶⁹² While virtually every Evangelical considers some form of contraception acceptable to use in marriage,⁶⁹³ exceptions may include intrauterine devices (IUDs) and the levonorgestrel tablet (Plan B). These are typically objectionable because of the view that life begins at conception.⁶⁹⁴ In the Hobby Lobby case, certain forms of contraception were viewed as either immoral, unnecessary, or both and therefore could not conscientiously be provided among employee health care benefits, even though they were clearly defined as preventive medicine by the ACA.

The Hobby Lobby case aligned with lawsuits brought by Evangelical Grace

⁶⁸⁹ Pius XII, *Allocution to Midwives on the Nature of their Profession* (Washington, DC: United States Catholic Conference, 1951).

⁶⁹⁰ *Burwell v. Hobby Lobby Stores*, no. 13-354. 2014.

⁶⁹¹ *Conestoga Wood Specialties Corp. v. Burwell*, no. 13-356, 2014,

⁶⁹² United States Religious Freedom Restoration Act of 1993, 42 U.S.C. 2000b.

⁶⁹³ See Norman L. Geisler, *Christian Ethics: Contemporary Issues and Options*, 2nd ed. (Grand Rapids, MI: Baker, 2010).

⁶⁹⁴ John Jefferson Davis, *Evangelical Ethics: Issues Facing the Church Today* (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 2004).

College and Biola University⁶⁹⁵ that were also opposed to four, so-called “abortifacient” forms of FDA-approved contraception: two types of an intra-uterine device, and two varieties of the “morning after pill.” In a similar vein, the Catholic University of Notre Dame filed a lawsuit against the ACA⁶⁹⁶ because they could not provide artificial contraception due to magisterial teaching.⁶⁹⁷ While the Hobby Lobby case was at the intersection of religious freedom and health care,⁶⁹⁸ and did not dispute the fact that some forms of contraception are preventive medicine,⁶⁹⁹ it did fail to turn the religious argument on to itself, thus assuaging the unfounded conflict between health care need and public policy. Those who embrace the second principle of green bioethics can use a similar tactic to diffuse objections to prioritization of health care needs based on “personal belief.”

Data show that pregnancy and other outcomes of heterosexual sex remain one of the most widespread health challenges that women face worldwide. Nearly every Christian—Evangelical and Catholic included—hold that abortion is morally permissible if the mother’s life is in danger, even though a fetus is destroyed.⁷⁰⁰ In making this exception, conservative Christians can still maintain a “pro-life” stance, even as they

⁶⁹⁵ *Grace Schools, et al v. Kathleen Sebelius, et al.* (1430); *Diocese of Fort Wayne South Bend, Inc. v. Sebelius* (14-1431), filed 19 May 2014.

⁶⁹⁶ *University of Notre Dame v. Kathleen Sebelius*, no. 13-3853. Filed 19 December 2013.

⁶⁹⁷ Paul VI, *Humanae Vitae*, 12.

⁶⁹⁸ Peter Singer, “The Use and Abuse of Religious Freedom,” *Ethical Perspectives* 20, no. 1 (2013): 187-189. Cathleen Kaveny, “Is the Government ‘Defining Religion’?: The Bishops’ Case Against the Mandate,” *Commonweal*, 10 January 2013, at <https://www.commonwealmagazine.org/government-%E2%80%98defining-religion%E2%80%9999>

⁶⁹⁹ Another approach present in congressional hearings following the Hobby Lobby decision was that contraception provides health benefits unrelated to pregnancy, such as “addressing several menstrual disorders, helps prevent menstrual migraines, treats pelvic pain from endometriosis, and treats bleeding from uterine fibroids.” See American College of Obstetricians and Gynecologists, Physicians for Reproductive Health, American Academy of Pediatrics, American Nurses Association, et al. “Brief of *Amici Curiae*: In Support of the Government,” (28 January 2014): 1-39, at 15.

⁷⁰⁰ Davis, *Evangelical Ethics*, 155; David F. Kelly, Gerard Magill, and Henk ten Have, *Contemporary Catholic Health Care Ethics*, 2nd ed. (Washington, DC: Georgetown University Press, 2013), 108-113.

accept legal abortion in extreme circumstances, all while recognizing the deeply troubling termination of human life. Although abortion itself was not in dispute during recent lawsuits, highlighting the fact that Christians permit the extreme form of health care, i.e., termination of a fetus to save the mother, opens the door to support the use of abortifacents if the implantation or fertilization of an egg can lead to maternal mortality. I believe this indicates that prevention of pregnancy at any stage should be acceptable for all Christians, since pregnancy at any stage endangers the life of the mother. The objection to providing health care needs when public policy conflicts with personal beliefs can, furthermore, be reconciled from working within the religious tradition.

It is an error to suppose that all religions or personal beliefs are monolithic and unchangeable. Indeed, casuistry is a second moral resource to address objections to providing contraception as a health care need. Evangelical and Catholic colleges and universities in Massachusetts—one of the first states to mandate health insurance coverage for all citizens—have given employees and students their choice of FDA approved contraception, including sterilization, IUDs, and “the morning after pill” under their health insurance plans for years, without any objection. Had Hobby Lobby and others recognized this, the lawsuit could have been prevented.

The Hobby Lobby case, and other similar lawsuits, failed to recognize the impact of pregnancy on the health of women, especially when the life of the mother is in danger. They also failed to consider how other Christians addressed the potential conflict between legal mandate and personal belief. Addressing concerns about medical prioritization is necessary and should be presented to naysayers. However, it seems that in many cases, even when emotions run high, there are solutions that ensure health care needs are

delivered. The next case considers objections to refusing treatment despite familial desires.

2. Emotional conflicts with family desires

Focusing medicine in certain areas rather than others may seem to be a violation of freedom, a highly cherished value in American society.⁷⁰¹ In some cases, legal ramifications of reducing health care wants prevent conservation from being fully implemented. Bioethicist David Crippen insists, “Regulatory means are necessary to maintain the integrity of a health care system, but none (of the doctors surveyed on ICU attenuation) expressed a desire to look unreasonable patients and their families in the eye and say no... Many physicians are concerned about threats of legal action by surrogates.”⁷⁰² Especially in a litigious country like the United States, lawsuits are the apparent answer to any personal disappointment. Legal battles that sanction medical futility drain the health care system, provide false hope to families, and distort the goals of medicine. When they collide with emotional conflicts of substituted judgment for patient treatment, it can hinder best patient care and waste resource as well. The harrowing Jahi McMath case in 2013-2014 highlights the extremes of unnecessary health care wants that are given at the behest of the caregiver, under threat of legal action, and with no benefit to the patient.

Jahi McMath was a 13-year-old girl from Oakland, California who was declared brain dead on December 12, 2013 after an elective tonsillectomy for sleep apnea related to obesity. This case was especially tragic since McMath was young and the death was unexpected. Her family refused to accept that she was clinically dead and had her body

⁷⁰¹ See the political theories of John Courtney Murray, *We Hold These Truths* (New York: Sheed and Ward, 1960) and John Rawls, *A Theory of Justice* (Cambridge: Harvard University, 1971).

⁷⁰² Crippen, *ICU Resource Allocation in the New Millennium*, 336.

transferred to another hospital to be maintained on life support. This was after a legal battle to have a feeding tube inserted even after it was clear that there was no chance of recovery and McMath was irreversibly brain dead.⁷⁰³ This upsetting case highlights what Lisa Sowle Cahill calls “an overly technological and overly individualistic approach to decline and death.”⁷⁰⁴ However, further investigation into the health care industry and personal values can satisfy the emotional needs of family members, while also avoiding a protracted environmental drain for a treatment outside of the goals of medicine.

Ian M. Seppelt from Australia, recounts that “when asked directly the vast majority of chronically ill patients do NOT want extreme measures taken when approaching the end of their lives, but merely want some reassurance that they will be cared for and not abandoned.”⁷⁰⁵ Instead of defaulting to endless resuscitations, long-shot surgeries, and scans and tests, Seppelt suggests making a time investment into understanding what constitutes good quality of life for the end of life. His recommendation can be applied to medical decision-makers as well. And, I might add, doctors- patient conversations require no carbon emissions, and may save resources additionally.

The Jahi McMath situation has still not been settled, as her body remains artificially supported.⁷⁰⁶ Had physicians inquired into the values of the family, McMath might be resting in peace right now, and the family could be working towards acceptance

⁷⁰³ Laila Kearney, “Brain-dead California Teen Gets Surgery at New Facility after Court Fight,” *Reuters*, 09 January 2014, at <http://www.reuters.com/article/2014/01/09/us-usa-braindead-california-idUSBREA0806F20140109>

⁷⁰⁴ Cahill, *Theological Bioethics*, 7.

⁷⁰⁵ Ian M. Seppelt, “Australia: Where Are We Going?,” in David Crippen, ed., *ICU Resource Allocation in the New Millennium: Will We Say “No”?* (New York: Springer, 2013), 107-112, at 109.

⁷⁰⁶ The most recent coverage on the story came in January 2016. Bioethics Blog Bot, “Jahi McMath Hearing on January 29, 2016,” *Bioethics Research Library at Georgetown University*, 24 January 2016, at <https://bioethics.georgetown.edu/2016/01/jahi-mcmath-hearing-on-january-29-2016/>

of death. Yet lessons can be learned. At the height of the McMath controversy, a multiplicity of bioethical issues were raised such as the need to prevent childhood obesity, the legitimacy of elective surgeries for non-life-threatening conditions, and the extent of informed consent for minors and their decision-makers. In the end, the medical industry failed McMath and her health care fell through the cracks of a system that encourages a fix-it solution rather than a preventive approach to health care.

Under a preventative approach, doctors might have suggested a simple weight-loss to reduce sleep apnea, thus eliminating the need for surgery and risk of death. And, when simple solutions with low-carbon impact do not work, a values-approach to surgery, with a clear articulation of risks and benefits, and the limits of life-support—should it be needed—can be explained to the family in order to maximize informed consent. Comprehensive reform of health care prioritization is essential. The common good must direct health care, which firmly includes values of patients and families. While doctors may fear that family emotions will conflict with attenuating medically futile treatments, there is a way to move closer to aligning the goals of medicine with the family, conservation, and the common good through values.

Having addressed lingering questions and concerns, I now turn to the final part of this section and make suggestions for enacting the second principle of green bioethics, which demonstrates how health care wants can be eliminated and curtailed, even as health care needs are more widely distributed. Using the principle of subsidiarity to suggest policies, I indicate how each person or institution can participate in conservation at the level they are at, in order to maximize prioritization of health care needs and support the common good.

C. Policy suggestions

Climate change is an issue that impacts all people, countries, and health care organizations. While green bioethics does provide principles to evaluate the conservationist efficacy of certain developments, techniques, or procedures, individuals, doctors, and health insurance or governmental health must actively endorse human needs before human wants. The United States Conference of Catholic Bishops declares, “Stewardship—defined in this case as the ability to exercise moral responsibility to care for the environment—requires freedom to act.”⁷⁰⁷ This freedom is found primarily in the concept of subsidiarity.

Indeed, environmental stewardship of health care resources is already in effect in many different levels of medical administration, including Catholic Health Care Services, which recommend that “the responsible stewardship of health care resources can be accomplished best in dialogue with people from all levels of society, in accordance with the principle of subsidiarity and with respect for the moral principles that guide institutions and persons.”⁷⁰⁸ The suggestions and examples in the next section can lead to normative prescriptions. I begin at the foundational level by focusing on the individual medical consumer.

1. Consumer suggestions

The medical consumer is by and large unaware of those who have health care needs that are unfulfilled. Furthermore, an entitled culture enforces the belief that if you can pay for it, you should be able to have it. Added to this are health care policies that

⁷⁰⁷ United States Conference of Catholic Bishops, “Climate Change.”

⁷⁰⁸ United States Conference of Catholic Bishops. *Ethical and Religious Directives for Catholic Health Care Services*, 5th edition (Washington, DC: United States Catholic Conference, 2009), 11.

provide medically unnecessary procedures like Botox⁷⁰⁹ and breast pumps.⁷¹⁰ When those insured see that these are covered at no-to-minimal cost, there is a strong temptation to rely on services that are not needed, but whose desire was piqued by health insurance coverage. “Consumers of health care are not the purchasers (of health insurance) and so have little motivation to assess cost versus value. More is always better, especially when it is free.”⁷¹¹ It is difficult to convince Americans otherwise. And yet ethicists have provided a number of reasons for satisfying health care needs. These are individual suggestions, not policies. However, these recommendations could influence policy administrators, and be adopted by health care law and policy.

Jessica Pierce and Andrew Jameton implore “the world’s wealthy consumer classes, who spend roughly 90% of all of the dollars spent on health care in the world, (to) be sensitive to ethical principles, suggesting that they should reduce their consumption of health care materials and services.”⁷¹² To foster this mentality, Pierce and Jameton recommend a new sense of personal identity by acknowledging oneself as a relational being. “Sound social policy and social norms would have us internalize many externalities,”⁷¹³ so the individual is the starting point for conservationist suggestions.

First, individuals must have an appreciation of their personal identity as a person who has dignity regardless of financial purchase power or medical consumption. The Catholic Church maintains that each human being has “dignity as a person who is

⁷⁰⁹ Geoff Herbert, “Buffalo Teachers Still Get Free Plastic Surgery Courtesy of Taxpayers,” *Syracuse.com*, 19 January 2012, at http://www.syracuse.com/news/index.ssf/2012/01/buffalo_teachers_get_free_plas.html

⁷¹⁰ Blue Cross of Massachusetts, “Living Healthy Babies,” n.d., at <http://www.bluecrossma.com/breast-pump/>

⁷¹¹ David W. Crippen, “United States-Academic Medicine: Where Have We Been?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (Springer: New York, 2013), 101-105, at 101.

⁷¹² Pierce and Jameton, “Sustainable Health Care,” 376.

⁷¹³ Nick Bostrom, “Human Genetic Enhancements: A Transhumanist Perspective,” *The Journal of Value Inquiry* 37, no. 4 (2003): 493–506, at 501.

endowed with a spiritual soul and with moral responsibility.”⁷¹⁴ No amount of elective treatment can ever raise the value of a human being; dignity is intrinsic and can neither be added to nor subtracted from.

Likewise, Immanuel Kant avers, “the respect that I have for others or that which another can require from me is therefore recognition of dignity in other men, that is, of a worth that has no price, no equivalent for which the object evaluated could be exchanged.”⁷¹⁵ In addition to developing a personal identity as dignified apart from material goods, the individual can decline health care wants through seeing the self as a relational being who treads lightly.

While relationality is integral to personal identity in non-Western bioethics,⁷¹⁶ medical consumers in the developed world tend to think only of their personal desires for consumption, not of limited to medical procedures. A theological anthropology might also note that the human, sinful condition predisposes the average person looks after her own interests before others.⁷¹⁷ Self-serving goals can be antithetical to conservation when they go beyond satisfying material needs. “Environmental philosophers... appreciate individuals as strongly connected with all humans, creatures and the natural world in a cyclical flow of materials and energy.”⁷¹⁸ This relationality of the common good is embedded in identity when one recognizes the interdependent networks of life that are necessary for all humans to have their needs met.

⁷¹⁴ Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation: Replies to Certain Questions of the Day: Donum Vitae* (1987), introduction.

⁷¹⁵ Immanuel Kant, “Metaphysical First Principles of the Doctrine of Virtue,” in *The Metaphysics of Morals* (Cambridge: Cambridge University Press, 1991), 181-279, at 254.

⁷¹⁶ Marie Catherine Letendre and Joseph Tham, “Family and Healthcare Decision Making: Implications for Bioethics in China,” *Studia Bioethica* 4, no. 3 (2011): 25-33, at 26-27.

⁷¹⁷ This is exacerbated by advertisers and advertisements. The antidote is, as I am suggesting, personal identity. See Tom Crompton, and Tim Kasser, “Human Identity: A Missing Link in Environmental Campaigning,” *Environment* 52, no. 4 (2010): 23-33.

⁷¹⁸ Pierce and Jameton, “Sustainable Health Care,” 376.

Theologian James Gustafson confirms, “moral judgments will be necessary that ‘override’ certain human claims for individual rights and values for the sake of the more inclusive well-being of a wider circle of life.”⁷¹⁹ This does not mean forgoing essential health care needs, as I have discussed. Rather, it petitions relinquishing access to luxury health care goods that absorb health care and environmental resources without medical benefit.

Pope John Paul II believed that “one of the greatest injustices in the contemporary world consists precisely in this: that the ones who possess much are relatively few and those who possess almost nothing are many. It is the injustice of the poor distribution of the goods and services originally intended for all.”⁷²⁰ The individual patient must attend to the relational dimensions of health care use. A sense of personal identity as a responsible being who is intrinsically valuable—like every other person—and willingness to let the relationality of all beings guide utilization of health care are initial suggestions for individuals within the second principle of green bioethics. Additionally, doctors have a role to play in environmental conservation and reduction of health care wants. They can prioritize health care wants by professional choices.

2. Doctor suggestions

Doctors can prioritize medical needs and environmental conservation through several different avenues. First, health care professionals must be given more power to determine and effectively explain why a particular treatment is no longer beneficial, while at the same time respecting patient autonomy and medical decision-making. In South Africa, “law does not place the burden of decision on the family, but rather on the

⁷¹⁹ Quoted in Lisa Sowle Cahill, *Bioethics and the Common Good* (Milwaukee, WI: Marquette University Press, 2004), 11.

⁷²⁰ John Paul II, *Sollicitudo Rei Socialis*, 28.

clinician, as the decision whether a particular therapy is futile is deemed a medical decision, which the family cannot refuse.”⁷²¹ This may not be the most effective for the United States where patient autonomy and litigious responses to attempts at conservation dominate practice, but the underlying principle remains. Medically non-beneficial treatment in the setting of complicated grief can be “worse than futile.”⁷²²

Second, doctors should curtail elective surgery for high-risk patients. In one study, patients undergoing major elective surgery were at risk of developing postoperative complications either because of the surgery or the presence of coexistent medical conditions. “Between 65-74% had one or more medical conditions like heart disease, hypertension, pulmonary embolus, or diabetes mellitus.”⁷²³ These people, between the ages of 64 and 77, were already heavy medical consumers and presented extraordinary burdens on the health care system. The surgeries could have been denied on several fronts, such as the elective nature of the procedure, the high risk they posed, potential for post-operative death, and priority of treating their other chronic conditions. Again, it should be underscored that I am not suggesting that physicians refuse procedures related to health care needs. Rather treatments with little to no medical benefit are the focus of my objection.

Finally, bioethicists must remember that medical waste endangers the environment and the future of health care. “Current levels of consumption may challenge our ability to provide health care for future generations.”⁷²⁴ Focusing on health care needs

⁷²¹ Hodgson and Hardcastle, “South Africa: Where Have We Been?,” 80.

⁷²² At the 11th Annual International Conference on Clinical Ethics and Consultation, Annette Mendola, Vicki Cannington, Lynnette Osterlund, and Caroline Vogel presented a panel entitled, “Worse Than Futile: Medically Non-Beneficial Treatment in the Setting of Complicated Grief,” ICCEC 2015, New York City, 21 May 2015.

⁷²³ Wilson, et al., “Reducing the Risk of Major Elective Surgery,” 1100.

⁷²⁴ Pierce and Jameton, “Sustainable Health Care,” 366.

before health care wants can ensure all people have health care needs met. Personal philosophy of physicians must take an activist-timbre, knowing that their medical training and respectable profession, “open doors for them to meet with elected representatives, influence policy through such means as letters to the editor, and act as spokespeople for important causes and media contacts for questions relevant to public health.”⁷²⁵ There are multiple ways doctors can prioritize health care needs. Yet they are only one fragment of a system of health care where insurance dictates what procedures they may refuse or offer. Thus, medical insurance itself—or the government that provides health care—must prioritize health care needs before health care wants through policies that support conservation.

3. Insurance and governmental suggestions

In every sector of life, theological ecologists and ethicists recognize a limited number of resources that each person competes for. While some have ample health care needs met, others are left vulnerable without any form of medical attention.⁷²⁶ Health insurance is intended to minimize the cost of medical care for individuals, yet oftentimes health insurance and government-sponsored health care cover elective treatments that are minimally beneficial or even futile. If, however, health insurance prioritizes offerings oriented to the common good, and eliminate unnecessary medical developments, techniques, and procedures, conservation can occur.

“It is difficult to imagine a health care plan that will achieve all the desired goals without some form of creative prioritization, and tough collective bargaining on both

⁷²⁵ Martin Donohoe, and Gordon Schiff, “A Call to Service: Social Justice is a Public Health Issue,” *Virtual Mentor: American Medical Association Journal of Ethics* 16, no. 9 (2014): 699-707, at 702.

⁷²⁶ For a discussion on public goods, see Inge Kaul, Isabelle Grunberg, and Marc A. Stern, eds. *Global Public Goods International Cooperation in the 21st Century* (Oxford: Oxford University Press, 1999).

sides of the reimbursement table,”⁷²⁷ notes David Crippen. Nevertheless, an era of resource limitations requires that each person and entity enact conservationist strategies. For health care insurance this can be achieved through policies that are explicitly conservationist, implicitly conservationist, or a mixture of both.

In surveying health insurance coverage across the world, some conservationist strategies rely on explicitly conservationist measures to curtail services. Such is the case in New Zealand where “limiting (and withdrawing) intensive therapies are common practices... and are usually well accepted by other health professionals, patients and their families.”⁷²⁸ The culture of New Zealand health care is such that at every level of the medical industry some sort of conservationist measure is ratified. Although New Zealand does this for financial and not ecological reasons, oftentimes the two overlap. Conserved health care resources spare environmental waste and save money. Other national health care systems make implicit logistical obstacles to obtaining services.

The government of Australia provides health care for its citizens, which is augmented by private insurance. Under public, governmental health care schemes, implicit prioritization of non-essential medical developments, techniques, and procedures is implemented by bureaucratization. Ian M. Seppelt reports that in Australia, “elective admissions (mainly elective surgery) rationing is achieved by waiting, at times up to a year for non-urgent surgery, and patients are treated by a hospital-appointed doctor, rather than necessarily the doctor of their choice.”⁷²⁹ This is a start, but eliminating the elective treatments altogether could also be considered. Finally, other countries consider

⁷²⁷ Crippen, “United States-Academic Medicine,” 105.

⁷²⁸ Stephen Streat, “New Zealand: Where Have We Been?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (New York: Springer, 2013), 65-73, at 70.

⁷²⁹ Ian M. Seppelt, “Australia: Where Have We Been?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (New York: Springer, 2013), 3-10 at 4.

a multi-level system to curtail excessive medical waste. This combines explicit and implicit conservation, tailored to the requirements of the country.

In Germany, evaluation of current health care distribution is underway. In order to prioritize health care needs, reduce excess spending, and prioritize of solidarity, a tiered system has been proposed. In this situation

the first tier or basic level will probably be a compulsory insurance, covering life-threatening and acute diseases. The second-tier will demand more copayments and will leave extent of coverage and premiums to every insured. The third-tier will round off coverage for even marginal health problems.⁷³⁰

Authors from Germany recognize that health care can be effectively trimmed through targeting change at every step along the way. “Saying no to infinite health care demands will then be achieved by a mix of limitations set by the organization of health care system itself and by personal preferences.”⁷³¹ In the United States, James Childress and Tom Beauchamp also discussed a multi-tiered approach to health care, whereby basic standards of care would include “public health measures and preventive care, primary care, acute care, and special social services for those with disabilities”⁷³² and a second or third level would provide services beyond “basic care.” This final approach to health care prioritization provides the most flexibility and freedom, but also lacks the rigor to address the current environmental crisis by focusing on economics rather than ecology, addressing the symptoms of overconsumption, but not the ailment.

There are many occasions for environmental conservation in the medical industry.

⁷³⁰ Kerz, “Germany: Where Are We Going?,” 137.

⁷³¹ Ibid.

⁷³² Tom Beauchamp and James Childress, *Principles of Biomedical Ethics*, 4th ed. (New York: Oxford University Press, 1994), 16.

Health care needs are being met through the Affordable Care Act and Planned Parenthood. Objections to the second principle of green bioethics have been addressed. Individuals are beginning to appreciate that their use of the health care system affects others, even as doctors are emboldened to follow principle over patient demand. Governments that sponsor health insurance are creatively erecting barriers to medically unnecessary procedures without compromising human dignity. Prioritizing health care needs before health care wants can be a part of the ethos of the medical industry, but it takes collaboration and multiple modes of engagement, such as the ones identified in this chapter.

V. Conclusion

Suggestions for health care prioritization often lead to distress by the comfortable developed world who believe that if the market makes an item affordable, it is moral to buy and use. This mentality extends to the health care system. While health *care* should always be given, health *wants* can be severely reduced or eliminated at this time. The crux of prioritizing health care needs is not that human wants should never be provided for, but rather they must be balanced with limited natural resources. Providing health care needs to all people is essential to dignified communal life in the common good. Thus, certain medical offerings that siphon natural and intellectual resources away from human needs should be decreased. Once basic human needs are provided for all people, and conservation is embedded in bioethics, then weak needs/ strong wants could be allocated, and so on in ever-widening circles.

A few final considerations should be underscored. First, it must always be kept in mind that green bioethics is not concerned with “death panels” or the like. Providing

basic health needs to all people can be accomplished if health wants are curtailed.

Everyone should be able to access care from natural conception to natural death⁷³³ if the medical industry heard the Christian call to conservation and reduced superfluous treatments to medical consumers. This should be infinitely more palatable than making hard decisions about rationing life-saving medicine. It is easier to deny plastic surgery than vaccinations.

Second, the urgency of conservation must remain in the forefront of medical developments, techniques, and procedures.

Our inability or unwillingness to say no is an immovable object, and our inability to fund unlimited demand is an irresistible force. There is a strong likelihood that American health care will burst in totally unpredicted ways as the irresistible force meets the immovable object. We will all be observers of this process in our lifetime.⁷³⁴

How will we meet the urgent issue of conservation? Mitchell, et al. conclude that, simply, “environmental impact must be a necessary consideration in the evaluation of any technology.”⁷³⁵ Therefore, third, individuals must confront the fact that we are finite

⁷³³ The phrase “from conception to natural death” is often used in Catholic documents. For instance, Dignity Health is a health care system that was founded by the Sisters of Mercy in 1986 on the West Coast with a mission to “further the healing ministry of Jesus.” They state, “For Dignity Health, respecting the dignity of persons requires reverence at every stage of life’s journey from conception to natural death. Therefore, direct abortion is not performed. Reproductive technologies in which conception occurs outside a woman’s body will not be part of Dignity Health’s services. This includes in vitro fertilization.” Dignity Health, “Statement of Common Values,” (12 February 2013): 1-3, at 1. For more on Dignity Health see chapter one. Here, I want to go one step further and assert that health care should be accessed from *natural* conception to natural death because assisted reproduction absorbs medical resources without addressing a medical need. See Casini, et al., “Why Teach ‘Bioethics and Human Rights,’” 362; United States Conference of Catholic Bishops, “HHS Proposal Falls Short in Meeting Church Concerns; Bishops Look Forward to Addressing Issues with Administration,” 7 February 2013, at <http://www.usccb.org/news/2013/13-037.cfm>

⁷³⁴ Crippen, *ICU Resource Allocation in the New Millennium*, 338.

⁷³⁵ C. Ben, Mitchell, Edmund D. Pellegrino, Jean Bethke Elstain, John G. Kilner and Scott B. Rae, *Biotechnology and the Human Good* (Washington, DC: Georgetown University Press, 2007), 138.

beings living in a finite world. Limitation as a part of human creation will be discussed in the next chapter thoroughly.

Procedures done under the auspices of medicine, such as Botox, cosmetic dentistry, pharmaceuticals to treat non-life threatening ailments, and life-extending treatments in the last ten years of advanced age reveal an inability of humans to come to terms with limits and mortality. But “limitations on the rights of individuals in the face of public health threats are firmly supported by legal tradition and ethics. All legal systems, as well as international human rights, permit governments to infringe on personal liberty to prevent a significant risk to the public.”⁷³⁶ Hopefully, rights to health care would not be endangered, but if we do not act now, the future looks grim. Anthropogenic climate change significantly threatens the welfare of the *populus* and there is untold suffering that occurs in each hour of each day due to human overconsumption. But we are not enslaved to destiny. We can change the course of our trajectory.

The novel *Herland* by Charlotte Perkins Gilman describes a crisis point in the gynocratic utopia. The committee of women, when confronted with a scarcity of resources that threatened every citizen in the country, met the challenge

not by a “struggle for existence” which would result in an creating writhing mass of underbred people trying to get ahead of one another... neither did they start off on predatory excursions to get more land from somebody else... they sat down in council together and thought out...limits on what was necessary to secure a standard of peace, comfort, health, beauty and progress for all.⁷³⁷

⁷³⁶ Ronald Bayer and Amy L. Fairchild, “The Genesis of Public Health Ethics,” *Bioethics* 18, no. 6 (2004): 473-492, at 489. cf Lawrence O. Gostin, “Public Health Law in an Age of Terrorism: Rethinking Individual Rights and Common Goods,” *Health Affairs* 21, no. 6 (2002): 79-93.

⁷³⁷ Charlotte Perkins Gilman, *Herland* (Wickford, RI: North Books, 1998), 77.

Through the principles of green bioethics, the same can be done for the health care industry in this era of the anthropocene.

The first principle of green bioethics, which was explained in the last chapter, argued that when global resources are distributed justly, conservation will occur. It was the task of this chapter to subsequently identify which medical developments, techniques, and procedures could be included in global health care distribution. The second principle of green bioethics argued that human medical needs must take priority. Medical needs tie directly to global justice and clarify prioritization by location and service. It is the objective of the next chapter to dig deeper into human health needs within a global distribution paradigm and explore environmentally sustainable methods of providing health care needs.

Chapter five will explain the third principle of green bioethics—simplicity before complexity: reducing dependence on medical technology. The task of my third principle is twofold. First, to ensure that medicalization has not occurred, and second, to argue for a gradational approach to medical developments, techniques, or procedures when medical intervention is required. Thus, I move from the macro-level of health care distribution in chapter three, to the meso-level of health care needs in chapter four, to the micro-level of modes of health care delivery in chapter five. These principles of green bioethics, along with the fourth to be expounded in chapter six, will maintain the focus on environmental conservation in the health care system and the emphasis on the common good.

CHAPTER 5

Simplicity before Complexity: Reducing Dependence on Medical Intervention

I. Introduction

Medical resources are limited, yet the common good requires that all people have access to basic health care appropriate to human dignity. In order to justly allocate medical resources, the very way in which the Western world approaches health care must be reconceptualized to account for the needs of all people and the limits of the planet. After exploring distributive justice in health care resources in chapter three, and then qualifying the difference between health care wants and health care needs in chapter four, it is time to step back from the medical industrial complex⁷³⁸ and question the technological model, which currently underpins health care in America.

This chapter will describe the third principle of green bioethics, simplicity before complexity: reducing dependence on medical intervention. The third ethical principle for green bioethics has a two-fold approach. First, it proposes that the health care industry avoid medicalization and focus on preventing disease, thus reducing dependence on medical intervention. Second, it suggests a gradational approach to medical intervention, if required, which would also reduce medical intervention. These two prongs in tandem are dubbed, “simplicity.” Simplicity requires a vetting here because the concept presupposes the ethical and theological foundations of this chapter. Simplicity in living through reduction of consumption appears in both environmental philosophy and Catholic theology.

For the last two decades, the “voluntary simplicity” (VS) model of life has been

⁷³⁸ That is, as Arnold S. Relman wrote in 1980, “the new medical-industrial complex.” See Arnold S. Relman, “The New Medical-Industrial Complex,” *New England Journal of Medicine* 303, no. 17 (1980): 963-970. Thanks to Andrea Vicini for bringing this to my attention.

promoted as a means to conservation.⁷³⁹ The voluntary simplicity movement is premised on the idea that “less is more” and has two aspects. The first part of VS seeks to decrease consumption of material goods through “downshifting.” The second part of VS seeks to increase non-commercial experiences, values, and relationships. The aggregate result is reduced consumption, greater happiness, and increased personal satisfaction.

The first part of VS, “downshifting,” eliminates unnecessary consumer goods like duplicate cars, redundant electronics, and even long work hours. Downshifting is significantly associated with sustainable household practices,⁷⁴⁰ as there is less money to fritter away on the unnecessary. Those who downshift find themselves with less purchase power, but often with more time, energy, and fulfillment. The double-divided hypothesis states that there may be two results from one action.⁷⁴¹ In the case of simplicity, the first result is reduction of goods through decreased consumption. The second result is an enlarged internal life, full of intangible goods.

Simplicity in this second form might include enjoying a walk with a friend, reveling in the changing autumnal leaves, volunteering one’s time, or even contemplative practice. The expansive aspects of simplicity focus on important non-commercial values, family meals, connection with nature, community involvement, and creativity. Simplicity becomes an approach to life that is founded on gratitude, wonder, and peace. It recognizes that money cannot buy happiness and works towards reflective living.

⁷³⁹ Duane Elgin, *Voluntary Simplicity: Toward a Way of Life that is Outwardly Simple, Inwardly Rich* (New York: Quill, 1993).

⁷⁴⁰ Emily Huddart Kennedy, Harvey Krahn, and Naomi Krogman, “Downshifting: An Exploration of Motivation, Quality of Life, and Environmental Practices,” *Sociological Forum* vol. 28, no. 4 (2013): 764-783, at 764.

⁷⁴¹ Tim Jackson, “Live Better by Consuming Less: Is There a ‘Double Dividend’ in Sustainable Consumption?,” *Journal of Industrial Ecology* 9, no. 1-2 (2005): 19-36, at 23.

Voluntary simplicity—to distinguish it from involuntary poverty—is primarily attractive to wealthy, overworked, and overtired citizens of the developed world who are generally warm, well-fed, and seeking a better quality of life. In many ways, VS is a leisure class phenomenon and is therefore a perfect model for the American health care system, which is also wealthy but overworked!

Simplicity in its non-religious permutation offers little in the way of spiritual satisfaction. VS fails to acknowledge a deeper motivation for being content with what one has, cultivating inner virtue, or enjoying life in community. For instance, practices of simplicity in modern life rarely seek to downshift to a different tax bracket in order to show solidarity with the poor. However, simplicity in theology provides an articulation of a life that is embedded in the common good. In particular, the Catholic expression offers an integrative model of theological simplicity.

The Catholic conception of simplicity is not merely self-centered, which would imply simplicity so that *I* can have a better life. Rather, Catholic simplicity is other-centered and endorses simplicity so *all* may flourish. Since Catholic simplicity is concerned with others, it adheres to a value system that is focused on “three fundamental and closely intertwined relationships: with God, with our neighbour and with the earth itself.”⁷⁴² Thus, simplicity is undertaken with a relational mindset and spiritual motivation.

In *Laudato Si’: On Care for Our Common Home*, Pope Francis encouraged, “It is a return to simplicity which allows us to stop and appreciate the small things, to be grateful for the opportunities which life affords us, to be spiritually detached from what

⁷⁴² Francis, *Laudato Si’: On Care for Our Common Home* (Rome: Vatican Press, 24 May 2014), 66.

we possess, and not to succumb to sadness for what we lack.”⁷⁴³ This vision of simplicity is compelling for individuals and families. Theological simplicity can be brought to the medical industry as well.

The Catholic description of simplicity is especially apt for health care ethics since it links the individual to the greater whole of humanity. Currently, there are pockets of medical saturation but also vast medical deserts. Since the goals of medicine are to be universally applied, the medical industry must continue to expand health care—simply—to meet the needs of all people. At the same time, theological simplicity critiques the innumerable medical interventions that do not appear to bring health, wholeness, or healing. Simplicity is not merely a practice; it is an attitude that must be integrated into health care, in service to the common good.

After these introductory remarks, I will move to my ethical and theological foundations for this chapter—human limitation and the concept of medicalization. Christians acknowledge that we are bound and limited, both in terms of physical abilities and in terms of mortality. Limitation recognizes that use of the health care system is necessary for well being, but, in the end, no amount of medicine or technology can prevent death. Medical resources can only forestall the inevitable. Limitation further addresses the folly of medicalization, which will be the second foundational concept in this chapter.

I will locate the origins of medicalization in two sources: the gaze, which comes from Jacques Lacan’s work in philosophy, and, as an outgrowth, the medical gaze, which was identified by Michel Foucault. In essence, medicalization occurs when an aspect of embodied humanity is scrutinized by the medical industry, claimed as pathological, and

⁷⁴³ Ibid., 222.

subsumed under medical surveillance and intervention. (The actual adherence to medical treatment is less significant for identifying medicalization than the steps leading up to it.) Numerous critiques of medicalization appear in academic literature,⁷⁴⁴ yet few draw out environmental implications. I argue medicalization is a major, gratuitous cause of resource depletion in the health care industry.

The third section of my chapter will examine ways in which the health care industry can enact simplicity through the two-fold approach of preventing diseases or conditions, and gradation when prevention is not possible. First, I will address prevention utilizing the case of infertility in women. That is, women can avoid medicalization and dependence on the medical intervention by taking active steps to prevent infertility, thus saving enormous resources, especially in the developed world where fertility treatments are more frequently used. Second, I will appraise gradation as an approach to treatment when a disease or condition cannot be prevented. I will use obesity as a case study, and argue that if medical intervention is required, low-tech, undemanding, and economical solutions should be utilized before moving to high-tech, complex, or expensive

⁷⁴⁴ A feminist critique of medicalization utilizes the concept of the male gaze. Laura Mulvey, "Visual Pleasure and Narrative Cinema," *Screen* 16, no. 3 (1975): 6-18, at 15. In these cases, feminists protest the many ways in which the medical industry alienates women from the natural functions of their bodies, and offers women harmful "correctives." Teresa Delgado, "This is My Body... Given for You: Theological Anthropology Latina/mente," in *Frontiers in Catholic Feminist Theology: Shoulder to Shoulder*, Susan Abraham and Elena Procario-Foley, eds. (Minneapolis: Fortress Press, 2009), 25-47, at 26. Medical colonization of women usually aligns women with a gender script that essentializes "female" to reproductive or sexual functioning. Margaret Farley, *Just Love: A Framework for Christian Sexual Ethics* (New York: Continuum, 2006), 156-157. The disability critique of medicalization points out that the person with a disability is socially isolated and marginalized, due to an "ableist" society. Alexandre Baril and Kathryn Trevenen, "Exploring Ableism and Cisnormativity in the Conceptualization of Identity and Sexuality 'Disorders,'" *Annual Review of Critical Psychology* 11 (2014): 389-416. "Disability" as much as result of culture construction, as it is physical hardship. Eric Parens and Adrienne Asch, "The Disability Rights Critique of Prenatal Genetic Testing: Reflections and Recommendations," *Special Supplement Hastings Center Report* 29 (1999): S1-S22.

interventions. Again, medical and natural resources will be conserved if a gradational approach to medical treatments is employed.

In my penultimate section, I will survey simplicity and resource conservation. As in previous chapters, I will first examine what has been implemented elsewhere in the medical industry. I will first describe the Kimberton Clinic, which practices “sustainable medicine,” and then consider the natural death movement. Both the Kimberton Clinic and the natural death movement have put simplicity into action. After these illustrations, I will lift up lingering questions and concerns regarding my proposal that prevention and simplicity can reduce resource exploitation.

A primary concern, especially in the United States, is that preventative health measures interfere with liberty. Returning to the example of obesity from section three, I argue that health care prevention can actually preserve liberty by avoiding medical dependence. A second concern is that gradational approaches to medicine hinder best patient outcomes. I will use the example of sex reassignment surgery to argue that a simple approach to presenting oneself as male or female, which is not heavily reliant on the medical industry, can provide favorable outcomes for the patient, as well as society and the planet.⁷⁴⁵ Last, I will offer suggestions for simplicity in all levels of health care that draw each person in the common good towards participatory action against climate change.

For individuals, I encourage prevention and responsibility as two side of personal health that can reduce medical intervention. For doctors, I suggest a return to the goals of medicine and recognition of human limitation. This is especially apropos in an over-

⁷⁴⁵ This section could also be applied to “cisgender” people who seek surgical intervention to enhance their gender identity, i.e. a woman who seeks cosmetic surgery to exaggerate her breasts or narrow her waist.

prescribed society. For health insurance policies and governments that provide health care, I reiterate the need to avoid medical intervention by first, promoting strategies that prevent disease and, second, using a gradational approach to health care delivery when medical intervention is absolutely necessary.

Reducing dependence on medical intervention is not only a matter of green bioethics, it also ensures that humans are not subjected to “Type II medical malpractice,”⁷⁴⁶ but instead affirmed as image-bearers of God—limitations and all. I begin with my ethical and theological foundations, starting with a Christian perspective on human limitation.

II. Ethical and Theological Foundations

This section provides the ethical and theological foundations for the third principle of green bioethics. I begin with a theological description of human limitation. Christians recognize the human person as necessarily limited. Yet, denial of human limitation has become a ubiquitous feature of the medical industry. After presenting a theological foundation of limitation, I address the concept of medicalization.

Medicalization—as a concept—emerged in the 1800’s. I trace medicalization through the theory of gaze, developed by Jacques Lacan, and the medical gaze, identified by Michel Foucault. The purpose here is only to describe medicalization, rather than critique it. My appraisal of medicalization will be apparent in the remainder of the chapter. These ethical and theological foundations indicate that medical intervention for non-diseases, i.e. medicalization, are outside the bounds of a Christian theology of limitation and a serious cause of waste in the health care industry. I now situate my first

⁷⁴⁶ Nortin Hadler defines “Type II medical malpractice” as “doing something to patients very well that was not needed in the first place.” Nortin M. Hadler, *Worried Sick: A Prescription for Health in an Overtreated America* (Chapel Hill: University of North Carolina Press, 2008), 20.

foundation in a brief theology of human limitation.

A. Human limitation: A theological perspective

Medicine and health care must be grounded in the reality that humans are limited.⁷⁴⁷ We are limited by our bodies—mortal and decaying. We are limited by technological advances, and we are limited to the era and culture that we are born into. Human beings may work for change, or accept our lot in life, but regardless, an ethic of limitation must be a present reality in the theological ethics of medicine.⁷⁴⁸

James Gustafson comments, “scripture provides data and concepts for understanding the human situation, both in terms of its limits and its possibilities.”⁷⁴⁹ Concretely, this means that medicine can only do so much, the body can only have life extended for so long, and natural resources are not always renewable. Limitation is therefore an appropriate ethical foundation for both health care and ecology.⁷⁵⁰ Lisa

⁷⁴⁷ For non-theological discussions on limitation in health care, see Norman Daniels, *Just Health Care* (New York: Oxford University Press, 1985); Norman Daniels, *Am I My Parent's Keeper? An Essay on Justice Between the Young and Old* (New York: Oxford University Press, 1990); Daniel Callahan, *Setting Limits: Medical Goals in an Aging Society* (New York: Touchstone Books, 1988); Daniel Callahan, *What Kind of Life: The Limits of Medical Progress* (Washington DC: Georgetown University Press, 1995).

⁷⁴⁸ Some feminist bioethicists are cautious of limitation, rightly noting that women may be harmed by medical limitation based on age or sex. Because women live longer, they will be more drastically affected by policies that would curtail health care access after an absolute age, such as 70, leading to neglect of women at the end of their lives. See Nora K. Bell, “What Setting Limits May Mean: A Feminist Critique of Daniel Callahan’s ‘Setting Limits,’” *Hypatia* 4, no. 2 (1989): 169-178. Furthermore, it has been empirically verified that women’s pain is often dismissed, underdiagnosed, or simply ignored by physicians. See Diane E. Hoffmann and Anita J. Tarzian, “The Girl Who Cried Pain: A Bias Against Women in the Treatment of Pain,” *Journal of Law, Medicine and Ethics* 29, no. 1 (2001): 13-27. If medical limitation were to curtail palliative care or physician-assisted suicide, women could suffer unnecessarily. See Jennifer Parks, “Why Gender Matters to the Euthanasia Debate,” *Hastings Center Report* 30, no. 1 (2000): 30-36. The feminist critique of limitation does not nullify the concept, but rather cautions bioethicists about uncritically accepting limitation that may imperil the vulnerable. This caution can be retained as medicalization is described. Prudential approaches to limitation can, further, guide bioethicists to the median of simplicity instead of austerity measures in health care or extravagant medical treatments and diagnosis.

⁷⁴⁹ James M. Gustafson, “The Place of Scripture in Christian Ethics: A Methodological Study,” *Interpretation* 24, no. 4 (1970): 430-455, at 448.

⁷⁵⁰ The concept of limitation is also found in queer literature and will be a helpful interlocutor with green bioethics moving forward. Judith Halberstam writes, “the queer art of failure involves the acceptance of the finite, the embrace of the absurd... rather than resisting endings and limitations, let us instead revel in and leave to all of our own inevitable fantastic failures.” Judith Halberstam, *The Queer Art of Failure* (Durham: Duke University Press, 2011), 187. Instead of engendering despair, queer “failure” is actually a triumph.

Sowle Cahill warns, “refusal to come to terms with the boundaries and possibilities that frame and make possible human choices is precisely the sin that propels the disaster of Genesis 3.”⁷⁵¹ A hubris that denies boundaries and limits leads to grave consequences. This hubris continues to be an analytical framework in both ecology and technology.⁷⁵² In health care, the technological imperative drives many ethical issues, among them the role of limitation within medical technology.⁷⁵³

Oftentimes, the medical community disregards human limitation in favor of a mechanistic view of the person, reducing multifaceted human life to pure physical function. John Paul II recounts, “within this same cultural climate, the *body* is no longer perceived as a properly personal reality, a sign and place of relations with others, with God and with the world” (emphasis his).⁷⁵⁴ In such a state of being, the person becomes divided within herself. The body is seen as an enemy to be fixed, altered, and conquered. Jürgen Moltmann points out that the modern world leads people to “a yearning for the soul to be delivered from the body... (which) translates into a programme for overcoming disease, for prolonging human life, and for constructing a more perfect human organism by way of the introduction of machines into the human body.”⁷⁵⁵ As technology progresses, boundaries are simultaneously pushed further away and blurred and eradicated. Eventually, people are unable to cope with limitation and refuse to

⁷⁵¹ Lisa Sowle Cahill, *Between the Sexes: Foundations for a Christian Ethics of Sexuality* (Philadelphia: Fortress Press, 1985), 84.

⁷⁵² Adam Corner, Karen Parkhill, Nick Pidgeon, Naomi E. Vaughan, “Messing with Nature? Exploring Public Perceptions of Geoengineering in the UK,” *Global Environmental Change* 23 (2013): 938–947.

⁷⁵³ Ivan Illich, *Limits to Medicine, Medical Nemesis: The Expropriation of Health* (London: Marion Boyars Publishers, 1976).

⁷⁵⁴ John Paul II, *Evangelium Vitae: To the Bishops, Priests and Deacons Men and Women Religious Lay Faithful and All People of Good Will on the Value and Inviolability of Human Life* (1995), 23.

⁷⁵⁵ Jürgen Moltmann, *God in Creation: A New Theology of Creation and the Spirit of God* (Minneapolis: Fortress Press, 1993), 247.

acknowledge their own frailties. Nonetheless, human limitation is a reality that medical intervention cannot overthrow.

Theologians “Lisa Sowle Cahill and Bonnie J. Miller-McLemore argue, joined by Richard McCormick, (that) technophilia’s tendency to create a demand for more technology masks a misguided desire to seek medical or technical solutions to decidedly nonmedical problems.”⁷⁵⁶ Human capabilities include a range of opportunities, emotions, and states of being. The unwillingness to experience an inconvenience or personal disappointment in the body can manifest in the pursuit of some—but not all—medical intervention. However, the refusal to acknowledge the limits of the body and seek medical attention to escape the human condition is the essence of medicalization, which is described in the next section.

B. Origins of medicalization

Reinhold Niebuhr predicted that “modern technical civilization may perish because it falsely worshipped technical advance as a final good.”⁷⁵⁷ This is apparent in ecological destruction, the frenzied quest for economic growth, and consumer culture, which typify American life. In the health care industry, the compulsive drive to break limits, extend life, and shunt illness leave a wake of externalities: progress at any cost. A part of this “progress” is medicalization. I will demonstrate that medicalization is detrimental to the planet and the common good throughout the remainder of this chapter, but first I explain the origins of medicalization through the concepts of gaze and the medical gaze.

⁷⁵⁶ Cristina Traina, *Feminist Ethics and Natural Law: The End of the Anathemas* (Washington, DC: Georgetown University Press, 1999), 327.

⁷⁵⁷ Reinhold Niebuhr, *The Nature and Destiny of Man*, vol. 1 (New York: Scribner, 1964), 304.

1. The gaze

Medicalization consists, in part, of gaze. The idea of gaze originated from Jacques Lacan's psychoanalytical investigations on self-realization.⁷⁵⁸ Self-realization includes developing a sense of self apart from other people, just as an infant apprehends that her mother is not a part of herself. The infant is separate from the mother; there is self, and there is Other. The concept of the Other is not inherently problematic. Coming to view another person as the Other (not a "subaltern"⁷⁵⁹) is a stage of maturity. In fact, relationality is only possible by identifying the bounds of self and other, and interpersonal relationships are premised on the Otherness of a person. Otherness is conducive to social solidarity when dignity is recognized and people are seen as fully human.

However, the gaze can also reduce the person to an object. Consequently, there are different types of negative, destructive gazes. Feminists have indicated that the male gaze occurs when a heterosexual man views a woman (heterosexual or not) as an Other, as thing that can be touched, used, manipulated, and sexualized.⁷⁶⁰ In health care settings, the medical gaze might be enacted instead. In these cases, the physician fails to confront the "patient as person."⁷⁶¹ The medical gaze is the second step towards medicalization, which will now be explained.

2. The medical gaze

Building on the theoretical background of Lacan's Other, the medical gaze

⁷⁵⁸ Jacques Lacan, "The Mirror Stage as Formative of the Function of the I as Revealed in Psychoanalytic Experience," in *Écrits: The First Complete Edition in English*, Bruce Fink, trans. (New York: W. W. Norton, 2006), 75-81.

⁷⁵⁹ See Marcella Althaus-Reid, *Indecent Theology: Theological Perversions in Sex, Gender and Politics* (London: Routledge, 2000), 28. See also Gayatri Spivak, "Can the Subaltern Speak?," in *The Postcolonial Studies Reader*, Bill Ashcroft, Gareth Griffiths and Helen Tiffin, eds. (New York: Taylor and Francis, 2006), 28-37.

⁷⁶⁰ Mulvey, "Visual Pleasure and Narrative Cinema," 15.

⁷⁶¹ The reference is to Paul Ramsey, *The Patient as Person* (New Haven: Yale University Press, 1970).

emerged as a result of modern medicine. Alistair MacIntyre notes that in the late 17th and 18th centuries, “natural scientific conceptions of observation and experiment were intended to enlarge the distinction between *seems* and *is*. The lenses of the telescope and the microscope are given priority over the lens of the eye.”⁷⁶² In addition to scientific advancements such as the telescope and microscope, medical advancements like the stethoscope⁷⁶³ changed the dynamic between the unknown or unseen and knowledge.

Michel Foucault, the great French philosopher, recounted in *Birth of the Clinic* that by the middle of the eighteenth century A.D., “the relationship between the visible and the invisible... changed structure, revealing through gaze and language what had previously been below and beyond their (doctor’s) domain.”⁷⁶⁴ Internal diseases, which previously could only be assessed by their external manifestations, now had a basis of their own. In this branch of internal-external medicine, the body was not merely an object that externally produced symptoms of internal conditions like pregnancy or insanity.⁷⁶⁵ Rather, the body was part of a system with many variables—external and internal. These variables were set within a structure of power where the medical gaze occurred; namely, the body of the person within a medical setting. In this structure of power, the gaze is considerable fortified.

Foucault used “the archeological method,”⁷⁶⁶ to document developments in human

⁷⁶² Alasdair MacIntyre, *After Virtue*, 3rd ed. (South Bend, IN: University of Notre Dame Press, 2007), 80.

⁷⁶³ Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (New York: Vintage Books, 1973), 163.

⁷⁶⁴ *Ibid.*, xii.

⁷⁶⁵ Nietzsche writes, “the bad conscience is an illness... as pregnancy is an illness.” Friedrich Nietzsche, *On the Genealogy of Morals*, ed. Walter Kaufmann (London: Vintage, 1989), 2nd essay, sec. 19, pg. 88. While he is effecting in an analogical way, pregnancy can nevertheless produce illness-like symptoms—externally—due to an internal cause.

⁷⁶⁶ Hubert L. Dreyfus and Paul Rabinow, *Michel Foucault: Beyond Structuralism and Hermeneutics*, 2nd ed. (Chicago: University of Chicago Press, 1983), 13. The authors also note that the notion of power “appears in the titles of three books” of Foucault’s.

society, especially structures of power. He describes power as “the multiplicity of force relations immanent in the sphere in which they operate and which constitutes their own organization.”⁷⁶⁷ Structures of power are apparent in prisons, insane asylums, and health care facilities.⁷⁶⁸ When the gaze meets with the medical gaze in a medical setting, an axis of power is enacted on a patient. This confluence of actions usually results in a person being told they can or should utilize medical treatment, even though there might not be a clinical benefit. Ultimately, medicalization occurs when human functioning becomes an object of medical scrutiny to be fixed by medical solutions rather than accepted as “normal” in its variations.

Use of the health care system, medical prescriptions, and technological treatments may not seem problematic, especially if we assume doctors adhere to the Hippocratic Oath and the four principles of bioethics. However, oftentimes these treatments are unnecessary from a clinical perspective, or offer little to no medical benefits; they are an instance of medicalization. Detrimental effects of medicalization include overprescription or unnecessary drugs, iatrogenic diseases, emotional distress, and financial burdens.⁷⁶⁹ Medical errors are the third leading cause of death in the United States,⁷⁷⁰ making bioethicists wondering if we are not “better off” refusing medical care in some cases. The

⁷⁶⁷ Michel Foucault, *The History of Sexuality, vol. 1: An Introduction* (London: Vintage, 1978), 92.

⁷⁶⁸ Theologian Gunter Risse concurs that in the modern era there are many parallels between hospitals and other axis of power. Risse records that hospitals have historically been premised on observation. Indeed, even “secular ‘induction’ measures include the application of wrist bands for identification purposes, and the surrender of private clothes” which are exchanged for a hospital gown. The paper gowns, like a prison uniform, “are designed to provide easy access to the body by the caregiver.” Risse, *Mending Bodies, Saving Souls*, 8-9. With free access to the patient, the physician can then observe and record data, make educated guesses about the nature of illness, and suggest or implement a course of treatment.

⁷⁶⁹ Carl Elliott, *Better Than Well: American Medicine Meets the American Dream* (New York: W. W. Norton, 2003); H. Gilbert Welch, Lisa Schwartz, and Steve Woloshin, *Overdiagnosed: Making People Sick in the Pursuit of Health* (Boston: Beacon Press, 2011).

⁷⁷⁰ John T. James, “A New, Evidence-Based Estimate of Patient Harms Associated with Hospital Care,” *Journal of Patient Safety* 9, no. 3 (2013): 122-128.

drive for more—more technologies, more medicine, more cures, more palliation from the reality of the world—has made medicalization a clear and present threat to the health of people who find themselves caught in the medical industrial complex.

Having thus explained human limitation and medicalization as foundations of this chapter, the premise for my third principle of green bioethics becomes clear. Sustainable medicine must reject the notion that bodies are always in need of medico-technological intervention and recognize medicalization when it occurs. It is my contention that avoiding medicalization is a necessary component of environmental conservation in the medical industry. In the next section, I provide a strategy for reducing dependence on medical intervention by arguing for prevention and gradation. These two approaches comprise simplicity.

Standard economic theory takes “the most effective means to a given end.”⁷⁷¹ The basic idea of simplicity in health care is one of economy: get the job done with fewer resources. The “job” of health care is the best patient care in line with the four goals of medicine.⁷⁷² The “available resources” are medical goods and services. Thus, *care* should always be a component of simplicity in the medical industry, but *treatment* may not be necessary. The next section focuses on simplicity through prevention and gradation, acknowledging that simplicity is more than just an approach to reducing medical intervention. Simplicity is a habitual mindset, an entrenched way of life, and comprehensive philosophy that regards less as more, in many circumstances.

⁷⁷¹ John Rawls, *Theory of Justice* (Cambridge: Harvard University, 1971), 14.

⁷⁷² The goals of medicine, as outlined by Joseph H. Howell and William Frederick Sale, include: “the prevention of disease and injury, and the promotion and maintenance of health; the relief of pain and suffering caused by maladies; the cure of those with a malady, and the care of those who cannot be cured; and the avoidance of premature death and the pursuit of a peaceful death.” Joseph H. Howell and William Frederick Sale, “Specifying the Goals of Medicine,” in *Life Choices: A Hastings Center Introduction to Bioethics*, 2nd ed., Joseph H. Howell and William Frederick Sale, eds. (Washington DC: Georgetown, 2000), 62-73,

III. Reducing Dependence on Medical intervention

In the words of Ivan Illich, Catholic priest and iconoclast of artificial medical control over life,⁷⁷³

the medicalization of life appears as the encroachment of health care on the budget, the dependence on professional care, and as the addiction to medical drugs; it also takes form in iatrogenic labeling of the ages of man. This labeling becomes part of a culture when layman accept it as a trivial verity that people require routine medical ministrations for the simple fact that they are... (in any state of life).⁷⁷⁴

Illich's quote is particularly apt from the previous discussion on human limitation and medicalization. Before I explain the third principle of green bioethics, which provides a substantive environmental critique of medicalization, a hermeneutics of generosity must be extended to doctors, medicine, and the health care industry in general.

Medicalization is not the only outcome of the modern health care industry. To be sure, in some cases medicalization does not occur and the patient will be distressed about her health, or in need of treatment, and seek the offerings of the medical industry. While patient-driven medicalization, or "medicalization from below,"⁷⁷⁵ is a reality, in the case that there is a clinical disease that can be treated, an appropriate course of medicine should be suggested. Doctors and the health care industry do humanity a great service when they work towards the goals of medicine to support human health and flourishing.

⁷⁷³ Ivan Illich, "The Medicalization of Life," *Journal of Medical Ethics* 1, no. 2 (1975): 73-77.

⁷⁷⁴ Quoted in Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford: Basil Blackwell, 1984), 275.

⁷⁷⁵ Szasa, *The Medicalization of Everyday Life*, xviii.

That being said, in this section I navigate between the authenticity of clinical disease and the medicalization of certain conditions, using two approaches to simplicity that acknowledge: 1. some conditions are medicalized, but also 2. some conditions need medical attention.

There are seemingly innumerable aspects of health care that need to apply medical simplicity and reduce dependence on medical intervention. For example, pharmaceuticals, “routine” check-ups and prescriptions, elective mastectomies and oophorectomies, as well as nearly any medical development, technique, or procedure which the developed world has that the developing world does not, i.e. genetic therapy, nanotechnology, dialysis, ProactiveTM skin care, and routine neo-natal circumcision at a hospital could be discussed. Yet, I choose to take a more controversial approach to medical simplicity by addressing two accepted, generally unchallenged, and *welcomed* applications of medicalization.

Female infertility and obesity represent conditions that are medicalized. However, each may also indicate a condition that legitimately requires medical attention. I argue in both cases that a simple approach to addressing these somatic conditions will conserve resources. I focus on prevention of infertility and gradation in treatments of conditions related to obesity, thus articulating my two-fold approach to reducing dependence on medical intervention. I turn now to the prevention of female infertility as a means of avoiding medicalization and dependence on medical intervention.

A. Prevention—the case of female infertility

Barbara Andolsen notes with acumen, “Today, predominantly male medical experts still exert power over women’s bodies by defining certain physiological states

experienced exclusively by women as disease or potential medical crises that should be controlled by (male) medical management.”⁷⁷⁶ The medicalization of embodied women manifests in a plurality of harmful diagnoses and treatments that have lasting side effects. This harm is both physical—as there may be iatrogenic effects—and psychological—as women suffer the stigma of medical diagnosis or depression from failed medical “treatments.”⁷⁷⁷ Thus, feminist theologians bring the medicalization of women to the attention of medical and religious communities. Although all forms of medicalization of women are harmful, I maintain that the most sinister manifestation exists in the medicalization of female infertility, which expends unnecessary medical resources and physically damages women along the way.

Some contend female infertility is a condition—beneficial, harmful, or neutral—depending on the life-plans of the woman. Others would classify infertility as a disease. The World Health Organization (WHO) currently defines epidemiological infertility as “women of reproductive age (15–49 years) at risk of becoming pregnant (not pregnant, sexually active, not using contraception and not lactating) who report trying unsuccessfully for a pregnancy for two years or more.”⁷⁷⁸ The medical industry has declared infertility pathological, and offers a plethora of remedies. I argue that infertility is just one example from the list of female “disorders,” and one among many conditions, that do not require medical intervention.

⁷⁷⁶ Barbara Andolsen, “Elements of a Feminist Approach to Bioethics,” in *Readings in Moral Theology*, no. 9: *Feminist Ethics and the Catholic Moral Tradition*, Charles Curran, Margaret Farley and Richard McCormick, eds. (New York: Paulist Press, 1996), 341–382, at 343.

⁷⁷⁷ S. R. Holley, M. R. Passoni, R. D. Nachtigall, M. E. Bleil, N. E. Adler, and L. A. Pasch, “Rates of Major Depression Following IVF Failure,” *Fertility and Sterility* 98, no. 3 (2012): S234.

⁷⁷⁸ World Health Organization, “Infertility Definitions and Terminology,” 2013, at <http://www.who.int/reproductivehealth/topics/infertility/definitions/en/>

First, many forms of female infertility can be prevented. This is especially true in the West where factors like delayed procreation, obesity, and untreated sexually transmitted diseases lead to infertility.⁷⁷⁹ Anne Dochin explains, “In the global North, fertility is compromised by delayed childbearing, damage to reproductive organs from hormonal contraceptives and intra-uterine devices, and environmental and workplace toxins.”⁷⁸⁰ Since delayed procreation is often tied to a woman’s education, and is typically accomplished by extended synthetic contraceptive use, infertility of this sort can be prevented by a certain demographic; what Dochin refers to as the Global North.

Second, fertility declines with age. Infertility related to maternal age can be prevented by voluntarily having children earlier rather than later. This has the additional benefit of preventing complications from advanced maternal age, like greater exposure to environmental hazards.⁷⁸¹ Even so, ethicists must be aware that until men take an equal share of the burden of raising children, many women in the global North will continue to delay childbearing until they are established in their careers or finished with their education. The larger problem, which I recognize, is a sexist society where men do not raise their children and women are disproportionate caregivers. If prevention of female infertility is a priority, then society must address structural sexism.⁷⁸² Instead, society has relegated approaches to infertility to the medical industry.

However, third, infertility does not require a medical solution to what is a lifestyle

⁷⁷⁹ Center for Disease Control, “Sexually Transmitted Diseases in the United States, 2008,” 16 November 2009. at <http://www.cdc.gov/std/stats08/trends.htm#f3>

⁷⁸⁰ Anne Donchin, “In Whose Interest? Policy and Politics in Assisted Reproduction,” *Bioethics* 25, no. 2 (2011): 92-101, at 100.

⁷⁸¹ *Ibid.*, 100.

⁷⁸² Marie-Eve Lemoine and Vardit Ravitsky, “Sleepwalking into Infertility: The Need for a Public Health Approach Towards Advanced Maternal Age,” *American Journal of Bioethics* 15, no. 11 (2015): 37-48.

choice—the preference to achieve parenthood through biological reproduction.⁷⁸³

Medical-technological solutions to infertility include low-tech interventions—like ensuring that intercourse occurs during ovulation—to more demanding procedures like hormonal shots. High-tech procedures run the gamut of assisted reproductive technologies (ARTs), including invasive techniques like intracytoplasmic sperm injection (ICSI), in-vitro fertilization (IVF), three-way genetic parenting, and gestational carriers. These medical interventions are instances of resource exploitation and do not cure or treat infertility.

I contend that if society were to make people aware that many forms of infertility are preventable, be explicit about the lifestyles that contribute to infertility, and market campaigns at prevention, much in the way there has been awareness of life threatening diseases like HIV, heart disease, and cancer then all women at risk for seeking fertility treatments can participate in sustainability by reducing dependence on medical intervention. Prevention cannot ensure that all women will be able to have children when they want to, but it will reduce the perceived need to utilize health care resources for what is a standard result of certain chosen lifestyles.

By identifying medicalization of, and then preventing, female infertility instead of relying on reproductive technologies, health care can act in a conservationist manner.

Feminists ought to be especially interested in this approach because of their critiques of

⁷⁸³ I am aware of the tensions between competing values such as career advancement, procreation, and completing one's education for upper class women. Ideally, women would be able to make a truly free choice about if and when to have children (along with how much education to undertake and if and when to get married), but people are embedded in relationships. Thus, the choice of lifestyle remains for privileged women: to have children early and disrupt extensive education, or to delay procreation and move towards age-related infertility. These are not the only alternatives, of course, as adoption circumvents pregnancy and sometimes the extra time that is needed to raise young children. Women might also mitigate some of these tensions by finding a spouse who will raise his children as a co-parent, or juggling work and family. Finally the option to not have kids, or have fewer than desired, is always an option.

the medicalization of women. Even so, feminists still rightfully point out that even if a woman avoids the medicalization of infertility and conceives naturally, she still faces medicalization in pregnancy and childbirth.⁷⁸⁴ Therefore any attempt at articulating a position that might appear to be pro-natalist must declare that the reason for encouraging natural conception is not because motherhood or procreation is beneficial for women, or even a morally acceptable decision. “Procreation is no longer an unambiguous good, if it ever was.”⁷⁸⁵ Rather, prevention of female infertility would be advocated as a sort of *minus malum*, since it avoids technological intervention, the medicalization of women’s conception, and conserves medical and natural resources for authentic health needs, not medicalized, health wants.

Prevention is a first way of enacting simplicity and reducing dependence on the medical industry. If conditions or diseases cannot be prevented, then a second and subsequent approach to simplicity may be applied within the third principle of green bioethics. Gradation in allocation of medical developments, techniques, and procedures is the topic of the next section.

⁷⁸⁴ Oakley, *The Captured Womb*; Rebecca Kukla, *Mass Hysteria: Medicine, Culture, and Mothers’ Bodies* (New York: Rowman and Littlefield, 2005); Adrienne Rich, *Of Woman Born: Motherhood as Institution and Experience* (New York: W. W. and Norton, 1986). For opposing sides of the same debate see: Richard Johanson, Mary Newburn, and Alison Macfarlane, “Has the Medicalisation of Childbirth Gone too Far?,” *BMJ* 324, no. 7342 (2002): 892-895; Lachlan de Crespigny and Julian Savulescu, “Homebirth and the Future Child,” *Journal of Medical Ethics* 40, no. 12 (2014): 807-812.

⁷⁸⁵ Barbara Andolsen, “Whose Sexuality? Whose Tradition? Women, Experience, and Roman Catholic Sexual Ethics,” in *Readings in Moral Theology, no. 9: Feminist Ethics and the Catholic Moral Tradition* Charles Curran, Margaret Farley, and Richard McCormick, eds. (New York: Paulist Press, 1996), 207-239, at 225.

B. Gradation—approaches to obesity

From a green bioethics perspective, approaches to managing and treating clinical disease should rely first on prevention, and then on gradation.⁷⁸⁶ That is, low-tech, economical treatments, with proven favorable outcomes, should be pursued before escalating to complex, expensive, or multi-step procedures. I argue that using gradation in medical treatments will reduce dependence on medical intervention. This is true whether the medical solution addresses a clinical disease like cancer, diabetes, or heart disease, or a medicalized disease like infertility, or in this case, obesity.⁷⁸⁷

There are a multitude of health complications that are associated with obesity. Type II diabetes (formerly “adult-onset” diabetes, but with the growing prevalence of diabetic and pre-diabetic children and adolescents it has been renamed⁷⁸⁸), hypertension, stroke, cardiac disease, infertility, and high cholesterol are included among obesity-associated comorbidities.⁷⁸⁹ Internationally, obesity is considered a disease of affluence and a majority of developed world citizens have chosen to live in such a way that they develop this condition. At the same time, socio-economic and demographical factors

⁷⁸⁶ The term “subsidiarity” is another way to describe this approach. In chapter three I used the concept of subsidiarity to frame my policy suggestions for individuals, doctors, and institutions. Subsidiarity takes a tiered approach to ethical and social dilemmas, thus allowing each person or group to work “where they are at” without escalation to higher-level interventions. Subsidiarity can also be applied in green bioethics with respect to medical treatments and regimens, both in that individual health outcomes should rely on the most basic or simple plan possible and that treatments should be requested at the most local level possible. For instance, going to a primary care physician before a specialist or petitioning a government to sponsor AIDS medication for the country instead of relying on outside humanitarian aid would demonstrate subsidiarity. In the United States, medical consumers choose against subsidiarity when they elect to be treated at hospital across the country instead of in their home state, or travel to another country as part of medical tourism.

⁷⁸⁷ “Obesity” will be my catchall word for the range of conditions that indicate surplus body weight or body fat, including “overweight,” “obese,” and “morbidly obese.” Higher weights relative to height—also called body mass index (BMI)—are associated with a plurality of medical issues, and should be treated as such. However, being “overweight” does not necessarily make one “unhealthy.” C. J. Lavie, R. V. Milani, H. O. Ventura, A. Romero-Corral, “Body Composition and Heart Failure Prevalence and Prognosis: Getting to the Fat of the Matter in the ‘Obesity Paradox,’” *Mayo Clinical Proceedings* 85, no. 7 (2010): 605-608.

⁷⁸⁸ Louise A Baur, “Changing Perceptions of Obesity- Recollections of a Paediatrician,” *The Lancet* 378, no. 9793 (2011): 762-763.

⁷⁸⁹ *Ibid.*

partially determine obesity and health outcomes. This ought to be flagged at the outset of conversations on obesity.

Obesity-related conditions appear in every socioeconomic bracket, but are especially prevalent in low-income areas in the United States where people are more likely to work full time to survive and thus have less access to recreation.⁷⁹⁰ Moreover, cheap, but high-calorie food in the U.S., and the accessibility of food from vending machines, grocery stores, restaurants, and markets create a perfect storm for overeating in the U.S. across income lines. Health disparities, including those related to weight, exist even within countries with socialized health care, like France.⁷⁹¹ This indicates that obesity is more of a social problem than a medical problem, and is another medicalized condition. That is, obesity-related conditions are not random; they are connected to well-known facts about the effects of excess body weight, body fat, and overconsumption of macronutrients.⁷⁹² In the rare case that obesity-related conditions cannot be prevented, then gradational approaches to medical intervention could be suggested, such as individual reduction in calories consumed and more exercise, before attempting medical intervention.

Personal responsibility is the first level of gradation. Weight gain and loss comes down to simple thermodynamics. When calories in excess of daily needs are consumed, weight is gained. When fewer calories are taken in than what is needed to sustain vital

⁷⁹⁰ C. R. Tomson, R. N. Foley, Q. Li, D. T. Gilbertson, J. L. Xue, A. J. Collins, "Race and End-stage Renal Disease in the United States Medicare Population: the Disparity Persists," *Nephrology Carlton* 13, no. 7 (2008): 651-656. See also Emilie M. Townes, *Breaking the Fine Rain of Death: African American Health Issues and a Womanist Ethic of Care* (New York: Continuum, 1998).

⁷⁹¹ Jean Pascal, Hélène Abbey-Huguenin et Pierre Lombrail, "Inégalités Sociales de Santé: Quels Impacts sur L'accès aux Soins De Prévention?," *Lien social et Politiques—RIAC* 55, *La santé au risque du social* (Printemps 2006): 115-124.

⁷⁹² F. Ofei, "Obesity—A Preventable Disease," *Ghana Medical Journal* 39, no. 3 (2005): 98.

function and additional activity, weight is lost.⁷⁹³ Those seeking to prevent or reverse the health effects of obesity can benefit from a reduction in calories, first and foremost.⁷⁹⁴ The first-level approach of a modification of diet instead of reliance on pills, procedures, and surgical intervention will aid environmental conservation. The health care industry should not be the first stop on the road to losing weight.

Another first-level approach is exercise, which is free, available to all except the very infirm, and requires no extra resources. One does not even need to join a gym to enjoy the benefits of walking, running, basketball, or soccer. The World Health Organization has suggested exercise for the sake of health and wellbeing as well.⁷⁹⁵ Beyond diet and recreation, other lower-level solutions to obesity abound.

In 2013, the cofounder of the Hastings Center, Daniel Callahan, suggested carbon neutral strategies to address the obesity epidemic in the U.S., like alterations in individual lifestyle habits, stigmatization, and social pressure.⁷⁹⁶ Others, like physician Garry Egger, proposed carbon taxes as a way to reverse the expanding waistline of the world.⁷⁹⁷ Every first-level solution to each medical problem, however, does not fit all people, thus gradation recognizes that a ratcheting of treatments may be necessary. For some, glandular conditions prompt corpulence and only medical intervention will be effective. For others, the effects of obesity can no longer be managed with simple diet and exercise.

⁷⁹³ There are 3,500 calories in a pound. Daily caloric needs vary for individuals. The Mayo Clinic has a calorie calculator for those interested. Mayo Clinic, "Calorie Calculator," 2015, at <http://www.mayoclinic.org/calorie-calculator/ITT-20084939>

⁷⁹⁴ Frédéric Picard and Leonard Guarente, "Calorie Restriction- the *SIR2* Connection," *Cell* 120, no. 4 (2005): 473-482.

⁷⁹⁵ Organisation Mondiale de la Sante, "Stratégie mondiale pour l'alimentation, l'exercice physique et la santé," A57/9 (17 avril 2004): 1-24.

⁷⁹⁶ Daniel Callahan, "Obesity: Chasing an Elusive Epidemic," *Hastings Center Report* 43, no. 1 (2013): 34-40.

⁷⁹⁷ Garry Egger, "Personal Carbon Trading: A Potential 'Stealth Intervention' for Obesity Reduction?," *Medical Journal of Australia* 187, no. 3 (2007): 185-187.

After first-level solutions are thoroughly explored, medical intervention to treat obesity-related conditions must decipher between medical developments, techniques, or procedures that address the health consequences of obesity, and those that only address the aesthetic ramifications of corpulence. Plastic surgery, liposuction, and body contouring are in the latter category. Liposuction can spot-reduce fat, but unless the person modifies obesogenic environments and habits, they will gain the weight back. Cosmetic interventions are offered under the guise of the medical industry, but should not be considered medical solutions to being overweight, since they do not treat clinical issues like blocked arteries, angina, or blood sugar levels.

There are multiple second and third line approaches to medical intervention of obesity-related conditions. Clearly, some medical interventions take more resources than others. Psychotherapy for binge eating or depression—both linked to obesity—has a very low carbon footprint, but adherence levels may be low.⁷⁹⁸ Furthermore, health insurance “incentivizes structures (that) typically reward surgical procedures over counseling.”⁷⁹⁹ Pharmaceuticals, which lower cholesterol levels and treat other obesity-related conditions, have an enormous carbon footprint, as discussed in chapter one. Tongue-mesh surgery utilizes few resources, but is a temporary solution.⁸⁰⁰ Gastric bypass surgery is a one-time procedure, which drastically reduces weight, but has undesirable externalities like possible lack of nutrition absorption that could require further medical attention.⁸⁰¹

⁷⁹⁸ F. Amianto, L. Lavagnino, G. Abbate-Daga, and S. Fassino, “The Forgotten Psychosocial Dimension of the Obesity Epidemic,” *The Lancet* 378, no. 9805 (2011): e8.

⁷⁹⁹ Kristin Voigt and Harald Schmidt, “Gastric Banding: Ethical Dilemmas in Reviewing Body Mass Index Thresholds,” *Mayo Clinical Proceedings* 86, no. 10 (2011): 999-1001, at 999.

⁸⁰⁰ In tongue-mesh surgery, a patch of mesh is sewn onto the tongue, making chewing difficult and painful, thus leading to a reduction of caloric intake. The tongue mesh is removable. Bruce Hensel, “Doctor Claims Tongue Patch Can Help Shed Pounds,” *NBC Los Angeles*, 6 April 2011, at <http://www.nbclosangeles.com/news/health/Tongue-Patch-Diet-119362834.html>

⁸⁰¹ For this and other problems with “lap bands” see Voigt and Schmidt, “Gastric Banding.”

Each of these treatments uses various amounts of resources, but it is important to note that there are very few, if any, environmental externalities in preventing obesity. Likewise, utilizing first-line, simple approaches to treatment instead of depending on medical intervention are relatively sustainable.

Obesity and weight-related conditions are one of the most pressing health issues facing the developed world right now. With added pressure on the medical system to address what could be prevented, medical resources are being put towards a battle that could be fought on a number of non-medical fronts—like prevention and gradation. Yet, in the realm of health care, reversing weight gain by low-carbon solutions like reducing calories and increasing activity is not proffered, but rather energy intensive pills, surgery, and aesthetics. While obesity as a disease is medicalized, there are nonetheless clinical ramifications for corpulence that eventually necessitate medical attention. When obesity is treated, the medical industry should use low-tech, preventative measures first, then utilize a gradational approach to medical intervention.

C. Summary

In this section I have argued that both female infertility and obesity are preventable conditions. Medical personnel concerned with environmental resource conservation should put effort into awareness and prevention of these conditions, which are unnecessarily treated by the medical industry. In the atypical case that female infertility or obesity (and other conditions) cannot be prevented, a gradational approach to treatment can unfurl. This includes first, considering if medicalization has occurred. Second, an attempt to reverse the condition instead of immediately pursuing medical intervention should be considered. Then, third, treatments that begin with first-level

approaches should be utilized, only increasing intensity, invasiveness, expense, or expenditure when absolutely necessary. Simple medical treatments must always be within the bounds of good medical practice, observing other values like fair resource distribution and quality of life. I believe simple approaches to health care, with the full understanding of the purpose of a theology of limitation, can lead to environmental conservation for the benefit of the common good. While I have focused on female infertility and obesity, nearly any condition has the potential to be medicalized.

When medicalization occurs, treatments absorb medical resources unnecessarily, putting a drain on the environment and disrupting the common good. I have maintained that overuse of the medical industry is a clear and present threat to the common good and the lives of individuals who suffer under the medical gaze. Yet, it is also an environmental menace as it places the normal variety of human experience under the medical microscope. This results in a bloated carbon footprint from the medical industry and an unnecessary absorption of medical resources. Christian bioethicists must recognize medical waste and resist it for the sake of environmental sustainability. In the next section I illustrate the third principle of green bioethics in action, address concerns over its implementation, and provide further suggestions for enactment.

IV. Simplicity and Resource Conservation

The third principle of green bioethics is the most intuitive. If ethicist can recognize and reject medicalization, while at the same time encourage preventative health measures, then resources in the medical industry will be conserved. Likewise, a gradational approach to medical conditions and diseases that cannot be prevented will further reduce dependence on the medical industry. Simplicity in health care cannot be

seen as a lessening of options, but rather an enlarging of the common good. Theologian Luka Tomašević believes that it is appropriate for religious principles to be integrated into the ethos of health care. He points out, “theologians, especially those belonging to the Catholic Church, began to talk about the common good as a traditional social truth of Catholic social doctrine and to demand justice in the area of integrated life and health insurance.”⁸⁰² This sense of the common good must pervade all levels of human functioning from the individual to corporations. The common good can be supported through simplicity in health care.

In my penultimate section of the chapter, I examine the third principle of green bioethics in action, tying simplicity in the medical industry to resource conservation. As in previous chapters of the dissertation, this section identifies green medical practices that are already in place throughout the world, addresses lingering questions and concerns, and concludes with policy suggestions for individuals, doctors, and health insurance. I first turn to two examples of reducing dependence on medical intervention: one in clinical practice and the other in terminal cases of illness. These both serve as models for simplicity in different ways.

A. What has been implemented elsewhere⁸⁰³

The buds of a green bioethic are sprouting, as a long overdue bulb planted by Van Potter in the 1970’s. At times, however, simplicity in the medical industry is difficult to

⁸⁰² Luka Tomašević, “Development and Perspectives of Theological Bioethics,” *Croatian Medical Journal* 54, no. 1 (2013): 86-88, at 86.

⁸⁰³ For a further example of simplicity in a medical development, technique, or procedure (in this case a treatment for hydrocephalus), see MacArther Foundation, “Benjamin Warf,” 2 October 2012, at <http://www.macfound.org/fellows/880/>. See also the Centers for Disease Control and Prevention “stewardship programs” which are “designed to ensure that hospitalized patients receive the right antibiotic, at the right dose, at the right time, and for the right duration.” That is, using a simple, minimalist approach. Centers for Disease Control and Prevention, *Get Smart Health Care: Know When Antibiotics Work* (Atlanta, GA: Centers for Disease Control and Prevention, n.d.), at <http://www.cdc.gov/getsmart/healthcare/resources/slides/getsmart-healthcare.pdf>

assess because it is premised on absence. That is, it is easier to quantify who uses the medical industry, rather than the number of hospital visits prevented because of precautionary health care measures. However, there are some visible examples of reducing dependence on medical intervention by avoiding medicalization and utilizing gradation in medical treatments. In this section I focus on the Kimberton Clinic as an example of simplicity in clinical practice and the natural death movement as an example of simplicity at the end of life. Both exemplify simplicity in health care. I examine the Kimberton Clinic first.

1. The Kimberton Clinic

Kimberton Clinic in Pennsylvania, USA, advocates “sustainable medicine,” inspired by Daniel Callahan. Founded by Richard Fried, M.D, and located in a renovated barn, Kimberton Clinic offers individualized services, which are economically and ecologically sustainable.⁸⁰⁴ Although environmental sustainability—in terms of conservation—is not the sole driving force behind Kimberton Clinic, the Clinic illustrates one example of a physician’s office that is practicing simplicity for patients of all ages and health conditions by reducing dependence on medical technologies when possible. Kimberton Clinic exemplifies the notions of prevention and gradation that I have argued for in this chapter.

In 2014, the Kimberton Clinic was profiled by the American Medical Association’s journal of ethics, *Virtual Mentor*. Associate editor Phil Perry described, “at Kimberton, preventive medicine and sound prescribing are emphasized to eliminate

⁸⁰⁴ Kimberton Clinic, “What is Sustainable Medicine?,” 2010, at <http://kimbertonclinic.com/what.htm>

overuse of antibiotics and psychopharmaceuticals.”⁸⁰⁵ Prevention is the Clinic’s first step towards their model of sustainable health care. Then, as a second step in sustainable medicine, Kimberton Clinic cautiously utilizes medical developments, techniques, and procedures when necessary.

Instead of falling into the consumptive cycle of “routine” use of scarce medical resources, the Clinic approaches medical care using a gradational approach. They explain,

While all up-to-date diagnostic services are utilized (CT, MRI, laboratory test etc.) they are ordered with careful consideration, and not as a shortcut for thoughtful history-taking, physical examination and doctor-patient conversation. Thus, medical and therapeutic care is individualized, the opposite of a “cookbook” or “drug of choice” mentality. Our striving is to do the *right thing at the right time for each patient*.⁸⁰⁶

Kimberton Clinic demonstrates simplicity in the health care establishment, with a balance of medical treatment and restrained prescription. The Kimberton Clinic is a superb model of simple health care that strikes the correct balance between use and over-use.⁸⁰⁷ Although this small health care facility in rural Pennsylvania might not be appealing to large medical complexes that specialize in rare diseases and experimental surgeries, it nonetheless demonstrates that a sustainable medical industry can encompass clinics that thrive on patient-center health care, which is much closer to the goals of

⁸⁰⁵ Phil Perry, “State of the Art and Science Greener Clinics, Better Care,” *Virtual Mentor: American Medical Association Journal of Ethics* 16, no. 9 (2014): 726-731, at 729. Emphasis theirs.

⁸⁰⁶ Kimberton Clinic, “About the Kimberton Clinic,” 2010, at <http://kimbertonclinic.com/clinic.htm>

⁸⁰⁷ The question of who will pay for these alternative treatments remain. It is unclear what types of health insurance Kimberton Clinic accepts. However, it does seem that health insurance companies are more willing to fund low-tech alternative and ancillary health care services such as acupuncture, massage therapy, nutritional counseling, personal training, Pilates, tai chi, and yoga. See Blue Cross of Massachusetts, “Perks,” 2015 at <http://www.studentbluema.com/perks.php>

medicine outlined in chapter four, and, presumably, more satisfying for the physician and patient. Philosopher Mary O'Brien comments, "it is a central contradiction in the lives of health care workers that there is a gap between what they think they ought to be doing—promoting well-being—and what they are actually doing, which is depending on ill-being for their livelihoods."⁸⁰⁸

Doctors do not want to see people sick, they want to see them well. But a practice based on unnecessary prescriptions, overuse of marginally beneficial treatments, and complex, multi-stepped procedures are not sustainable for the patient who has to endure the medicalization of an industry based on consumption. Nor is medicalization sustainable for the planet that must survive the systematic plunder for more and more resources. Sustainable medicine must step back from the constant deferral to high-tech health care. Simplicity—inclusive of prevention, gradation, and avoiding medicalization—is a green priority for bioethics, rooted in the common good. A second illustration of simplicity in practice comes from the natural death movement.

2. Natural death movement

Homo sapiens have a 100% permanent mortality rate; all will yield to death. Death is the natural terminus of every person's life, but some citizens of prosperity intentionally seek a medicalized death. My environmental concern is not the medicalized death of physician-assisted suicide or euthanasia (which are quick and absorb few resources). Rather, my concern is the laborious use of the medical industry in the last stage of life, which includes extensive employment of artificial nutrition and hydration, intubation and other forms of life-support, EKG and EEG monitoring, and finally, the inevitable expiration under medical supervision. Health care can and should address pain at the end

⁸⁰⁸ O'Brien, *The Politics of Reproduction*, 293.

of life—this was already established in chapter four. Yet, green bioethics advocates an approach to death that supports the person, along with her family, and encourages minimal invasion when the end of a lifespan is near. Instead of a medicalized death, the converse approach (which is still the only option for the vast majority of humans throughout the world) is to die in a less technological manner; to die in simplicity. This can be achieved in a number of ways, like hospice and palliative care,⁸⁰⁹ but here I highlight the natural death movement.

The Catholic Healthcare Association's *Health Care Ethics USA* journal published an article on the natural death movement in 2014. Carol Taylor and Robert Barnet profiled the work of Dr. Stanley Terman at Caring Advocates. Taylor and Barnet paraphrase the Caring Advocates natural death movement by remarking,

Natural dying, like natural child birth, does not depend on high tech medicine, and it requires even less skilled assistance for nature to take its course. When our brains can neither understand how to eat nor appreciate food, natural dying lets three things occur: 1. Cease manual assistance with oral feeding (as ultimately provided by skilled personnel), 2. Withhold/withdraw all life-sustaining treatment, and 3. Provide the best possible comfort care for a peaceful transition.⁸¹⁰

In addition to attention at the end of life, Caring Advocates encourage dialogue about natural death before terminal illness occurs.

⁸⁰⁹ Committee on Approaching Death: Addressing Key End of Life Issues, *Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life* (Washington, DC: National Academies Press, 2015), chapter two; Alfred F. Connors, Neal V. Dawson, Norman A. Desbiens, William J. Fulkerson, Lee Goldman, William A. Knaus, Joanne Lynn, et al., "A Controlled Trial to Improve Care for Seriously Ill Hospitalized Patients: The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT)," *JAMA* 274, no. 20 (1995): 1591-1598.

⁸¹⁰ Carol Taylor and Robert Barnet, "Hand Feeding: Moral Obligation or Elective Intervention?," *Health Care Ethics USA* 22, no. 2 (2014): 12-23, at 14.

The Caring Advocates organization offers assistance in end of life discussions with loved ones' through "My Way Cards for Natural Dying" conversation starters. These cards act as a step-by-step guide to advanced directive/ living will decisions, which can be extremely difficult to talk about.⁸¹¹ Philosophies and practices akin to the natural death movement are being advocated worldwide as well.

Ian M. Seppelt from Australia, has discovered that "families who want 'everything done' ... can usually be readily easily turned into wanting 'everything reasonable done with good comfort care and without invasive therapies or intensive care admission.'"⁸¹² Shared decision-making is important, as it places the determination of ministrations within the family, in consultation with the doctor, and also optimizes the death transition process, where so many regrets and distressing experiences haunt family members who were unaware of simple medical alternatives, natural death, and comfort care. In the natural death movement, the medicalized default setting that one must do "anything necessary" to stay alive is not assumed.

A medically laborious death is not the way many people envision their final end, but inadvertently find themselves stuck on a treadmill of hospital admissions, last-chance surgeries, and ICU stays until death overtakes them. This can be avoided by expressing one's wishes in an advanced directive or to a family member. The natural death movement provides a model of simplicity in health care that upholds the dignity of the person and the claims of the common good.

⁸¹¹ Caring Advocates, "1. A Clear and Specific Living Will can be Effective- If you Cannot Speak for Yourself," 2014, at <http://caringadvocates.org/card-sorting.php>

⁸¹² Ian M. Seppelt, "Australia: Where Are We Going?," in *ICU Resource Allocation in the New Millennium: Will We Say "No"*, David Crippen, ed. (New York: Springer, 2013), 107-112, at 109.

Both the Kimberton Clinic and the natural death movement reduce dependence on medical intervention. Despite the benefits to the patient and the planet, some people will feel threatened by the argument that the medical industry should move towards simplicity. In the next section, I address potential issues with implementation of each of these components of simplicity in the medical industry.

B. Lingering questions and concerns

Bioethicists have been muckraked, called “thieves of virtue,”⁸¹³ intervening in medicine when they should not, and acting as medical professionals while trained in theology or philosophy.⁸¹⁴ Jean-Jacques Rousseau commented on the seeming disconnect between those who desire medical intervention and those critical of health care, usually because health precludes one thinking of a physician as necessary. Rousseau proclaims, “with regard to illness, I shall not repeat the vain and false declamations against medicine made by most people in good health.”⁸¹⁵ Despite academic and institutional resistance to bioethicists—and especially “religious” bioethicists⁸¹⁶—any approach to health care, which disrupts the hegemonic notions of power, has the positive potential to expose deficits for the purpose of correcting them. There are many challenges facing the principle of simplicity. Here I address two of the more prominent and persuasive objections to my third proposed principle of green bioethics.

First, a primary concern, especially for citizens in the United States, is that preventative health care measures interfere with personal liberty. Using obesity as a case

⁸¹³ Tom Koch, *Thieves of Virtue: When Bioethics Stole Medicine* (Cambridge, MA: MIT Press, 2014).

⁸¹⁴ Jonathan D. Moreno, “Ethics Consultation as Moral Engagement,” in *Bioethics: An Anthology*, 2nd ed., Helga Kuhse and Peter Singer, eds. (Malden, MA: Blackwell, 2006), 707-714.

⁸¹⁵ Jean-Jacques Rousseau, *The First and Second Discourses*, Roger D. Masters, ed. (New York: St. Martin’s Press, 1964), Second Discourse, 101-181, at 109.

⁸¹⁶ Brian Earp, “Does Religion Deserve a Place in Secular Medicine?,” *Journal of Medical Ethics* (2015), e-letter, at http://jme.bmj.com/content/41/3/229/reply#medethics_el_17551

study—since it was discussed in a previous section—I point out that medical intervention due to deteriorating health will require more austere medical surveillance than preventative measures, thus negating the initial concern.

A second objection is that a gradational approach to medicine restricts medical options and best patient outcomes. I use sex reassignment surgery as an example and demonstrate that non-surgical options for gender presentation are often best for the patient, as well as society, and the planet. First, I turn to concerns about prevention.

1. Preventative health measures interfere with liberty

The United States is increasingly polarized over political issues, especially those revolving around government intervention and personal freedom. Incentives aimed at promotion of health face vigorous debate over “nanny state intervention” and personal autonomy. On one hand, government interference in safety and health issues—like mandatory seatbelts in cars, helmet laws,⁸¹⁷ and the elimination of marketing cigarettes on television—is thought to save billions of dollars in devastating accidents and diseases. On the other hand, proponents of liberty cite John Stuart Mill’s dictum “that the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.”⁸¹⁸ Enter the case of obesity.

Obesity costs the United States \$300 billion per year,⁸¹⁹ yet the tension between surveillance, public health, and autonomy impede preventative health care measures from coming to fruition. While public health in the United States has attempted to maximize

⁸¹⁷ Gerald Dworkin, “Paternalism,” in *Intervention and Reflection: Basic Issues in Medical Ethics*, 8th ed. Ronald Munson, ed. (Australia: Thompson, 2008), 125-134, at 126; 128.

⁸¹⁸ John Stuart Mill, *Utilitarianism* and *On Liberty*, Mary Warnock, ed. (London: Fontana Press, 1962), 35.

⁸¹⁹ Eric Pianin and Brianna Ehley, “Budget Busting U.S. Obesity Costs Climb Past \$300 Billion a Year,” *The Fiscal Times*, 19 June 2014 at <http://www.thefiscaltimes.com/Articles/2014/06/19/Budget-Busting-US-Obesity-Costs-Climb-Past-300-Billion-Year>.

personal and social health, and minimize interference from the government through legislation, when it comes to the issue of obesity, Americans have fought tooth and nail to maintain their eating habits, which they equivocate with autonomy.

For instance, initiatives aimed at reducing the consumption of super-sized, corn syrup-based, carbonated beverages are vociferously objected to.⁸²⁰ Even policies that might prevent obesity in youth and children stall. San Francisco's Healthy Meal Incentive Ordinance, which forbade McDonalds from providing free toys in Happy Meals, caused a protracted debate.⁸²¹ Hysteria over intervention in youth obesity likens school programs that promote health and exercise to Michel Foucault's "*biopouvoir*."⁸²² Adults decry the "surveillance" of children's diets, insisting that schools need not yield to nutritional standard.⁸²³ While individuals demand "autonomy" at any cost, and reject preventative health measures aimed at maintaining a healthy weight through balanced food consumption and adequate exercise, health care workers indicate that obesity is a systemic problem that affects millions of people of all ages.

In 2011, the *Lancet* ran an article series on obesity, recognizing that obesity is not only an individual concern; it is also a public health concern.⁸²⁴ Some of the authors called for implementation of health care measures that some citizens, as seen above, reject. Policies to improve food, structural urban environments, and increase investment in population obesity monitoring can save money and resources, but have little public

⁸²⁰ Joseph Ax, "Bloomberg's Ban on Big Sodas is Unconstitutional: Appeals Court," *Reuters*, 30 July 2013, at <http://www.reuters.com/article/2013/07/30/us-sodaban-lawsuit-idUSBRE96T0UT20130730>

⁸²¹ San Francisco's Healthy Meal Incentive Ordinance, enacted November 2011, SS. 471.1- 471.9.

⁸²² Myriam Jacolin-Nackaerts et Jean Paul Clément, "La lutte contre l'obésité à l'école: entre biopouvoir et individuation," *Lien social et Politiques* no. 59 (2008): 47-60.

⁸²³ Emma Rich, John Evans, and Laura De Pian, "Children's Bodies, Surveillance and the Obesity Crisis," in *Debating Obesity: Critical Perspectives*, Emma Rich, Lee Monaghan, and Lucy Aphramor, eds. (New York: Palgrave Macmillan, 2010), 139-163.

⁸²⁴ *Lancet*, "Obesity," 26 August 2011, at <http://www.thelancet.com/series/obesity>

support.⁸²⁵ While Americans dread the thought of governmental intervention in an attempt to help them live better, healthier lives—measured in quantifiable outcomes like quality of life years (QLY) and infrequency of visits to physicians due to ill health—they forget that if and when they succumb to the consequences of their lifestyle, they will come under physician and hospital surveillance.

While the illusion of personal freedom may be temporarily found in the ability to eat whatever is available at the fast-food chains and grocery stores of America, sooner or later the obese and overweight will come round to the medical industry to attend to their obesity-related conditions. Medical and technological forms of weight control and observation will truly limit autonomy as physicians offer “solutions” that rely on invasive experiments in weight control.

One form of highly supervised mechanical treatment for obesity is the FDA approved “Maestro Rechargeable System,” which includes “a rechargeable electrical pulse generator, wire leads and electrodes implanted surgically into the abdomen” to regulate appetite.⁸²⁶ Another example is an intragastric balloon that is placed in the stomach and inflated to simulate feelings of satiety. The intragastric balloon is now a medical intervention for adolescents as well.⁸²⁷ Furthermore, when the obese undergo surgery for weight-related complications, they require restrictive apparatuses like suction

⁸²⁵ Steven L. Gortmaker, Boyd A. Swinburn, David Levy, Rob Carter, Patricia L. Mabry, Diane T. Finegood, Terry Huang, Tim Marsh, and Marjory L. Moodie, “Changing the Future of Obesity: Science, Policy, and Action,” *The Lancet* 378, no. 9793 (2011): 838-847.

⁸²⁶ United States Food and Drug Administration, “FDA Approves First-of-Kind Device to Treat Obesity,” *FDA*, 14 January 2015, at <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm430223.htm>

⁸²⁷ L. J. Reece, P. Sachdev, R. J. Copeland, M. Thomson, J. K. Wales, and N. P. Wright, “Use of Intragastric Balloons and a Lifestyle Support Programme to Promote Weight Loss in Severely Obese Adolescents. Pilot Study,” *Appetite* 89 (2015): 305.

cupped suspensions devices to lift their corpulent abdomen.⁸²⁸ These examples surely limit autonomy more readily than proactive, preventative health measures aimed at salubrious habits.

Theologian Jacques Maritain supposed that humans have traded freedom in nature to submission as slaves to technology. He keenly observes, “in order to rule over nature and take no account of the basic laws of his own nature, man... is forced to submit himself to more and more to technological and inhuman necessities.”⁸²⁹ Surveillance and breeches of autonomy during the course of medical treatment of weight-related conditions are much more intrusive than simple state policies incentivizing positive health care measures for the general populace. While a desire to resist surveillance is rational, rejecting preventive health care measures demonstrates a lack of foresight.

Moral agents can resist having their autonomy being sacrificed on the altar of surveillance by taking precautionary and preventative health care measures themselves. This can assuage the fears that health care prevention will interfere with liberty. The proactive approach makes government intervention unnecessary and medical scrutiny avoidable, thus aligning it with the third principle of green bioethics. Having thus raised and answered concerns over prevention, a second concern regarding gradation will now be raised and addressed.

2. A gradational approach restricts medicine and best patient outcomes

It is contrary to modern conventions of the health care industry to suggest simplicity in order to reduce dependence on medical intervention. Medical developments, techniques, and procedures are a cause of growth for the medical industry and national

⁸²⁸ Rice University, “Lift my Belly! Device Helps Obese People Breathe,” *Science Blog*, 9 May 2012, at <http://scienceblog.com/54233/lift-my-belly-device-helps-obese-people-breathe/#5DMovScOP57wqg0K.97>

⁸²⁹ Jacques Maritain, *Integral Humanism* (New York: Charles Scribner’s Sons, 1968), 32.

economy. Students from other countries flock to the United States to be trained in surgical robotics, pharmacy science, and *in utero* surgeries on fetuses. Cutting edge, advanced, and improved techniques allow for varied and individual approaches to treatments, but many technological solutions to human limitation are a drain on our natural resources. Therefore, the ambition of technological progress must consider the common good and the limits of our resources.

The fear, of course, with suggesting a sustainable approach to health care is that medical offerings will be subordinate to ecological conservation. Currently, if one can pay for health care and treatments (which is only a small minority of people, even in rich countries like the United States), boundless access to procedures may give patients the best opportunity to improve quality of life, access medical care, use health insurance to defray costs, have legal structures to prevent against discrimination, and find emotional support through friends, family, or online. So the argument goes. I contended in chapter four that basic health care needs should be provided yet, defaulting to a technological solution should not be assumed to be the most beneficial for the patient. Nor should it be assumed that medical intervention is the only solution to a health care need.

It must be recognized that some personal dissatisfactions cannot be addressed by surgical intervention. Providing the patient-client any medical service they request will not necessary result in better health outcomes, or higher levels of personal satisfaction. This is especially pertinent when idiosyncrasies are medicalized and people are offered physical treatments for what is tantamount to a socially objectionable lifestyle or personality. In the case of “sex reassignment surgery” (SrS) for gender presentation, I argue that the high-tech solution of SrS is not the most beneficial to the patient, thus

refuting the concern that gradation hinders medicine and best patient outcomes. I also briefly note that SrS harms society and the planet.

Sex reassignment surgery is a term that describes the range of technological and surgical procedures by which a person's physical appearance and secondary sexual characteristics are altered to resemble that of the other sex. In the United States, SrS is considered to be the standard treatment for gender identity disorder (GID)/gender dysphoria in transsexual and transgender people, who have been labeled mentally ill by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM).⁸³⁰ SrS is also used for people without GID who want to live as the other sex. It should not be assumed that all transgender people want SrS, nor should it be assumed that a person undergoing SrS has GID. At the same time, some transsexual advocates have lobbied long and hard to have SrS covered under health insurance, claiming that it is the only solution to, and the best treatment for, their "condition."

However, from the perspective of professor Judith "Jack" Halberstam, a transgender but adamantly *not* (surgically) transsexual,⁸³¹ the taxonomizing of transgenderism and transsexualism by sexologists instead of the individuals themselves has resulted in a problem of categorizing people within the spectrum of sexual and gender

⁸³⁰ Gender identity disorder (GID) was the term used in the *DSM-IV*, but it was removed from the later *DSM-V*, and replaced with the term "gender dysphoria." The criteria for diagnosis are similar for both terms. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. (Washington, DC: American Psychiatric Association, 2013).

⁸³¹ The Transgender Law Center writes, "The term 'transgender' is used to describe people whose gender identity does not correspond to their birth-assigned sex and/or the stereotypes associated with that sex." I support this definition because it indicates the socially constructed arena (i.e. stereotypes) of gender in which "transgender" must define itself. It is accepted in many academic locations in America (and somewhat in the larger populace) that gender is a construct. As a subset of transgender, are transsexuals, who have physically altered their appearance by surgical or chemical means. While the medical industry may sanction and categorize both transgender and transsexual through psychology and psychiatry, only the physical aspects of medicine affect the bodies of transsexuals, as defined, and are thus my concern for green bioethics. See Transgender Law Center, "10 Tips for Working with Transgender Patients," (Transgender Law Center 2011): 1-2, at 1.

expressions too narrowly. This leads to a contracted conception of gender identity and sexual expression, which is ultimately harmful to the flourishing of unique individuals.⁸³² Since the “pro-surgery” strain of medical intervention for gender dysphoria is over-represented in medical discourse,⁸³³ I argue that, to the contrary, SrS is not the best course of treatment for gender expression. Further, I suggest that gradational approaches to presenting as a male or female will support best patient outcomes, with added social and ecological benefits.⁸³⁴

First, SrS is not necessarily best for the patient. While gradation may be objected to because it may remove some options from immediate access, it should not be assumed that high-tech intervention is the best standard of care. Use of the health care industry can be physically harmful when “cures” and “treatments” are overprescribed. Gradation can prevent the externalities of overtreatment.

Iatrogenic disease is a major cause of physical pain for individuals who have used the medical industry. In the case of SrS, harmful side-effects may include surgery to repair prolapsing, or re-open artificially created vaginas that are attempting to heal from

⁸³² Judith Halberstam, *Female Masculinities* (Durham: Duke University Press, 1989), 47.

⁸³³ Alexandre Baril, “Needing to Acquire a Physical Impairment/Disability: (Re)Thinking the Connections Between Trans and Disability Studies Through Transability,” trans. Catriona LeBlanc, *Hypatia: Journal of Feminist Philosophy*, 30, no. 1 (2015): 30-48; Jacqueline K. Hewitt, Campbell Paul, Porpavai Kasiannan, Sonia R. Grover, Louise K. Newman, and Garry L. Warne, “Hormone Treatment of Gender Identity Disorder in a Cohort of Children and Adolescents,” *Medical Journal of Australia* 196, no. 9 (2012): 578-581. Additionally, two landmark cases in 2014 demonstrated the growing acceptance and vocal political lobby for sex reassignment surgery to be covered under Medicaid and for violent prisoners in the U.S. See Department of Health and Human Services, Departmental Appeals Board Appellate Division NCD 140.3, Transsexual Surgery Docket No. A-13-87, Decision No. 2576, 30 May 2014; Ryan Parker, “Federal judge Orders California Prison Inmate be Granted Sexual Reassignment,” *Los Angeles Times*, 2 April 2015, at <http://www.latimes.com/local/lanow/la-me-la-california-inmate-sex-change-20150402-story.html>

⁸³⁴ As I mentioned in the introduction, this approach can be equally applied to men who want to look like women, as much as it can to women who want to look like men. That is, gender is a constructed ideal and both men and women seek cosmetic surgery to conform to localized conceptions of “pure” gender. Ecologically, padded bras are much better than breast implants for men or women who want to give the illusion of larger breasts. On this point in particular I refer the reader back to chapter four to the discussion on the harms of breast augmentation.

“constructive” surgery, the carcinogenic effects of female hormones, unpredictable outbursts of violence from male hormones, painful recuperation from elective mastectomies, infections, or prescription of anti-depressants for dissatisfaction with surgical outcomes of “gender reassignment.”⁸³⁵

The medical industry has even advocated that children who display “gender dysphoria” be subjected to “puberty suppression” via injections of male or female hormones so that they can avoid bullying, make the “inevitable” surgical sex transition easier later in life, and appear more like the other sex in the meantime.⁸³⁶ But high-tech solutions often lead to further medical problems down the road. The price transgender and gender non-conforming people pay is with their bodies, as they surrender to invasive, life-altering, cancer-inducing hormone “therapies.” There are social ramifications to the “gender dysphoria” label—and attendant technological intervention of SrS—as well.

Judith Butler cautions, “we not underestimate the pathologizing force of the diagnosis (of gender dysphoria), especially on young people who may not have the critical resources to resist this force.”⁸³⁷ It should not be the default to “cure” a “disorder” listed in the *DSM* with extensive, invasive, and oftentimes not fully successful (in terms of patient satisfaction; sexual function; or “social passing”⁸³⁸) outcomes.⁸³⁹ I would further argue that it should not be the default to create a label like “gender dysphoria” for

⁸³⁵ See Laura Purdy, “A Bioethics Perspective on Sex Reassignment Therapy,” Unpublished mss. (April 2015): 1-18, at 4-7.

⁸³⁶ Annelou L.C. De Vries, Jenifer K. McGuire, Thomas D. Steensma, Eva C.F. Wagenaar, Theo A.H. Doreleijers, and Peggy T. Cohen-Kettenis, “Young Adult Psychological Outcome after Puberty Suppression and Gender Reassignment,” *Pediatrics* 134, no. 4 (2014): 696-704.

⁸³⁷ Judith Butler, *Undoing Gender* (New York: Routledge, 2004), 77-78.

⁸³⁸ Anne Lawrence, “Factors Associated With Satisfaction or Regret Following Male-to-Female Sex Reassignment Surgery,” *Archives of Sexual Behavior* 32, no. 4 (2003): 299-315.

⁸³⁹ I would extend this to other “mental” conditions that are subjected to physically invasive treatments like stereotactic neurosurgery, deep brain stimulation, and ablative procedures for “anorexia nervosa.” See Sabine Müller, Rita Riedmüller, Henrik Walter and Markus Christen, “An Ethical Evaluation of Stereotactic Neurosurgery for Anorexia Nervosa,” *AJOB Neuroscience* 6, no. 4 (2015): 50-65.

“gender outlaws”⁸⁴⁰ who transgress socially accepted—and constructed—norms.

Unfortunately, current medical standards of “treatment” have additional negative social outcomes, reiterating my contention that gradational approaches to health care are essential.

Accordingly, second, SrS is not necessarily the best outcome for a society, assuming that humanity ought to repudiate heterosexism, patriarchy, and transphobia. With endorsement of medicalization and health insurance that covers SrS, heterosexism is reified by forcing gender-queer bodies into “normal” states of being. Halberstam records, “in bulletins offering tips for FTM... most of these lists seem to place no particular political or even cultural cause upon the kinds of masculinities they mandate, but they obviously steer transsexual men away from transgressive or alternative masculine styles and towards a conservative masculinity.”⁸⁴¹ The accepted social practice for transgender people—proffered by both society and the medical industry—is gender conformity in the form of clear, binary gender stereotypes and heteronormativity. These are constitutive of the patriarchy and perpetuate transphobia by marginalizing those who present themselves as genderqueer or genderplural.

Heteronormativity via SrS brings the “disordered” individual under a paradigm that assumes “healing” if they conform to gender essentialist standards. Halberstam continues, “posttransition... many formerly lesbian FTMs become heterosexual men, living so-called normal lives.”⁸⁴² Instead of this route conformity, which requires a substantial technological investment, the simple solution is acceptance of the variations in

⁸⁴⁰ The reference is to Kate Bornstein, *Gender Outlaw: On Men, Women, and the Rest of Us* (New York: Routledge, 1994).

⁸⁴¹ Judith Halberstam, “Transgender Butch: Butch/FTM Border Wars and the Masculine Continuum,” *GLQ: A Journal of Lesbian and Gay Studies* 4, no. 2 (1998): 287-310, at 298.

⁸⁴² *Ibid.*, 299.

human expression. Recognizing diversity in embodiment actually provides the best social environment for the person, who is not really ill. Ethicists Kristen Voigt and Harald Schmidt regard it as “clearly problematic when people resort to surgical procedures to escape stigma, bias, and discrimination” (the immediate reference was to gastric banding for weight loss).⁸⁴³ Voigt and Schmidt continue, “it would be far preferable to address stigma and discrimination directly, rather than have people undergo surgical procedures.”⁸⁴⁴ Hence, gradation.

Third, and finally, is far better for the environment not to regard transgenderism as a problem to be cured with the medical industry. When health care addresses physical ailments that are clinically present, it fulfills the goals of medicine. But when the body is treated at no medical advantage to the patient, medicalization has occurred. When bioethicists acknowledge transgender as something outside the purview of the medical industry, it can reduce medical resource use, carbon emissions, and adhere to a simplicity model. This approach can be effective by recognizing “we are all transsexuals.”⁸⁴⁵ That is, gender is constructed and each person has pieces—even if it is the smallest bit—of both (all?) genders within them. Erasing gender fiction is sustainable. Creating gender fiction is not.

Those who object to simple medical solutions and a gradational approach to treatments, and demand a vast panoply of treatments, are generally part of an entitled culture. I nevertheless recognize that in some cases technological intervention is desired by autonomous individuals who see the value in manipulating their own bodies as a

⁸⁴³ Voigt and Schmidt, “Gastric Banding,” 1000.

⁸⁴⁴ Ibid.

⁸⁴⁵ Judith Halberstam, “F2M: The Making of Female Masculinity,” in *Feminist Theory and the Body: A Reader*, Janet Price and Margrit Shildrick, eds. (New York: Routledge, 1999), 125-33.

greater good than simplicity and sustainability.⁸⁴⁶ I also recognize that some people feel as though they have no other recourse than SrS to survive. Others do not have access to a discourse that disrupts gender essentialism or medicalization and will pursue gender transition. Yet, gradation can still be enacted for those who feel compelled to present a highly specified form of gender.

One gradational approach to gender presentation is non-surgical attempts at feminization/ masculinization. This can be done by altering socially determined gender markers like hair length, dress codes, hobbies and activities, self-identification through referencing pronouns, manner of speaking, or choice of romantic partner. But in all cases, it should not be assumed that high-tech, prolonged, extensive surgeries, and interventions will result in best patient outcomes. SrS as a “routine treatment” for “gender dysphoria” must be reevaluated. Halberstam calls upon society to “produce ever more accurate or colorful or elaborate... ‘nonce taxonomies’”⁸⁴⁷ for the self. Drawing on Eve Sedwick for inspiration,⁸⁴⁸ Halberstam articulates the principle of diversity over uniformity; mosaics over homogenization. This is, ironically, the simple solution.

In sum, gradation approaches to medical developments, techniques, and procedures do not equate to a blanket rejection of technological intervention. People can and should access basic health care needs, in alignment with global distributive justice and human dignity. Green bioethics can strive towards the sun as Daedalus—utilizing the best of medicine when necessary—without succumbing to the fatal hubris of Icarus, attempting

⁸⁴⁶ These manipulations—like cosmetic surgery and reproductive technologies— are outside of the medical industry and should not be supported by health insurance, or government funding. See Danielle Griffiths and Alexandra Mullock, “The Medical Exception and Cosmetic Surgery: Culpable Doctors and Harmful Enhancements,” in Sara Fovargue and Alexandra Mullock, eds. *The Legitimacy of Medical Treatment: What Role for the Medical Exception?* (New York: Routledge, 2015), 105-123.

⁸⁴⁷ Halberstam, *Female Masculinities*, 47.

⁸⁴⁸ Eve Sedwick, *Epistemology of the Closet* (Berkeley: University of California Press, 1990).

to upgrade every aspect of human existence. With the preoccupation of perfect bodies and minds, simple approaches to health care—which first rely on prevention and deconstructing medicalization, and then use gradation in medical treatments—are overlooked. Yet, simplicity in the medical industry is vitally important for conservation. Having answered some lingering concerns about the third principle of green bioethics, I now provide policy suggestions for the ethical implementation of simplicity in the medical industry.

C. Policy suggestions

In this section I make suggestion for individuals, doctors, and health insurance companies/ governments that allocate health care, as I have done in previous chapters. This three-tiered approach works towards environmental sustainability in the medical industry and offers ownership to each person involved in health care decision-making. The National Health Services maintains “carbon reduction can only truly be tackled through effective partnership working at the local level, especially with local government through local area agreements, local strategic partnerships and comprehensive area assessment.”⁸⁴⁹ Hence, the NHS also encourages a multi-level approach to carbon saving measures. I begin with the individual medical consumer.

1. Consumer suggestions

Earlier in this chapter I proposed prevention as an avenue towards environmental sustainability. But prevention is only one aspect of individual initiative necessary to avoid medicalization; the other dimension is responsibility. Prevention and responsibility are two sides of the same coin that guide my suggestions for individual consumers.

⁸⁴⁹ NHS Sustainable Development Unit, *Saving Carbon, Improving Health: NHS Carbon Reduction Strategy for England* (London: NHS Sustainable Development Unit, 2009), 28.

Individuals can demonstrate autonomy by proactively controlling their health, as much as possible. This can take many forms including quitting smoking or using drugs, reducing alcohol consumption, preventing numerous pregnancies, or driving safely. Prevention and responsibility actually by-pass policy suggestions for individuals by opting out of medical intervention. The absence of the individual in the health care system translates to a reduction in expended medical resources. Prevention and responsibility have a long intellectual tradition, and they are framed here by academic literature in philosophy and theology.

Aristotle describes prevention and responsibility as two aspects of individual care in *Nicomachean Ethics*. Aristotle describes a case of “a man who becomes ill voluntarily through living a dissolute life and disobeying doctor’s orders. In the beginning before he let his health slip away, he could have avoided becoming ill.”⁸⁵⁰ Prevention of illness and responsibility for maintaining health must be taken in tandem. They are foundational to theological reflection as well as philosophical meditations.

Responsibility is a recurring leitmotif in Christian ethics, as seen in the discussion on H. Richard Niebuhr’s ethics in chapter two. *Homo dialecticus* is the moral agent that takes account of her role in society, connected to others. Draining resources that do not benefit the patient, and certainly harm the community, is ill advised. Lisa Sowle Cahill contends, “The common good implies an equitable distribution of the benefits available in societies,”⁸⁵¹ inclusive of medical needs. Yet, when individuals are not responsible for their physical condition and take more than their share of the medical resource pie, the

⁸⁵⁰ Aristotle, *Nicomachean Ethics*, trans. Martin Ostwald (New York: MacMillan, 1962), book 3, ch. 5, 114a.

⁸⁵¹ Lisa Sowle Cahill, “Germline Genetics, Human Nature, and Social Ethics,” in *Design and Destiny: Jewish and Christian Perspectives on Human Germline Modification*, R. Cole-Turner, ed. (Cambridge, MA: MIT Press, 2008), 145-166, at 153.

common good suffers.

The United States Conference of Catholic Bishops further recognizes that preventative and responsible actions can lead towards conservation. They suggest, “changes in lifestyle based on traditional moral virtues can ease the way to a sustainable and equitable world economy in which sacrifice will no longer be an unpopular concept.”⁸⁵² A part of simplicity in health care requires that short-term “sacrifices” in lifestyle—like eating well, exercising often, vaccinations when necessary, preventative skin-care, stress management and relaxation—become a priority. Prevention also bypasses the need for medical intervention and, in turn, avoids the environmental pollution of drugs, treatments, and procedures that the medical industry expends on “cures.” Individuals can participate in simplicity by prevention and responsibility, thus radically undercutting the current medical model of unsustainable Western medicine.

Thomas Szasa rightly notes that Americans want “an authority that will protect them from having to assume responsibility not only for their own health care, but also for their behaviors that make them ill... politicians assure people that they have a ‘right to health’ and that their maladies are ‘no-fault diseases.’”⁸⁵³ Western medicine traps individuals by allowing them to believe that they can do whatever they want to their body and expect there will be a chemical cure or surgery for it. This removes agency and is an unobtainable fantasy. A reactive approach to health care is an uphill battle that not only threatens massive resource use, it also damages the individual who may never find a cure for the condition that responsibility could have prevented.

⁸⁵² United States Conference of Catholic Bishops, “Climate Change: A Plea for Dialogue Prudence and the Common Good,” 15 June 2001, at <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/global-climate-change-a-plea-for-dialogue-prudence-and-the-common-good.cfm>

⁸⁵³ Szasa, *The Medicalization of Everyday Life*, 167.

As early as 1993, Michael Yeo proposed an “ethics of empowerment approach...that demands that people be assigned a ‘prospective’ responsibility for their own health, as opposed to a ‘retrospective’ one.”⁸⁵⁴ But despite economic and personal benefits, Szasa’s caution and Yeo’s proposal have been ignored. The health care system *will* take care of any neglectful individual as long as they can pay for services. Yet, this does not absolve each individual from being responsible for his or her own health. In order to reduce dependence on medical technologies, personal health care that prevents diseases and takes responsibility for one’s own health is an ethical imperative of environmental solidarity. This is the simple solution, which circumvents the medical industry as much as possible.

Likewise, doctors must be encouraged to enact simplicity by avoiding medicalization and reducing dependence on medical intervention. In the next section I propose that physicians can eliminate medicalization by reaffirming the goals of medicine, as specified in chapter four, and recognize human limitation when they consider prescription of non-life saving drugs. I will use Cialis (Viagra) as an example. This example, of course, is one among many that could have been chosen.

2. Doctor suggestions

We are living in a pharmaceutical era, where nearly 70% of Americans take at least one prescription drug, according to the Mayo Clinic.⁸⁵⁵ Since pharmaceuticals account for a quarter of the 18 million tons of carbon dioxide emitted each year by the

⁸⁵⁴ Michael Yeo, “Toward an Ethic of Empowerment for Health Promotion,” *Health Promotion International* 8, no. 3 (1993): 225-235.

⁸⁵⁵ Wenjun Zhong, Hilal Maradit-Kremers, Jennifer L. St. Sauver, Barbara P. Yawn, Jon O. Ebbert, Véronique L. Roger, Debra J. Jacobson, Michaela E. McGree, Scott M. Brue, and Walter A. Rocca, “Age and Sex Patterns of Drug Prescribing in a Defined American Population,” *Mayo Clinic Proceedings* 88, no. 7 (2013): 697-707.

National Health Service (NHS),⁸⁵⁶ and 39% of the 546 million metric tons of carbon dioxide in the US health care sector,⁸⁵⁷ doctors must carefully consider if prescription drugs are the simplest and most ecological approach to treating health conditions. Some prescriptions drugs treat clinical diseases. Yet, there is a large portion of the pharmaceutical industry that is not focused on treating clinical diseases. The luxury emissions⁸⁵⁸ from recreational and lifestyle pharmaceuticals are an enormous source of resource use and must be curtailed. I contend that one of the most objectionable places where the goals of medicine are overshot and where limitation is denied is the realm of pharmaceutical sexual enhancements for (mostly) heterosexual men. Viagra is a representative of these drugs, and I use it as a case study in articulating my policy suggestions for doctors.

Viagra is a pharmaceutical—incredibly lucrative, and heavily marketed—to “treat” male “impotence,” “premature ejaculation,” or “erectile dysfunction.” These are not universal conceptions, neither do they threaten life, or cause mortality. These labels, although presented as pejorative, represent a spectrum of male sexual response; even a carnal “limitation” can be a part of normal reactions to excitement, stress, fatigue, or diet. Yet, these male conditions are currently treated as medical disorders. While the range of male sexual response is not a disease, it can point to underlying clinical medical conditions that can, and should, be addressed.

The Associate Press reports, “impotence is mostly caused by such medical problems as diabetes, heart disease, prostate surgery and spinal cord injury. It also can be

⁸⁵⁶ Ian Roberts, “The NHS Carbon Reduction Strategy,” *BMJ* 38, no. 7689 (2009): 248-249, at 248.

⁸⁵⁷ Jeanette W. Chung and David O. Meltzer, “Estimate of the Carbon Footprint of the US Health Care Sector,” *Journal of the American Medical Association* 302, no. 18 (2009): 1970-1972, at 1971.

⁸⁵⁸ Henry Shue, “Subsistence Emissions and Luxury Emissions,” *Law & Policy* 15, no. 1 (1993): 39-60.

psychological or a drug side effect.”⁸⁵⁹ It makes little sense to prescribe a pill to treat the *effects* of a condition rather than the condition itself. When the spectrum of normal male sexual response is put under the banner of medical treatment, a resource-heavy, “quick-fix” prescription rather than the simple solution of lifestyle change—or gradational approaches to clinical disease—is employed.

Doctors must first acknowledge that male (and, indeed, female) sexual response is medicalized. Middle-age men are marketed pharmaceuticals like Viagra intended to reinforce their manhood via heterosexual sex, not treat a clinical condition. “Viagra is the perpetually new male anti-contraceptive, a means to greater virility, while the male contraceptive pill remains unattainable,”⁸⁶⁰ remark Andy Miah and Emma Rich with irony. Viagra is a medical prescription for a non-medical problem, which localizes sexual expression to male genital sexuality. Furthermore, sex, maintaining an erection, and ejaculation are not medical needs and are outside of the goals of medicine, as defined earlier by Howell and Sale; therefore they do not need to be a concern of the medical industry. I contend, along with others, that the little blue pill is more about the patriarchy than health care and its prescription cannot be considered a fulfillment of the role of a physician.⁸⁶¹ Rather, than write prescriptions for Viagra, doctors are encouraged to critically think about the bounds of health care and treat the disease—if there is one—instead of innocuous symptoms.

⁸⁵⁹ Associate Press, “Viagra is a \$50 Million Pentagon Budget Item,” *New York Times*, 4 October 1998, at <http://www.nytimes.com/1998/10/04/us/viagra-is-a-50-million-pentagon-budget-item.html>

⁸⁶⁰ Miah and Rich, *The Medicalization of Cyberspace*, 87.

⁸⁶¹ Erin Dufault-Hunter, “The Downside of Getting it Up: How Viagra Reveals the Persistence of Patriarchy and the Need for Sexual Character,” *Journal of the Society of Christian Ethics* 32, no. 1 (2012): 57-74.

At this point it might be objected that sexual expression through sexual expression—within certain bounds—is good. Or we might consider that the partner's of men with “erectile dysfunction” might desire penetrative sex. Reports indicate, however, that when Viagra is prescribed to a man with a “decline in sex life” it actually causes great strife in a marriage due to the chemically induced mismatched libido of partners. The “Viagra divorce” argues against even a “social” benefit of this prescription for a physical condition.⁸⁶² Furthermore, Viagra is not simply a gateway to making love with one's wife. Rather, erection-on-demand comes from a place of “sexual self-determinism for privileged men” that frequently does not have anything to do with their spouses.⁸⁶³ Viagra is often utilized to compensate for natural physiological changes in older, divorced men so that they may compete in the sexual market for the affections of younger women.⁸⁶⁴

Theological ethicists have been calling doctors to strive towards the goals of medicine in light of a Christian articulation of human limitation. The physician is a health care provider, not a lifestyle manager. Oftentimes, patients make demands that are generally not recognized under good medical practice.⁸⁶⁵ Gerald McKenney asks that we “avoid the suggestion that the physician is simply the servant of whatever lifestyle choice

⁸⁶² Although it seems somewhat comical, the term, “Viagra Divorce” has been in the media since Viagra itself has been around. Reports, articles, lawyers, and websites have all recorded the dissolution of marriages due to this pill. The Medical Dictionary defines “Viagra Divorce” as “a divorce granted on the grounds that a husband has become sexually aggressive or unfaithful due to increased libido evoked by Viagra® or another anti-impotence drug.” Segen's Medical Dictionary, “Viagra Divorce,” 2012, at <http://medical-dictionary.thefreedictionary.com/Viagra+Divorce>

⁸⁶³ Miah and Rich, *The Medicalization of Cyberspace*, 88. See also Leonore Tierfer, “The Viagra Phenomena,” *Sexualities* 9, no. 3 (2006): 273-294.

⁸⁶⁴ Marcy Miller, “The Little Blue Pill,” *Huffington Post*, 26 July 2012, at http://www.huffingtonpost.com/marcy-miller/the-little-blue-pill_b_1700088.html

⁸⁶⁵ Contrast these claims to positive rights with negative patient rights, which have legal precedence. See *Schloendorff v. The Society of the New York Hospital*. (105 N.E. 92) Court of Appeals of New York. 1914.

the patient brings to his office.’⁸⁶⁶ Treatment of real medical needs, based on the traditional goals of medicine, can prevent medicalization through discernment.

Physicians can consider the environmental ramifications of overprescription as well.

Viagra pollutes the environment through the carbon output of the pharmaceutical industry, and wastes resources on research, marketing, and development. Unlike other prescription drugs for medical needs, Viagra harms others—such as women subjected to male sexual demands—as well. Doctors can conscientiously object to prescribing unnecessary medical intervention thus saving natural resources. At the same time, counseling, therapy, or expressions of love and sexuality that do not require an erection could be encouraged. Simplicity might lead to repudiating the recreational, or lifestyle, use of the health care industry. Now that I have outlined suggestions for individuals and doctors, in the final section I reflect on health insurance policies that take gradation as their starting point, returning to the example of obesity.

3. Health insurance suggestions

I contend that health insurance—both private and governmental—can collaborate to integrate the third principle of green bioethics by recognizing medicalization, promoting strategies that prevent diseases or deleterious conditions, and using a simple approach to health care delivery when medical intervention is absolutely necessary. The onus of responsibility is on policymakers to restructure health insurance to cover medical needs in the least resource-intensive way possible. “Because people in modern societies expect the state to defray all or part of the cost of what is deemed a ‘medical service,’ where we draw the line between ‘health care’ and ‘not health care’ is informed more by

⁸⁶⁶ McKenny, *To Relieve the Human Condition*, 139.

economics and political considerations than by medical or scientific judgments.”⁸⁶⁷ A reorientation to simplicity is essential for conservation and the common good. For medical insurance, to implement the third principle of green bioethics, a focus on prevention and gradation should be promoted.

Health care systems are unfairly overburdened, treating people with failing health due to their lifestyle choices. Among these medical burdens are diseases and conditions associated with being overweight.⁸⁶⁸ “The U.S. spends \$147 billion each year to treat obesity, \$116 billion more to treat direct costs of diabetes, and hundreds of billions more to treat cardiovascular disease and cancer that many suspect are related to the Western diet.”⁸⁶⁹ With approximately 70% of the population obese or overweight in the United States,⁸⁷⁰ and growing ranks of the obese worldwide, a new tactic in “chasing the elusive epidemic”⁸⁷¹ must be implemented. Obesity is a worldwide issue in other developing countries as well.⁸⁷²

The United Kingdom is predicted to be a predominantly obese society by 2050. From the U.K. we see impassioned editorials calling for the Department of Health to “give the prevention of disease the priority that it deserves but currently lacks...if we want to avoid a situation where more than half of the population is taking carbon

⁸⁶⁷ Szasa, *The Medicalization of Everyday Life*, xiv.

⁸⁶⁸ Y. Claire Wang, Klim McPherson, Tim Marsh, Steven L. Gortmaker, Martin Brown, “Health and Economic Burden of the Projected Obesity Trends in the USA and the UK,” *Lancet* 378, no. 9793 (2011): 815-825.

⁸⁶⁹ Healthier Hospitals Initiative, “Brochure,” (ND): 1-12, at 5, http://healthierhospitals.org/sites/default/files/IMCE/public_files/Pdfs/hhi-brochure.pdf

⁸⁷⁰ The Center for Disease Control and Prevention, “Adult Obesity Facts,” 2015, at <http://www.cdc.gov/obesity/data/adult.html>

⁸⁷¹ The reference is to Daniel Callahan’s 2013 *Hastings Center Report* article, “Obesity: Chasing an Elusive Epidemic,” also cited above.

⁸⁷² Yves Jalbert et Lyne Mongeau, “*Prévenir l’obésité: un aperçu des programmes, plans d’action, stratégies et politiques sur l’alimentation et la nutrition*,” *Institut national de santé publique du Québec* (2006): 1-28.

intensive drugs.”⁸⁷³ These concerns reflect a preventive mentality that will, in the long term, reduce dependence on medical intervention. Health insurance companies can support prevention of obesity in many ways like subsidizing gym memberships, rebates for athletic equipment, vouchers for vegetables and fruits, financial bonuses to maintain a healthy body mass index (BMI), or even raffles for weight loss. If prevention is unappealing—for fear of surveillance as mentioned earlier in this chapter in section III, or some other reason—a gradational approach in health care insurance for obesity would reduce resource use.

Current medical models of treatment for obesity-related conditions—not obesity itself—include medications like Metformin for Type II diabetes, gastric bypass surgery, heart surgery, stints, pacemakers, assisted reproductive technologies, and positive airway pressure therapy (PAP) machines for sleep apnea.⁸⁷⁴ And, for obesity-related impotence, the medical industry prescribes a pill with known harmful side effects—Viagra—in order for a man to feel “potent” again.⁸⁷⁵ Many of these medical “solutions” merely mask the “problem” of obesity, but do not fix it.

Instead, a first-line solution to treatments for weight-related conditions would encourage a lifestyle change to combat carrying extra body weight. Health insurance companies could reimburse doctors for their time discussing lifestyle changes, nutrition, and caloric values with patients. Other health care professionals could assist individuals to make gradual, sustained lifestyle changes such as eating more nutritious food, doing

⁸⁷³ Roberts, “The NHS Carbon Reduction Strategy,” 248.

⁸⁷⁴ American Sleep Apnea Association, “Choosing a PAP Machine,” (Washington, DC, 2015), at <http://www.sleepapnea.org/treat/treatment-options/positive-airway-pressure-therapy/choosing-a-pap-machine.html>

⁸⁷⁵ Tat Chan, Chakravarthi Narasimhan, and Ying Xie, “Treatment Effectiveness and Side Effects: A Model of Physician Learning,” *Management Science* 59, no. 6 (2013): 1309-1325.

more exercise, and changing attitudes towards food consumption. Yet, most physicians, patients, and the public (who are generally overweight) consider lifestyle changes “too much work.” It is more convenient to prescribe a pill or surgery than work for incremental change.⁸⁷⁶ Truly, it takes more work—and far more resources—to medicalize obesity rather than the simple solution: eat less; move more.⁸⁷⁷ Nonetheless, these carbon-neutral strategies must be a starting point.

If it can be determined that medicalization has not occurred, prevention has not worked, and reversal of obesity is impossible, then gradation endorses gradual implementation of medical solutions, some of which were discussed in the previous section III. Health insurance can encourage low-tech interventions through prioritization. At the same time, insurance coverage strategies and limitations can reduce the frequency and number of high-tech surgeries that are performed to combat obesity. Insurance companies should offer invasive surgeries on a case-by-case, rather than a minimum qualification, basis. As it stands, health insurance policies are currently doing the reverse by ballooning their coverage of treatments related to the preventable “disease” of obesity.

One drastic example of the outer bounds of health insurance coverage for obesity treatments was the proposal by the British National Institute for Health and Care Excellence (NICE). NICE contended that the NHS should provide bariatric surgery to minimally eligible candidates to combat Type II diabetes. NICE alleged that this approach might also be an option to prevent voluntary joint-replacement surgery as a

⁸⁷⁶ Alison Fildes, Judith Charlton, Caroline Rudisill, Peter Littlejohns, A. Toby Prevost, and Martin C. Gulliford, “Probability of an Obese Person Attaining Normal Body Weight: Cohort Study Using Electronic Health Records,” *American Journal of Public Health* 105, no. 9 (2015): e54-e59.

⁸⁷⁷ Although that statement is a little reductionistic, it reflects the fact that weight gain and loss is a simple formula of thermodynamics. When one consumes more calories than one needs, weight is gained. When one eats fewer calories than what is needed to sustain the current weight (body weight multiplied by activity), one decreases in body mass.

result of obesity.⁸⁷⁸ Here, we see how health problems related to obesity are “solved” with invasive intervention instead of simple solutions. If the NHS adopts this proposal, the carbon emissions of the medical industry will expand, affecting climate-change related health care costs.⁸⁷⁹ Obesity is a public health issue, one that cannot be solved on the individual level alone. Thus, health insurance policies must search for solutions that work within culture and society instead of only treating individuals as isolated, independent beings.

Health care policies must not ignore the fact that obesity—in the vast majority of cases—is a result of overconsumption and must be addressed as a complex personal, social, and environmental issue even with the support of health insurance, if need be. Benedict XVI clarifies, “our present crises—be they economic, food-related, environmental or social—are ultimately also moral crisis, and all of them are interrelated.”⁸⁸⁰ Yet the medical industry is not working with a gradational approach to health care policy. On the contrary, the medical industry is inventing ever-more complicated ways to address personal choices that have escalated to require medical intervention.

Accordingly, before health insurance covers medical intervention as a course of treatment for obesity, discriminating policy makers will first ask if medicalization has occurred. Then, insurance should support conservation-based prevention, only later followed by gradation in the treatment of obesity and related conditions. A green bioethic

⁸⁷⁸ National Institute for Health and Care Excellence, “Offer Weight Loss Surgery to Obese People with Diabetes,” *Nice*, 27 November 2014, at <https://www.nice.org.uk/news/article/offer-weight-loss-surgery-to-diabetics>

⁸⁷⁹ Kim Knowlton, Miriam Rotkin-Ellman, Linda Geballe, Wendy Max, and Gina M. Solomon, “Six Climate Change–Related Events in the United States Accounted for about \$14 Billion in Lost Lives and Health Costs,” *Health Affairs* 30, no. 11 (2011): 2167-2176.

⁸⁸⁰ Benedict XVI, *World Day of Peace Message: If You Want To Cultivate Peace, Protect Creation* (2010), 5.

aligns the health of individuals with the health of the planet. This must occur on every level.

V. Conclusion

Christians view limitation as a part of life. Although human limitation may be addressed by medicine, when normal human functions and the diversity of humanity are seen as pathological, and technological solutions are proffered as *the* way to escape “the human condition,” medicalization has occurred. When the medical industry offers technological solutions as an inevitable and appealing “solution” to the “problem” of embodiment, without considering non-medical alternatives, or when the condition has been medicalized, then patients surrender to the medical industry complex, rife with ecological externalities.

Bioethicists have called on society to consider human limitation within health care. Existential problems, states feminist theologian Dorry de Beijer, “are being redefined. They change from philosophical to medical problems, which as a result require medical-technical answers. Non-medical answers... are therefore even more marginalized.”⁸⁸¹ Yet, medicalization of normal human functions in American society is so prevalent we may not even know it present.

Commercials endorse “solutions” to every physical and mental dissatisfaction we have, “raising expectations of what an individual or family needs to live well.”⁸⁸² These visual cues are reinforced by social messages that stir desires to be competitive in a free-market, whether that competition is by being the smartest, prettiest, most (re)productive,

⁸⁸¹ Dorry de Beijer, “Motherhood and New Forms of Reproductive Technology: Passive Source of Nutrition and Rational Consumer,” in *Motherhood: Experience, Institution, Theology*, Anne Carr and Elizabeth Schussler Fiorenza, eds. (Edinburgh: T and T Clark, 1989), 73-81, at 75.

⁸⁸² Kennedy, Krahn and Krogman, “Downshifting,” 766.

or “having it all.” Instead of technological intervention as a last resort, or even one among equal options, it is nearly mandatory for those who can afford it. This further normalizes the use of technology for non-medical “problems” and keeps the medical consumer dependent on technology to feel like they are flourishing. The current medical model of technological dependence is environmentally unsustainable and in contradiction with the promotion of the common good.

Theological ethicists must not passively accept the Baconian attitude of dominance over limitation, but take seriously the critiques offered by the third principle of green bioethics. Simplicity encompasses satisfaction with what one has and recognizes that when needs are present they can be addressed in the least complex way possible. Avoiding medicalization as first-line defense against the use of medical resources, then prevention, and finally medical solutions that use gradation to treat diseases should replace current health care models. Addressing the aforementioned examples of female infertility, obesity-related conditions, natural death, sex reassignment surgery, and Viagra are just the tip of the iceberg. Conservation of resources will be achieved if simple solutions are ingeniously utilized before medical interventions are sought.

Mary Jo Iozzio denounces, “the medical model (which) presumes a normative position that confounds the lives and real experiences of people (with disabilities) and labels them deviant.”⁸⁸³ When individuals are declared “deviant” by the medical industry, and their bodies colonized, manipulated, and mutilated by the prosthetics of technology then health care has moved from beneficial to harmful. Theologians aware of these manipulations must speak out aggressively to the physical, ecological, and above all

⁸⁸³ Mary Jo Iozzio, “Genetic Anomaly or Genetic Diversity: Thinking in the Key of Disability on the Human Genome,” *Theological Studies* 66, no. 4 (2005): 862-881, at 863.

ethical malevolence that occurs when humans are demoted from fully valuable, as soul and body, to merely flesh that can be subdued.

Having thus set forth my third principle of green bioethics—simplicity before complexity: reducing dependence on medical intervention—my final chapter will explain the fourth principle of green bioethics. In chapter six, I will outline my last principle, arguing that the principle of the common good should drive health care instead of financial profit. “Ethical economics” will be the topic of chapter six.

CHAPTER 6

The Common Good Should Drive Health Care Instead of Financial Profit: Ethical Economics

I. Introduction

Each aspect of health care, from pharmaceuticals to surgical tools, operating rooms to patient beds, diagnostic tests to patient meals, has a profit margin that must be met. In order to ensure continuous rollover, slick marketing campaigns and medical enticements allure patients. Private detox centers,⁸⁸⁴ psychiatric wards,⁸⁸⁵ and boutique gynecological clinics⁸⁸⁶ are eager to accept health insurance or private payments for their luxury services. These individualistic endeavors ignore the common good, embrace profit, and serve an elite clientele. At the same time, millions of people are without basic health care and technological advances are further out of their reach every day. The medical industry can safeguard the common good by making basic health care financially and physically accessible for all instead of surrendering to the demands of the all-powerful economy. Green bioethics must consider all aspects of health care. The fourth and final priority for green bioethics engages economics and states that the common good should drive health care instead of financial profit.⁸⁸⁷

In this chapter, I will first introduce human rights and authentic human development as my ethical and theological foundations. A proper understanding of the common good

⁸⁸⁴ Such as Promises Austin, which offers a “60-Day Luxury Drug Rehabilitation Program.” See Promises Austin, “Treatment Programs,” 2013, at <http://www.promisesaustin.com/programs/60-day-program>

⁸⁸⁵ Walden Behavioral Care, LLC offers Psychiatrists, dietitians, nurses, social workers, and mental health counselors. See Walden Behavioral Care, “Adult Residential Eating Disorder Program,” 2014, at <http://www.waldenbehavioralcare.com/treatment/adult-eating-disorder-services/residential-care/>

⁸⁸⁶ The Women's Wellness Institute of Dallas specializes in “vaginal rejuvenation,” labiaplasty, and endometrial ablation “treatment” (scraping the uterus to reduce “heavy” menstruation). See Women's Wellness Institute of Dallas, “Gynecology: Women's Health,” n.d., at <http://www.womenswellnessinstitute.com/content/gynecology>

⁸⁸⁷ Van Rensselaer Potter wrote in 1971, “technological decisions should not be made on the basis of profit alone, but should be examined in terms of survival.” Van Rensselaer Potter, *Bioethics: Bridge to the Future* (New Jersey: Prentice-Hall, 1971), 168.

encompasses human rights and ensures that each individual person is accorded dignity as a complex person with needs. Human rights are further filled out by the concept of authentic human development, which recognizes that people are more than *homo economicus*; they are also *imago Dei*. After my ethical and theological foundations, I will discuss the health care system as a business.

The choices the medical industry makes about providing or creating new medical developments, techniques, and procedures are significantly based in finance. All services are subject to cost efficiency, but I am particularly concerned with profitability of medical luxury goods. Theologically based ethics are not opposed to profitability from intellectual acumen or technological developments, but any industry that generates revenue must address the tension between economic development and environmental use. After discussing profit as a driving force in health care systems in general, I will specifically underscore the lucrative pharmaceutical industry.

Pharmaceutical companies have vested interests in maintaining patents, developing personalized drugs, and marketing pharmacogenomics. Without the development of new pills (for new “diseases”) financial profits will languish. Despite their profitability, Big Pharma cannot continue as is. After I have discussed the role of profit and pharmaceuticals as a prime example of the health care system as a business, I will explain how my fourth principle of green bioethics can lead to resource conservation.

In section four I will examine ethical economics as a means towards resource conservation. First, I will overview what has been implemented elsewhere, highlighting two cases of not-for-profit health care. Distribution of free antiretrovirals (ARV) in Brazil is my first example of prioritization of the common good above profit. In this case, the

health care of citizens is put before selling expensive ARV, demonstrating the inflated prices of HIV drugs.⁸⁸⁸ Second, I will focus on the work of Doctors Without Borders (DWB). DWB meets health care needs of people worldwide, without ability to pay as a prerequisite for service. Naturally, there will be objections to my fourth principle of green bioethics.

Proposing that health care focuses on the common good instead of profit will be contentious. Thus, I first raise some preliminary business concerns, such as the role of corporations within a society. I argue that revenue alone is a weak standard of human flourishing. Thus I will offer alternatives to profit-driven commerce that account for the common good. Both Sallie McFague's "ecological economics," and alternatives to the GDP as the measurement of social health, will be discussed. When profits drive the creation, distribution, and marketing of medicine, those who are underprivileged suffer. But when priority is placed on the well being of humans as a whole, ethical economics can be realized.

Last, I will provide suggestions for ethical economics as a principle of green bioethics. As in previous chapters, I give consumer, doctor, and institutional suggestions. First, I will invite individuals to employ ethical economics by financial sharing of medical expenses. For doctors, I will suggest an ethos of service that prioritizes patient needs and best patient practices. For institutions, I will propose policies that minimize ties to the pharmaceutical industry.

⁸⁸⁸ Christine Rushton, "Company Hikes Price 5,000% for Drug that Fights Complication of AIDS, Cancer," *USA TODAY*, 18 September 2015, at <http://www.usatoday.com/story/news/health/2015/09/18/company-hikes-price-5000-drug-fights-complication-aids-cancer-daraprim/32563749/>

As Kevin O'Rourke affirms, "Profit cannot be the basis of any profession but must be considered a secondary and highly variable feature."⁸⁸⁹ If the medical industry makes decisions based on the common good and ethical economics instead of fiduciary gain, environmental conservation will occur. I turn now to my ethical and theological foundations.

II. Ethical and Theological Foundations

The American economic system—inclusive of the medical industry—often places profit margins above concern for the common good. A sizeable number of citizens are unable to access health care because it is cost prohibitive. This hinders their well being since health care is a basic human need. When health insurance costs more than a mortgage, and people go into debt because they cannot pay medical bills for chronic or acute illness, the fissure between the goals of medicine and the availability of medicine grows.⁸⁹⁰ Even after the implementation of the Affordable Care Act in the United States approximately 41 million Americans were still uninsured as of 2015,⁸⁹¹ requiring them to make choices about healthcare, insurance, and medical treatment based on economics instead of need. Benedict XVI contended that profit cannot be the exclusive goal of the medical industry; it must have the common good as its ultimate end.⁸⁹² In this section I articulate my ethical and theological foundations for this chapter and argue that human

⁸⁸⁹ Kevin O'Rourke, *A Primer for Health Care Ethics: Essays for a Pluralistic Society*, 2nd ed. (Washington DC: Georgetown University Press, 2000), 18.

⁸⁹⁰ Of course, health care goes beyond basic needs. The struggle to pay for basic health care is a reality not only for Americans, but especially for those worldwide.

⁸⁹¹ Jenna Levy, "In U.S., Uninsured Rate Sinks to 12.9," *Gallup*, 07 January 2015, at <http://www.gallup.com/poll/180425/uninsured-rate-sinks.aspx> The number was calculated using data from the United States Census Bureau. United States Census Bureau, "Census Bureau Projects U.S. and World Populations on New Year's Day," *United States Census Bureau*, 29 December 2014, at <http://www.census.gov/newsroom/press-releases/2014/cb14-tps90.html>

⁸⁹² Benedict XVI, *Compassion in Veritate: On Integral Human Development in Charity and Truth* (2009), 21.

rights and authentic human development should be the foundation for ethical economics. This will ultimately dethrone profit in the health care industry, and reduce the amount of resources used. I turn first to human rights.

A. Human rights

Willis Jenkins calls human rights “the most successful universal moral project.”⁸⁹³ Currently, rights-language proliferates in a variety of settings, often oriented at groups like women, LGBT communities, racial minorities, and even animals.⁸⁹⁴ For Christians, human rights concern the larger community; rights are neither a handout, nor a claim that can be made without context. Meghan Clark summarizes the concept of rights by stating, “a right begins with a person who is bearer of the right (subject) and includes a particular substance (object) that is claimed against another individual or group who has a correlative duty to respect this right.”⁸⁹⁵

In society, the rights of the person, obligations to others, and the good of the whole vacillate back and forth, ideally creating harmony where all people can thrive. Human rights are an appropriate starting point for discussing ethical foundations because they express a pluralistic concept, it requires responsibility from others, and their claims are made intelligible within communities.

First, the phrase “human rights” is broadly recognizable. In 1948, following World War II and the Nuremburg trials, the United Nations signed the *Universal Declaration of Human Rights*.⁸⁹⁶ Eventually, rights became a lens for theology as well.

⁸⁹³ Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (Washington DC: Georgetown University, 2013), 120.

⁸⁹⁴ *United Nations Educational, Scientific and Cultural Organization, Universal Declaration of Animal Rights* (Paris: UNESCO, 1978).

⁸⁹⁵ Meghan Clark, *The Vision of Catholic Social Thought: The Virtue of Solidarity and the Praxis of Human Rights* (Minneapolis: Fortress, 2014), 2.

⁸⁹⁶ United Nations, *Universal Declaration of Human Rights* (Geneva, Switzerland: United Nations, 1948).

Christians articulate human rights based in an understanding of the intrinsic value and dignity of the person. “From the very beginning, religious activists have been taking part in the struggle for political and human rights and raising the awareness of religious and human values in the society,”⁸⁹⁷ documents Luka Tomašević. The readily familiar language of human rights therefore allows a large number of people to assent to, protect, and implement, the manifestation of rights.

Second, human rights necessarily entail corresponding duties or responsibilities. This prevents individuals from making unilateral demands to entitlements that could jeopardize the common good. James Nash explains, “using the rubric of justice, rights and responsibilities are not commensurate...but they are correlative: strict responsibilities to other beings exist because the others have just claims.”⁸⁹⁸ It is appropriate to say that if I claim the right to basic medicine, then I have a responsibility to pay a fair amount to the provider. Conversely, if I have a right to choose medicine as a career, then I have the responsibility to practice it in a way that allows people to access my services. Both claims rest on a larger supposition that people who work should receive a living wage and that those unable to work can have their financial needs (for health care, for example) met. Human rights, therefore, demonstrate give-and-take and must benefit the person without neglecting society. It should be noted that the merging of obligations and responsibilities to rights was “an important adaptation” of Catholic human rights theory and answers the objection to human rights being narrowly individualistic.⁸⁹⁹

⁸⁹⁷ Luka Tomašević, “Development and Perspectives of Theological Bioethics,” *Croatian Medical Journal* 54 no. 1 (2013): 86-88, at 86.

⁸⁹⁸ James A. Nash, “Biotic Rights and Human Ecological Responsibilities,” in *The Annual of the Society of Christian Ethics*, ed. Harlan Beckley (Washington D.C.: Georgetown University Press, 1993), 137-162, at 143.

⁸⁹⁹ Clark, *The Vision of Catholic Social Thought*, 16.

Third, human rights are situated in a larger community where rights become intelligible only in the company of others. Catholic moral theology embraces an anthropology that regards the person as a communal being. Since society is the context for all of human life—including rights claims—it must be the arena in which human rights take shape and are employed. Many people believe that health care is a human right that must be distributed to the uppermost limits. This would surely bolster the standard of care for the poor, making the right to health care more than just lip service to high ideals, but this disregards the limits of the planet and the enormous burden that would be placed on medical systems. Another approach to health care in a world society might conjecture “the rich should have only the same health care as the poor.”⁹⁰⁰ This is a minimalist approach to medicine, but would violate human rights. Thus ethicists need to reassess health care as a right from within a world community that adjudicates the limits of the earth with the right to basic health care. If health care is for the benefit of the common good, then it must not jeopardize other common goods like the sustainability of the planet. If it is a right, then it should not be so expensive that many people cannot access it.

In summary, human rights, from a theological perspective, can only function when tied to larger networks. Willis Jenkins places human rights in the same category as economic livelihood and distributive justice. All three, in his view, “are goods in themselves as well as epistemic conditions for learning how to sustain the goods of creation.”⁹⁰¹ Jenkins’ description of human rights fits clearly with the vision of the common good. Claims to human rights are legitimized within a community, but they

⁹⁰⁰ Andrew Jameton, “Outline of the Ethical Implications of Earth’s Limits for Health Care,” *Journal of Medical Humanities* 23, no. 1 (2002): 43-59, at 55.

⁹⁰¹ Jenkins, *The Future of Ethics*, 180.

cannot be the only goal of society. Therefore authentic human development must also be part of social life. The next section outlines authentic human development within the common good as a second theological foundation for ethical economics.

B. Authentic human development

This section describes authentic human development as a secondary foundation for ethical economics. It is remarkable that the Catholic concept of authentic human development foreshadowed the cry of ecologists for “sustainable development.”⁹⁰² Thus, the nuanced concept of development can also be appropriated for environmental conservation.

The idea of authentic human development has been part of Catholic Social Teaching for decades. In a quintessential articulation of authentic human development, in 1967 Pope Paul VI declared, “the development We speak of here cannot be restricted to economic growth alone. To be authentic, it must be well rounded; it must foster the development of each man and of the whole man (sic).”⁹⁰³ Authentic development is composed of two elements; the first acknowledges that economics is part of development. The second supplements the first, and appreciates that wealth alone is not a sufficient indicator of human development. Authentic human development places the economy in service to the whole human person, not the other way around.

The first element of authentic human development recognizes that economic development has an influence on the well being of people. Gustavo Gutierrez depicts,

⁹⁰² The 1987 Brundtland Commission’s well-cited report, known as “Our Common Future,” coined and defined the term “sustainable development.” See Gro Harlem Brundtland, *Report of the World Commission on Environment and Development: “Our Common Future”* (New York: United Nations, 1987). Note, “sustainable growth” is an oxymoron, since sustainability implies an end point; a stasis that does not grow. However, “sustainable development” can be the aim of policies since development has a fixed end point in mind.

⁹⁰³ Paul VI, *Populorum Progressio: On the Development of Peoples* (March 26, 1967), 14.

“development (as) a total social process, which includes economic, social, political and cultural aspects.”⁹⁰⁴ These aspects of human development are often intertwined and dependent on each other. A society that has increasing gaps between economic classes is unstable and political strife will follow. But a basic level of income ensures that citizens will be able to provide for their needs with dignity. Thus, Catholic Social Teaching includes economic progress as an indispensable element that can promote authentic human development.

In *Sollicitudo Rei Socialis* John Paul II notes that “development has a necessary economic dimension, since it must supply the greatest possible number of the world’s inhabitants with an availability of goods essential for them ‘to be.’”⁹⁰⁵ Ultimately, “being” includes necessities of life that are bought and sold in the marketplace. Food, housing, clothing, and medical care are necessary for humans to live well. Each of these goods have a price tag attached to them and, without sufficient income, people are forced to make difficult decisions between essential goods. John Paul II indicates that an economically developed society allows people to afford basic products and services necessary for life. CST does not advocate eliminating money or markets, but places them in a proper place, in service to individual flourishing and the common good.

The second component of authentic human development complements the first, and acknowledges that wealth alone does not translate to a fully developed person. Rather, economic aspects of authentic human development are balanced with other social goods like spirituality and the development of virtuous camaraderie. Social policies that benefit the marginalized can also be part of authentic human development. The United

⁹⁰⁴ Gustavo Gutierrez, *A Theology Of Liberation* (Maryknoll, NY: Orbis Books, 1973), 24.

⁹⁰⁵ John Paul II, *Sollicitudo Rei Socialis: For the Twentieth Anniversary of Populorum Progressio*, 28.

States Conference of Catholic Bishops suggests, “Development policies (could) seek to reduce poverty with an emphasis on improved education and social conditions for women.”⁹⁰⁶ In Catholic Social Teaching, we see a robust description of authentic human development beyond economics, to the needs of the holistic person with many dimensions beyond subsistent life. A person has emotional, spiritual, physical, and social needs that may be developed.

Since CST originates from a theological vantage point, teachings on the spiritual dimension of the person are essential to authentic human development. In *Sollicitudo Rei Socialis*, John Paul II proposed, “Development which is not only economic must be measured and oriented according to the reality and vocation of man seen in his totality, namely, according to his interior dimension.”⁹⁰⁷ Alongside this inner growth, CST indicates that authentic human development is marked by a concern for others.

Since human beings are social, we must learn how to live compassionately in society if we aspire to authentic human development. For CST, the notions of *caritas* (charity), of love, and affection characterize authentic and integral development. In *Populorum Progressio* Paul VI reasoned that “Genuine progress does not consist in wealth sought for personal comfort or for its own sake; rather it consists in an economic order designed for the welfare of the human person, where the daily bread that each man receives reflects the glow of brotherly love and the helping hand of God.”⁹⁰⁸

Teachings on authentic human development clearly encompass both exterior economic dynamics and the interior person. They orient discussions on the marketplace

⁹⁰⁶ United States Conference of Catholic Bishops, “Climate Change: A Plea for Dialogue, Prudence and the Common Good,” 15 June 2001, at <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/global-climate-change-a-plea-for-dialogue-prudence-and-the-common-good.cfm>

⁹⁰⁷ John Paul II, *Sollicitudo Rei Socialis*, 29.

⁹⁰⁸ Paul VI, *Populorum Progressio*, 86.

aimed at promoting the benefit of all people in the common good, with emphasis on the person's holistic needs. Thus, authentic human development is an essential theological foundation for ethical economics because the marketplace can easily become profit-driven, forgetting that the purpose of buying and selling was to assist others in supplementing what they did not have, bartering one person's bounty for another's.⁹⁰⁹

In recent years, authentic human development has also included an articulation of the person in her natural environment and taken on ecological coloring. This is in response to both the limits of the planet and the superdevelopment of those in wealthy countries. Pope Francis propounds, "Authentic human development...presumes full respect for the human person, but it must also be concerned for the world around us and take into account the nature of each being and of its mutual connection in an ordered system."⁹¹⁰ His words point ethicists to a fuller consideration of what it means to be human in the era of the anthropocene, especially in a world market economy.

I have posited human rights and authentic human development as ethical and theological foundations for the fourth principle of green bioethics. From these foundations ethicists can deduce that markets become exploitative when they reject the interdependence of individuals within society. The sick need doctors to make them well, but doctors also need patients to make a living. However, when the primary goal is of health care is financial gain, the medical industry reduces the person to merely a

⁹⁰⁹ On this point see Daniel Finn, *The Moral Ecology of Markets: Assessing Claims about Markets and Justice* (Cambridge: Cambridge University Press, 2006); Allen B. Moran and Daniel Finn, eds., *The True Wealth of Nations: Catholic Social Thought and Economic Life* (New York: Oxford University Press, 2010); Daniel Finn, *Christian Economic Ethics: History and Implications* (Minneapolis, MN: Fortress Press, 2013); Daniel Finn, ed. *Distant Markets, Distant Harms: Economic Complicity and Christian Ethics* (Oxford: Oxford University Press, 2014); Christine Firer Hinze, *Comprehending Power in Social Ethics* (Oxford: Oxford University Press, 1995); Christine Firer Hinze, *Glass Ceilings and Dirt Floors: Women, Work, and the Global Economy* (New York: Paulist Press, 2015). Thanks to Andrea Vicini for drawing my attention to these writings.

⁹¹⁰ Francis, *Laudato Si': On Care for Our Common Home* (Rome: Vatican Press, 2014), 5.

pocketbook to be depleted. For authentic human development to occur, there must be a just transaction between parties. When engaged citizens sell goods out of a desire to participate in the common good, we recognize and validate full humanity through our actions.

In the next section I examine the health care system as a business. The immense profitability of the current medical industry is my concern. Therefore, I first discuss profit in the medical industry in general. Second, I look at the multi-billion dollar pharmaceutical industry as a specific example of profit in the health care sector.

III. The Health Care System as a Business

The medical industry provides a service to humanity when it attends to human health and healing through the four goals of medicine, in line with the principles of bioethics. Yet, the whole health care industry is also a business and financial transactions are inevitable. Purchases made in the realm of the medical industry are purchases nonetheless. Frequently in this day of medical consumerism, we are offered developments, techniques, and procedures under the promise of happiness, fulfillment of life-projects, or even a higher salary,⁹¹¹ but these do not address medical needs. Environmentalists point to the medical waste for procedures that do not contribute to the health or quality of life of the patient. But if people are willing to pay for a procedure, policymakers hesitate to force regulation because our world is under the conviction that prosperity depends on economic growth. Theologians, in particular, caution against material accumulation when it is only benefits the economy and is neither beneficial to

⁹¹¹ Ty Kiisel, "You Are Judged by Your Appearance," *Forbes*, 20 March 2013, at <http://www.forbes.com/sites/tykiisel/2013/03/20/you-are-judged-by-your-appearance/>; Alyson Shontell, "If You Look like this, Your Pay Check Will be Higher than Average," *Business Insider*, 26 February 2011, at <http://www.businessinsider.com/if-you-have-any-of-these-20-physical-features-your-pay-check-will-probably-be-higher-2011-2?op=1>

the person nor to society. This section examines the health care system as a business. I focus on the ways in which the medical industry in general effectively generates profit. Then I study the pharmaceutical industry, which is a major money making endeavor within for-profit health care. The purpose of this section is to establish the excessive profitability of the medical industry.

A. Profit in the medical industry

Health care should be directed at medical needs and address both public and individual health. Yet, a persistent preference for exclusive access, massive cost of specialized treatments, and individualized pharmaceutical drugs makes one question the commitment of the health care industry to basic medical care for all people. In a number of ways, the medical industry acts as business, instead of being contributing to the common good. Here I highlight two examples. The first illustration comes from a television commercial for personal loans for fertility treatments. The second case is the Intercytex Ltd. Corporation, which offers treatments for male hair loss and other dermatological concerns. Both utilize medical technology in order to generate profit.

Once the medical industry moves beyond health care needs—as defined in chapter four—and chooses to medicalize services—as outlined in chapter five—the concomitant result is a plethora of lucrative non-medical services that are offered under the umbrella of the medical industry. Since these treatments utilize doctors, prescriptions, pharmacies, and medical centers, but are not necessary for physical health, they are rightly called “luxury” medical services. Many luxury services—such as cosmetic

surgery, fertility treatments, sex-reassignment surgery,⁹¹² Viagra, and elective joint replacement—have been identified in previous chapters.

Very often these, and other, health care wants are attached to marketing campaigns, thus preying on the consumerist tendencies of the middle and upper-classes. Theologians C. Ben Mitchell, et al. point out that once basic health care needs are met, “the confluence of an ego-oriented culture sustained by social approval, peer example, and clever advertising produce a cascade of demand” for unnecessary medical treatments that raise standard of living.⁹¹³ Purchasing fertility treatments is one example of the health care business selling services to affluent customers.

Reproductive technologies are expensive. While they are occasionally covered under health insurance—usually with limitations to egg retrieval cycles, cost, or conception—recently, more governments and health insurance companies are adding fertility treatments to their health care plans.⁹¹⁴ In absence of health insurance coverage for fertility treatments, the high cost combined with low success rates translates to

⁹¹² Sex reassignment surgery (SrS) is the standard treatment for gender dysphoria in the United States. Thus, some people consider it a medical treatment for a mental disorder. I also recognize that people may wish to have a complete or partial SrS, take female or male hormones, or otherwise modify their appearance as a part of their “body project” without having gender dysphoria. These people may or may not be transgender. Further, procedures that health care providers might consider part of “sex reassignment surgery,” such as mastectomy without breast reconstruction may be desired by both cis- and transgender men (natal sex female), gay and straight. The lines between cosmetic surgery, gender identity, self-construction, and gender presentation are much more fluid than many in the medical industry recognize. See S. Lochlann Jain, “Cancer Butch,” *Cultural Anthropology* 22, no. 4 (2007): 501-538. Medical desires are also highly personal and may be affected by one’s perceived financial and physical investment and benefit, as well as personal standards for satisfaction with one’s body. Judith/ Jack Halberstam confesses, “as a real medi-phobe, I don’t see taking hormones, even in small doses as right for me for any extended amount of time. Top surgery? Well, yes please.” Judith/ Jack Halberstam, “On Pronouns,” *Jack Halberstam: gaga feminism and queer failure*, 3 September 2012, at <http://www.jackhalberstam.com/on-pronouns/> Halberstam describes the ambivalence many women have towards their breasts and what can be a legitimate, but nevertheless, idiosyncratic desire to have them removed for greater convenience. Thus, SrS and its adjuncts can have a two-fold prophylactic and cosmetic purpose.

⁹¹³ C. Ben Mitchell, Edmund D. Pellegrino, Jean Bethke Elstain, John G. Kilner and Scott B. Rae, *Biotechnology and the Human Good* (Washington, DC: Georgetown University Press, 2007), 123.

⁹¹⁴ Cristina Richie, “Reading Between the Lines: Infertility and Current Health Insurance Policies in the United States,” *Clinical Ethics* 9, no. 4 (2014): 127-134.

couples drained of money, but without children to show for their investment. Realizing that the treadmill of infertility treatments becomes harder to dismount the longer one attempts conception, and that the low-success fertility business means repeat customers, banks have teamed with medical business as backers of payments for fertility services.

In cultures marked by a procreative imperative, the absence of children in a marriage can signal a deficiency of initiative, because it is assumed that if one wants children they can have them. “Establishing oneself as climbing up, rather than slipping down, the evolutionary track”⁹¹⁵ becomes a pursuit accomplished by having biological children. When they do not arrive naturally, the fertility business offers infants-on-demand through fertility treatments for entrepreneurial, high-power couples.

In 2010, a bank in New Zealand marketed personal loans specifically aimed at couples pursuing reproductive technologies.⁹¹⁶ The television advertisement opens with a woman indicating that her pregnancy test is negative. As the ad tracks the failed attempts at conception, and a presumed diagnosis of infertility, the viewer witnesses the man selling his car. He contacts ASB Bank New Zealand and gets approved for a loan to fund reproductive technologies. Finally, there is confirmation of pregnancy from the doctor, the purchase of a new Toyota mini-van equipped with three infant seats and the final close-up of three infants, swaddled by parents and family. The ad ends with the phrase, “ASB: Creating Futures.” This marketing campaign, joined with other glossy advertisements for fertility clinics, indicates medical business, not medical care.

⁹¹⁵ Amy Laura Hall, *Conceiving Parenthood: American Protestantism and the Spirit of Reproduction* (Grand Rapids: Eerdmans, 2008), 147.

⁹¹⁶ ASB Bank New Zealand, 2010, at <https://www.youtube.com/watch?v=igcd4wNl3s8>. For critical commentary see Josephine Johnston, “Why I Mostly Love ASB Bank’s IVF Ad,” *The Hastings Center Bioethics Forum*, 20 December 2010, at <http://www.thehastingscenter.org/Bioethicsforum/Post.aspx?id=5032&blogid=140>

From an economic point of view, multiple corporations turn a profit when couples utilize the medical industry for technological reproduction. The aforementioned television commercial indicated that banks, car companies, merchants of children's clothes and car seats, and (though not shown) grocers will all make a profit from a single lifestyle choice. Only well-established couples can afford to take out personal loans and more than double the size of their family instantly; the conspicuous consumption reminds us that the medical business is not for everybody. Rather, "positional consumption" defined as "goods that have the characteristic of allowing us to 'position' ourselves socially with respect to our fellows"⁹¹⁷ characterize the social ambitions of a young, white, infertile couple with good credit.

The analytic viewer of this ad also notes that in a short period of time the couple went from a financially precarious situations—so much so that they had to sell their one compact car—to being able to finance fertility treatments, purchase a newer, larger car and provide for three additional people. These loans and fertility treatments are often marketed with an appeal to the roller coaster of emotions in attempted pregnancy, relief at fertilization, and joy at new birth. While fertility treatments do not save lives, there are no correlative loans (or commercials for loans!) for basic health needs, like vaccines, or even high-cost, but life saving organ transplants which might have a similar emotional pay-off.

All medical offerings are, in a way "fee for service," certain types of medical developments, techniques, and procedures fuel market growth without concomitant health benefit. Luxury medical services are for the advantage of inventors, stockholders,

⁹¹⁷ Tim Jackson, "Live Better by Consuming Less," *Journal of Industrial Ecology* 9, no. 1-2 (2005): 19-36, at 27.

and interested parties, yet these financial conflicts of interest degrade the integrity of the health care system and jeopardize the trust one has in doctors. Other aspects of the health care business retain ties to scientific advancements without the assistance of third-party

Intercytex Ltd. is a U.K. company, which self-describes as “focused on developing our lead product ICX-RHY to treat a variety of skin related problems including Epidermolysis Bullosa and scar contractures.”⁹¹⁸ In addition to these conditions, Intercytex also offers “medical” treatments for acne scarring⁹¹⁹ and baldness.⁹²⁰ Again, some of these conditions are not indicative of health care need, and are cosmetic treatments in the clearest sense of the term. Intercytex has been marketing their offerings for a number of years, indicating consistent earnings in the black. Clearly, scientific and medical investments have seeded the growth of this company, which treats both essential needs and physically superficial characteristics. But, as David Crippen comments, “Medicine is no longer just an art and a science. It is clearly a business now.”⁹²¹

Luxury medical goods are sold to consumerist markets in the developed world, although more and more they are reaching into urban pockets of developing countries as well. The medical industry, in many parts of the globe, has succumbed to a capitalist-consumer mentality that requires expansion instead of equilibrium. Theologian Jürgen Moltmann correctly asserts, “it is not natural requirements that dominate our lives and provide the driving power for our economy; it is the demands that have been stimulated

⁹¹⁸ Intercytex, “Summary,” 2010, at <http://www.intercytexas.com/>

⁹¹⁹ Intercytex, “Treatment Pipeline,” 2010, at

http://www.intercytexas.com/index.php?option=com_content&view=section&layout=blog&id=2&Itemid=3c

⁹²⁰ Tressless News, “Intercytex Phase II hair Multiplication Trial Update,” *Tressless News*, 25 September 2007, at <http://tressless.com/2007/09/25/intercytexas-phase-ii-hair-multiplication-trial-update/>

⁹²¹ David W. Crippen, “United States- Academic Medicine: Where Have We Been?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (New York: Springer, 2013), 101-105, at 101.

and artificially heightened. These additional desires are in principle limitless. They can be stepped up beyond any possible fulfillment.”⁹²² He is describing artificial, not natural needs.⁹²³ It is the role of business to pander to these desires that crystalize as artificial needs. The medical industry does this in a variety of ways.

The obliteration of the line between natural requirement and luxury medical good occurs when a prescription is tied to a medically unnecessary drug, or when garnering a referral to a doctor specializing in “aesthetic” medicine, or when paying out of pocket for a cosmetic treatment that employs medical knowledge and care. Ultimately, these luxury goods utilize the medical label and are legitimized as a part of the health care industry. The medical industrial complex is, in part, so profitable because lavish items such as contact lenses (but not corrective lenses), cosmetic surgery, cosmetic dentistry, and prescriptions for anything from “allergies” to “impotence” are available to anyone who can pay, with very light—if any—regulations.

While “the Church acknowledges the legitimate role of profit as an indication that a business is functioning well...profitability is not the only indicator of a firm’s condition.”⁹²⁴ Other factors must be attended to, such as the physical well being of workers and consumers. There is a heavy—and often unaccounted for—cost to the environment for each of these purchases as well. Ecological theologians Michael S. Northcott and Peter M. Scott encourage us to consider where the maximum limits of consumerism may lie, before excess leads to ruin.⁹²⁵ In the next section, I continue to

⁹²² Jürgen Moltmann, *The Source of Life: The Holy Spirit and the Theology of Life* (Minneapolis, MN: Augsburg Press, 1997), 107.

⁹²³ Jackson, “Live Better by Consuming Less,” 24.

⁹²⁴ John Paul II, *On the Hundredth Anniversary of Rerum Novarum: Centesimus Annus* (1991), 35.

⁹²⁵ Michael S. Northcott and Peter M. Scott, eds. *Systematic Theology and Climate Change: Ecumenical Perspectives* (Florence, KY: Taylor and Francis, 2014), 145 n. 18.

analyze the health care system as a business, with a focus on the pharmaceutical industry.

B. The pharmaceutical industry

As generic medications spin off from name brands, a growing market for pharmaceutical profitability emerges. It used to be thought that “perfectly personalized medicine would, by definition, not be worthwhile to drug manufacturers; (because) there is little profit to be made in developing a drug for a market of one.”⁹²⁶ But recently the FDA approved 3D pharmaceutical printing,⁹²⁷ which could make pharmacogenomics not only reasonable, but also incredibly accessible, and therefore lucrative. Personalized medicine, complete with bespoke pills that utilize biomarkers as the basis for creating custom-tailored drugs,⁹²⁸ has come into vogue and will be the new demand of industrialized world citizens in years to come.

Inherently, there is nothing wrong with an honest wage for a useful service. But the pharmaceutical industry has long been under fire for over-charging for essential medications, as well as marketing unnecessary and damaging drugs to medical consumers.⁹²⁹ This section profiles three prescriptions that represent a money-driven pharmaceutical industry. I will discuss an anti-seizure drug, a drug that reduces dependency on external oxygen, and the Ebola vaccine. The first two of these drugs increase quality of life. The third drug actually saves lives. The cost of these drugs is my focus in this section, but the attendant issues with pharmaceuticals—like misdistribution, medicalization, and overprescription—are salient to moral assessments as well. In this

⁹²⁶ Karen Peterson-Iyer, “Pharmacogenomics, Ethics, and Public Policy,” *Kennedy Institute of Ethics Journal* 18, no. 1 (2008): 35-56, at 39.

⁹²⁷ Jane Wakefield, “First 3D-Printed Pill Approved by US Authorities,” *BBC News*, 4 August 2015, at <http://www.bbc.com/news/technology-33772692>

⁹²⁸ Henry I. Miller, “Bespoke Drugs,” *Forbes*, 9 January 2009, at http://www.forbes.com/2009/01/08/drugs-health-care-oped-cx_him_0109miller.html

⁹²⁹ Marcia Angell, *The Truth About Drug Companies: How They Deceive Us and What to Do About It* (New York: Random House, 2005).

section I build support for my claim that the appeal of moneymaking, rather than the common good, is currently driving the pharmaceutical industry.

In 2015, the Competition and Markets Authority in the U.K. accused the pharmaceutical companies Pfizer and Flynn Pharma of charging too much for Phenytoin sodium capsules.⁹³⁰ These pills lessen epileptic episodes by inhibiting seizures. The National Health Services, which provides health care for U.K. citizens, noted that their cost of purchasing the drug rose 25 times, from 2 million to 50 million pounds in 2013. Epanutin (brand name) pharmaceuticals are not lifesaving, in every case of use, and certainly come with a number of side effects. They can be considered, however, a form of preventive medicine, since unexpected seizures may lead to accidents, personal harm, and even death. The drastic increase in cost of purchasing the anti-seizure drugs indicate that they can be sold for less, but that profit margins are driving rising cost.

In a second example, the *Boston Globe* profiled people who consumed expensive pharmaceuticals to treat symptoms associated with chronic diseases.⁹³¹ One woman reported that the cost of Tracleer, the brand name for bosentan, which eases the symptoms of pulmonary hypertension, is over \$1,100 dollars a month. She pays for the pharmaceutical, in part, with a grant. Considered a specialty drug, Tracleer does not cure or treat disease, but it does allow those who take it to be free from oxygen supplies. This increases her quality of life, to be sure.

These first two examples of exorbitant drug costs came from the developed world, where basic health care is accessible to most. Both Epanutin and Tracleer are taken as

⁹³⁰ Hugh Pym, "Pfizer and Flynn Pharma Accused of Overcharging by CMA," *BBC News*, 6 August 2015, at <http://www.bbc.com/news/business-33799495>

⁹³¹ Felice J. Freyer, "Specialty Drugs Transform Lives- but at a Cost," *Boston Globe*, 21 July 2014, at <https://www.bostonglobe.com/lifestyle/health-wellness/2014/07/20/specialty-drugs-save-transform-lives-but-cost/MY2hxd8gD4mnfjwkmZ1ZcP/story.html>

part of a compendium of supervised health care plans that attend to quality of life, but are not lifesaving in every case. Outrage over the price of these drugs received media attention, and a quick investigation was followed by favorable outcomes for patients.⁹³² In other cases, however, the pharmaceutical industry has intentionally chosen not to manufacture and distribute vital drugs to the poor in developing and developed countries. Now, I add the case of Ebola to my pair of examples from the profit-driven pharmaceutical industry.

In 2013-2014, there was widespread transmission of the Ebola virus in West Africa. Although a vaccine for Ebola was discovered in 2005 after a previous outbreak,⁹³³ it was shelved by pharmaceutical companies because “there’s never been a big *market* for Ebola vaccines.”⁹³⁴ The Centers for Disease Control recorded that over 7,000 lives—mostly from poor African countries—could have been saved if the medication were readily available.⁹³⁵ Instead, thousands of poor people languished and died from the devastating effects of this high-fatality virus because the vaccine was not lucrative for manufacturing companies. Had the medical industry been concerned about the common

⁹³² See also Wes Venteicher, “Insurer Lowers Cost of HIV Treatments after Discrimination Complaints,” *Chicago Tribune*, 27 March 2015, at <http://www.chicagotribune.com/news/local/breaking/ct-coventry-hiv-drugs-met-20150327-story.html>

⁹³³ Steven M. Jones, Heinz Feldmann, Ute Ströher, Joan B. Geisbert, Lisa Fernando, Allen Grolla, Hans-Dieter Klenk, et al., “Live Attenuated Recombinant Vaccine Protects Nonhuman Primates Against Ebola and Marburg Viruses,” *Nature Medicine* 11, no. 7 (2005): 786-790.

⁹³⁴ Denise Grady, “Ebola Vaccine, Ready for Test, Sat on the Shelf,” *The New York Times*, 23 October 2014, at http://www.nytimes.com/2014/10/24/health/without-lucrative-market-potential-ebola-vaccine-was-shelved-for-years.html?_r=0 Emphasis mine.

⁹³⁵ Centers for Disease Control, “2014 Ebola Outbreak in West Africa - Case Counts,” 19 December 2014, at <http://www.Cdc.Gov/Vhf/Ebola/Outbreaks/2014-West-Africa/Case-Counts.Html>

good of all people from all nations, instead of the marketability of a vaccine, human lives could have been saved.⁹³⁶

Marcia Angell contends, “profit motive has corrupted medical policy, practice, and research. Facing an actual downturn in innovation and in the development of new products, pharmaceutical companies are desperate to maintain their incredible profits. They achieve this by maintaining monopolies on drugs, introducing new, virtually identical drugs, and new slightly less efficient drugs, plus bribes, and advertising.”⁹³⁷ Her statement is confirmed by simply glancing at the 1,280 page “Orange Book,” published by the Food and Drug Administration, which contains names, dosages, and ingredients in pharmaceuticals.⁹³⁸

In the Orange Book, many of the drug compounds are incredibly similar, or identical, but produced by competitor companies. Many of the drugs indicate a saturated market that represents stakeholders, inventors, chemists, and physicians all collaborating to promote their own version of the drugs marketed to the public. Again, the ethical issue in the pharmaceutical industry is not that interested parties are making a living from human ingenuity. Pope Francis holds that economic modesty “does not mean being opposed to any technological innovations which can bring about an improvement in the quality of life.”⁹³⁹ Rather, the Pope continues, “when significant new information comes to light, a reassessment should be made, with the involvement of all interested parties.”⁹⁴⁰

The current environmental crisis, coupled with growing awareness of the need to promote

⁹³⁶ Similar claims could be made about simple, inexpensive treatments for tuberculosis and malaria. For the latter see Colleen C. Denny and Ezekiel J. Emanuel, “US Health Aid Beyond PEPFAR: The Mother and Child Campaign,” *Journal of the American Medical Association* 300, no. 17 (2008): 2048- 2051.

⁹³⁷ Angell, *The Truth About Drug Companies*, 159.

⁹³⁸ United States Food and Drug Administration, *Approved Drug Products with Therapeutic Equivalence Evaluations*, 35th ed. (Silver Spring, MD: U.S. Food and Drug Administration, 2015).

⁹³⁹ Francis, *Laudato Si'*, 187.

⁹⁴⁰ Ibid.

the global common good, prompt ethicists to reassess an economically driven pharmaceutical industry.

In the next section I move from establishing the health care system as a profit-driven business to conceptualizing the implementation of the fourth principle of green bioethics. I will provide examples of health care driven by the common good instead of profit, address objections to the fourth principle of green bioethics, and provide suggestions for economic agreements and dynamics aimed at promoting the common good.

IV. Ethical Economics and Resource Conservation

The American health care system is currently predicated on fees-for-service, expensive drugs, and costly health insurance. Under these structures the poor majority is left behind while the rich minority pays their way into personalized insurance plans that generate revenue.⁹⁴¹ There are considerable environmental externalities from the health care industry, but concerns over the future are put aside by the reassurance of wealth today. “The costs of the evolution of this modern society are in fact greater than its utility, but they are shuffled off on to nature and future generations, in order that the present generation in ‘developed’ societies may enjoy the profits.”⁹⁴² However, integrating the goods of commerce with the common good can make health care more sustainable.

The choice to seek the common good above exclusively selling medical developments, techniques, and procedures for monetary gain allows the health care

⁹⁴¹ In the United States, even with the Affordable Care Act, financially unstable young people are faced with paying fines for being unable to securing insurance. Many are too old to qualify for their parent’s plans, do not have jobs where their employer offers health insurance, or have to pay an enormous amount from their paycheck for, effectively, a service they will not use.

⁹⁴² Jürgen Moltmann, *The Way of Jesus Christ: Christology in Messianic Dimensions* (San Francisco: HarperCollins, 1990), 305.

industry to focus on fewer services, which will lead to conservation. In this section, I first consider initiatives that have prioritized the common good over profit exclusively.

Second, I answer objections to subordinating uninhibited economic expansion to the common good. Third, I make policy suggestions for participating in ethical practices for individuals, doctors, and health insurance. I turn now to two examples of health care that is not profit driven. Distribution of antiretrovirals (ARV) in Brazil and Doctors Without Borders will be discussed.

A. What has been implemented elsewhere

Ethical economics prioritizes the common good, while also recognizing the need to scale back wasteful business practices that deplete the environment. Jessica Pierce and Andrew Jameton underscore the tension between economic growth and optimal ecological systems. They predict, “Seeking gains in human health and welfare through aggressive economic development without regard to environmental effects may guarantee the ecological disaster already at our doorstep.”⁹⁴³ Rather than policies that favor economic growth as the only indicator of success, green bioethics balances the demands of economics and ecology by promoting the common good.. My first example of ethical choices in economics in the medical industry is the distribution of free antiretrovirals in Brazil.

1. Distribution of free antiretrovirals in Brazil⁹⁴⁴

Numerous individuals and organizations worked to put the global human immunodeficiency virus (HIV) crisis on the map and secure treatment for people living

⁹⁴³ Jessica Pierce and Andrew Jameton, “Sustainable Health Care and Emerging Ethical Responsibilities,” *Canadian Medical Association Journal* 164, no. 3 (2001): 365-369, at 367-368.

⁹⁴⁴ See also Joao Biehl, “Pharmaceutical Governance,” in *Global Pharmaceuticals: Ethics, Markets, Practices*, eds. Adriana Petryna, Andrew Lakoff, Arthur Kleinman (Durham: Duke University Press, 2006), 206-239. Thanks to Andrea Vicini for drawing my attention to this chapter.

with HIV. International organizations like UNAIDS, under the leadership of Peter Piot;⁹⁴⁵ the work of theological ethicists Jon Fuller and James Keenan;⁹⁴⁶ and the commitment of physicians like Paul Farmer,⁹⁴⁷ made care of those infected with HIV/AIDS a priority in certain countries. Although there has been some progress in accessing ARV's recent years, the 1990s and early 2000s were marked by a lack of antiretroviral distribution in poorer countries.

In 2004, the United Nations estimated that six million people needed antiretroviral drugs to manage and treat HIV/AIDS, with the majority living in developing countries. In these low-income countries, "more than 9 out of 10 people are not getting the medications that, in richer countries, have turned a fatal disease into a chronic one."⁹⁴⁸ Prior to 2003, Brazil was among the countries with a gap in HIV care.

"The importation of three name-brand ARVs—nelfinavir, lopinavir, and efavirenz—were consuming 63% of (Brazil's) budget for acquiring ARV."⁹⁴⁹ The government was faced with an enormous health care need that was financially unsustainable. Brazil could have eliminated ARV from available medical offerings in order to save money. However, Jane Galvão records that, "concern for human rights

⁹⁴⁵ United Nations AIDS, "Homepage," n.d., at <http://www.unaids.org/>

⁹⁴⁶ As an example, see Jon Fuller and James Keenan, "Educating in a Time of HIV/AIDS: Learning from the Legacies of Human Rights, the Common Good, and the Works of Mercy," in Julian Filochowski and Peter Stanford, eds. *Opening Up: Speaking Out in the Church* (London: Darton Longman & Todd, 2005), 95-113.

⁹⁴⁷ See Tracy Kidder, *Mountains Beyond Mountains* (New York: Random House, 2009).

⁹⁴⁸ Celia W. Dugger, "Clinton Gets Five Companies to Reduce the Cost of AIDS Tests," *New York Times*, 15 January 2004, at <http://www.nytimes.com/2004/01/15/world/clinton-gets-five-companies-to-reduce-the-cost-of-aids-tests.html>

⁹⁴⁹ Jane Galvão, "Brazil and Access to HIV/AIDS Drugs: A Question of Human Rights and Public Health," *American Journal of Public Health* 95, no. 7 (2005): 1100-1116, at 1111.

combined with the urgent need for access to treatment by people with HIV/AIDS bolstered wider efforts to lower the costs of ARVs.”⁹⁵⁰

The Brazilian government reduced the cost of providing the drugs to its citizens through several strategies. First, Brazil negotiated with international pharmaceutical companies to lower the cost of some ARVs. Second, Brazil began producing other ARVs domestically. Combined, these two tactics permitted no cost distribution of drugs for the treatment of AIDS as part of Brazilian health care. While both strategies were effective models for reducing the cost of health care, the domestic production of ARVs is of particular interest because it kept money in the country, creating a positive loop of commerce. This allowed people in Brazil to benefit from the production of life-sustaining medicine, physically and financially.

Galvão chronicles that “of the 15 ARVs utilized in the country in 2002, 7 were produced in local laboratories, either public or private, and the remainder were purchased on the international market.”⁹⁵¹ By 2007, the Brazilian government decreed the compulsory license of AIDS medicine and began the national production of a generic antiretroviral.⁹⁵² Citizens received health care, the Brazilian government found a way to provide an essential medical service, and money stayed in the country.

As an addition to HIV treatment in health care, the country has also actively endorsed and supplied free condoms. Brazil has been manufacturing condoms for its people since April 2008 when “the first factory in the world to produce condoms with natural rubber from a native rubber tree was inaugurated in Xapuri (AC)... In 2009, 34

⁹⁵⁰ Ibid.

⁹⁵¹ Ibid., 1110.

⁹⁵² Rubens Costa-Filho, “Brazil: Where Are We Going?,” in *ICU Resource Allocation in the New Millennium: Will We Say “No”?*, David W. Crippen, ed. (New York: Springer, 2013), 113-121, at 119.

million condoms were distributed for free by the company, built with federal resources.”⁹⁵³ The proliferation of barrier forms of contraception is both wise and effective. Condoms reduce HIV transmission, which saves on health care costs related to treatments for affected people. It also leads to greater national economic self-sufficiency since the country does not have to purchase prophylaxis from other countries.

“In Brazil, there are at least two important arguments from an economic perspective for maintaining free access to AIDS medicines: the impact of ARVs in reducing deaths and the significant reduction in hospitalization and treatment costs associated with opportunistic infections.”⁹⁵⁴ Both prevention and treatment of HIV in Brazil demonstrate ethical economic dynamics in action.

Brazil’s approach to health care has many driving forces behind it; yet it can be asserted that the economic fortitude of the nation and the medical needs of its citizens are among the priorities of the countries. Brazil’s approach to health care has done a tremendous job of securing HIV treatment for citizens and has subordinated profit to the common good through strategies that provide free health care. Ethical economics and the common good can harmoniously co-exist. A second example of health care driven by the common good is Doctors Without Borders.

2. Doctors Without Borders

In many parts of the world, basic health care is impossible to access or afford. This was indicated in chapter three when I discussed global distributive justice. Due to the gap in health care access, some humanitarian organizations bring their services to people living in “medical deserts.” Doctors Without Borders (DWB)/ *Médecins Sans*

⁹⁵³ Ibid.

⁹⁵⁴ Galvão, “Brazil and Access to HIV/AIDS Drugs,” 1113.

Frontières (MSF) is another international example of prioritization of the common good above profit.

Doctors Without Borders summarize how they their work. They declare, “We help people worldwide where the need is greatest, delivering emergency medical aid to people affected by conflict, epidemics, disasters or exclusion from health care.”⁹⁵⁵

Known as *Médecins Sans Frontières* outside of the U.S., Doctors Without Borders traces its origins to 1968, when French citizens Max Recamier and Pascal Greletty-Bosviel volunteered with the Red Cross in Nigeria. They remained with the Red Cross until MSF was officially created on December 22, 1971. DWB/ MSF embodies the fourth principle of green bioethics.

Currently, DWB/ MSF brings free health care needs to the developing world with a focus on access to medicines; treatment of various diseases like Chagas, Cholera, Ebola, fistula, HIV/AIDS, Kala Azar, malaria, malnutrition, measles, meningitis, mental health, sexual violence, sleeping sickness, tuberculosis,; and promotion of women’s health.⁹⁵⁶ The organization “was created on the belief that all people have the right to medical care regardless of gender, race, religion, creed or political affiliation, and that the needs of these people outweigh respect for national boundaries.”⁹⁵⁷

The health care needs that DWB attend to are so basic that significant effort is undertaken to ensure that even the very poor have access to treatments, indicating that health care can address the medical needs of all people without having profit at the center. Doctors Without Borders is a humanitarian-based service that does not charge its clients.

⁹⁵⁵ Doctors Without Borders, “About Us,” n.d., at <http://www.doctorswithoutborders.org/about-us>

⁹⁵⁶ Doctors Without Borders, “Medical Issues,” n.d., at <http://www.doctorswithoutborders.org/our-work/medical-issues>

⁹⁵⁷ Doctors Without Borders, “Founding of MSF: People First,” n.d., at <http://www.doctorswithoutborders.org/about-us/history-principles/founding-msf>

DWB acknowledges that the health care of people is more important than financial gain and operates the organization according to this philosophy.

This section provided two examples of ethical economic dynamics in practice. Both illustrate prioritization of the common good without cost to citizens. Ethical economics—as I am framing it—can encompass many approaches and philosophies under numerous permutations. Brazil and DWB exemplify ethical health care in action. They promote sustainability in the medical industry by focusing on medical needs and global health care. Neither is profit driven. Having thus provided effective examples of economical health care directed at the common good, I turn to lingering concerns over the fourth principle of green bioethics. In the next section, I examine the purpose of business and alternatives to financial gain as the sole determinant of a successful economy.

B. Lingering questions and concerns

The primary objection to having the common good as the driving force in health care instead of profit is that individuals, shareholders, and companies might lose money, as well as the concern that pharmaceutical companies will cease to be located in U.S. jurisdictions, eliminating a highly profitable part of the American economic system. This concern is based on the presupposition that profit is the ultimate goal of a business and business exist to make a country financially powerful.⁹⁵⁸ In order to address this concern, I will guide objectors through a series of three steps that refute the monolith of profit and provide alternative economic models.

⁹⁵⁸ Travis Bradberry, writes, “Business is, after all, about making a profit.” Travis Bradberry, “7 Ways To Blow Your Boss's Mind,” *Forbes*, 29 September 2015, at <http://www.forbes.com/sites/travisbradberry/2015/09/29/7-ways-to-blow-your-bosss-mind/>

First, I examine why businesses exist and outline some ethical considerations of any business plan. Second, I describe Sallie McFague’s “ecological economics.” Ecological economics does not place profit at the expense of the environment; it points, rather, to alternatives to GDP. This section cannot and will not function as a full-blown economic analysis of market factors, business, or commerce. Rather, it aims simply to demonstrate that the common good can, in many different ways, overcome profit as a compelling influence in commerce. And, given that the health care industry is a business—as argued in section III—these intersectional philosophies can be applied to health care as well. I first highlight some preliminary business considerations.

1. Preliminary business considerations

As I argued above, there is nothing inherently wrong with making money from work. Catholic Social Teaching views labor and income as blessings, if properly used. That is, if undertaken in service to authentic human development and the common good. Thus, John Paul II reiterates, “Profit is a regulator of the life of a business, but it is not the only one; other human and moral factors must also be considered.”⁹⁵⁹ Among these factors are the many streams of social life that flow into the common good. Any commercial plan must weigh the benefits and drawbacks of developing and initiating a particular business. For instance, a corporation must attend to the interdependent dynamics of the economy, individual and collective needs, and shared goods.

Senior Research Scholar at the Institute for Philosophy and Public Policy at the University of Maryland, David A. Crocker has proposed a holistic business model

⁹⁵⁹ John Paul II, *Centesimus Annus*, 35.

that accounts for specific components of the common good.⁹⁶⁰ Observing the parallels between purchasing power and the current ecological problems Crocker contends,

a given consumption practice (and thus, the business behind that good) may be justifiable or defective in one or more of four ways. First, it may be good or bad for the environment. Second, consumption may help or harm other people. Third, our consumption practices may affirm or undermine values and institutions deemed essential to our community. Finally, a consumption choice or pattern may be beneficial or detrimental to a person's own well being.⁹⁶¹

I lack the space to fully comment on Crocker's ethic, yet it should be noted that the very articulation of an economic model that places profit on the side of a business plan—instead of the center—is feasible. Benedict XVI declares, “Prudence would dictate a *profound, long-term review of our model of development*, one which would take into consideration the meaning of economy and its goals with an eye to correcting its malfunctions and misapplications.”⁹⁶² Business plans on a shared earth must exist for more than simply revenue; they must account for the people and planet as well. Ecological economics is one way to aligning the value of a sustainable planet with the reality that one must make a living.

2. Ecological economics

Ecology and economics are typically faced with two competitive discourses. The first blames the current ecological predicament on the capitalist economy. Michael S.

⁹⁶⁰ See David A. Crocker and Toby Linden, *Ethics of Consumption: The Good Life, Justice, and Global Stewardship* (Lanham, MD: Rowman & Littlefield, 1998).

⁹⁶¹ David A. Crocker, “Consumption and Well-Being. Consumption, Population, and Sustainability,” in *Perspectives from Science and Religion*, Audrey Chapman, Rodney Petersen, and Barbara Smith-Moran, eds. (Washington, DC: Island Press, 2000), 207-218.

⁹⁶² Benedict XVI, *World Day of Peace Message: If You Want to Cultivate Peace, Protect Creation* (2010), 5. Italics his.

Northcott and Peter M. Scott contend, “the ground order of society has generated, and continues to generate, climate change through the commitment to never-ending growth.”⁹⁶³ In general, when products are sold, resources have been used. When production outpaces the ability of the earth to replenish itself, or the ingenuity of humans to create more effective ways to use fewer materials, the sustainability of the planet is endangered.

On the other hand, there is the idea that ecology itself can be profitable and need not diminish revenue. “Green collar workers” are drawn to jobs that promise wealth and environmental justice. Energy companies, automotive plants, and architects have all capitalized on the green revolution. Sustainable products and designs are highly appealing to the upper-middle class. The supermarket chain Whole Foods is a textbook example of the synthesis of capitalism and planetary awareness. Likewise, green medicine could be lucrative and is a marketing tactic of some hospitals, as seen in chapter one. Ecological economics combines the concerns over resource exploitations and desires to earn a living ethically.

Sallie McFague, the emerita Carpenter Professor of Theology at Vanderbilt Divinity School and current Distinguished Theologian in Residence at the Vancouver School of Theology, places emphasis on both planet and economics in *Life Abundant: Rethinking Theology and Economy for a Planet in Peril*.⁹⁶⁴ Her work in ecology has inspired new ways of thinking⁹⁶⁵ and speaking about consumption and

⁹⁶³ Northcott and Scott, *Systematic Theology*, 22.

⁹⁶⁴ Sallie McFague, *Life Abundant: Rethinking Theology and Economy for a Planet in Peril* (Minneapolis: Fortress Press, 2001).

⁹⁶⁵ See Sallie McFague, *Blessed are the Consumers: Climate Change and the Practice of Restraint* (Minneapolis: Fortress Press, 2013).

planetary health.⁹⁶⁶ Kari-Shane Davis Zimmerman supposes that for McFague, “the focus of ecological economics is the well-being of the community... justice and sustainability.”⁹⁶⁷ Ecological economics places the common good above profit by recognizing the needs of individuals within a community through justice. These requirements include not only the ability to access consumer goods necessary for life, but also what is needed for a meaningful existence in a clean, healthy environment. Ecological economics attempts to blend sustainability and profit instead of a capitulation to the almighty Dollar.

In order for ecological economics to be effective, a true investment in the common good is necessary. This takes the form of both realizing that all people are interconnected, and questioning economic growth in the first place. Markets—like all entities—are subject to fluctuations. Retreat must be a part of an economic system that maintains equilibrium. Many people in the developed world have been living in an age of abundance for some time. Now ethicists must consider an alternative. “Climate change represents a radical challenge to the contemporary belief in the intrinsic relationship between progress—defined as economic growth—and the welfare of humanity and the human habitat.”⁹⁶⁸ This runs contrary to the American way of thinking, but environmental bioethicists have long been attempting this subversion.

In the early 1970s, Van Potter drew on Kenneth Boulding’s aphorism to summarize the requirement for economic reorientation: “Ecology’s uneconomic/ But

⁹⁶⁶ See Sallie McFague, *Models of God: Theology for an Ecological, Nuclear Age* (Philadelphia: Fortress Press, 1987).

⁹⁶⁷ Kari-Shane Davis Zimmerman, “God, Creation, and the Environment: Feminist Theological Perspectives,” in *Green Discipleship: Catholic Theological Ethics and the Environment*, Tobias Winright, ed. (Winona, MN: Anselm Academic, 2011) 242-265, at 258.

⁹⁶⁸ Northcott and Scott, *Systematic Theology*, 5-6.

with another kind of logic/ Economy's unecologic.”⁹⁶⁹ Profit does not need to be the driving force in business. The common good is broad enough to encompass many of the values that have been put forth in this chapter, such as human rights, authentic human development, adequate income, and sustainability. All sectors of commerce—the health care industry included—have the ability to change their trajectory. In the next section I flag two alternatives to equivocating net income with national success.

3. Alternatives to the GDP

Since its creation in the 1900s, the calculation of the gross domestic product (GDP) has been upheld as the primary barometer of economic “health” of a country. Dan O’Neill defines gross domestic product as “an indicator of economic activity. It measures the total value of all final goods and services that are newly produced within the borders of a country over the course of a year.”⁹⁷⁰ The GDP indicates the dollar amount of economic growth and also assesses market performance of a country. It relies upon corporations to generate revenue as the primary form of the economic growth. Businesses market products at consumers, who purchase the items, spurring sales and profit. The GDP is a cyclical measurement in an infinite feedback loop. Despite the frequent appeal by politicians and economists to the GDP as *the* indicator of national prosperity, it cannot be sustained as the primary goal of social life for a number of reasons.

Philosopher Martha Nussbaum rightly points out that GDP can be unevenly distributed among citizens, so it is an unreliable determinant of individual human flourishing. In addition to giving an inaccurate appraisal of the social and emotional

⁹⁶⁹ Frank Fraser Darling and John P. Milton, *Future Environments of North America* (Garden City, NY: Natural History Press, 1966), 717, in Potter, *Bioethics: Bridge to the Future*, 165.

⁹⁷⁰ Dan O’Neill, “Gross Domestic Product,” in *Degrowth: A Vocabulary for a New Era*, Giacomo D’alisa, Federico Demaria, and Giorgos Kallis, eds. (New York: Routledge, 2014), 103-108, at 103.

fitness of citizens in a country, the GDP “does not look at all at other human goods that are not reliably correlated with the presence of resources: infant mortality, for example, or access to education, or the quality of racial and gender relations, or the presence or absence of political freedom.”⁹⁷¹ Nussbaum’s words remind ethicists that there are other values above economics.

Two alternatives to the GDP are gross national happiness (GNH) and the United Nations’ Human Development Index (HDI). Both indicate that economic generation is not the most important outcome in a country, and instead place emphasis on the needs and quality of human life. I am not suggesting that America replace the GDP with GNH as a measure of economic strength. Rather, they are an exercise in moral imagination, allowing citizens to consider an economic structure where the happiness of people or sustainable development are factored into indicators of national success. GNH and the HDI are instructive as alternatives to GDP.

The concept of gross national happiness originated in Bhutan in 1972.⁹⁷² Gross national happiness is a spin on the phrase gross domestic product. Like the GDP, it primarily emphasizes one, multifaceted aspect of life as a synecdoche for overall human welfare. Whereas GDP focuses on economics in general—and includes manufacturing, purchasing, selling, and capitalizing on services—GNH concentrates on happiness, and includes health, sociability, security, family relationships, and community. Happiness is, of course, difficult to measure, but it can guide us to standards of life that enjoy wide consensus.

Nussbaum explicates, “One step up in level of sophistication (from GDP) is an

⁹⁷¹ Martha C. Nussbaum, “Human Functioning and Social Justice: In Defense of Aristotelian Essentialism,” *Political Theory* 20, no. 2 (1992): 202-246, at 229.

⁹⁷² Winton Bates, “Gross National Happiness,” *Asian-Pacific Economic Literature* 23, no. 2 (2009): 1-16.

approach that measures the quality of life in terms of utility. This would be done, for example, by polling people about whether they are satisfied with their current health status or their current level of education.”⁹⁷³ An alternative to GDP, like GNH, appreciate that quality of life is a component of human welfare. Financial generation is not the ultimate standard of life⁹⁷⁴ and can only increase life satisfaction up to a certain point.⁹⁷⁵

Another alternative to the GDP is the United Nations’ Human Development Index (HDI) as a model to supplant the commercial stronghold in the U.S. The Human Development Index focuses on lifespan, educational achievement, and adjusted income.⁹⁷⁶ Like gross national happiness, it accentuates multiple features of human life that are constitutive of welfare. The UN recognizes that true development must comprise properties of existence, such as lifespan and education, in addition to economics. The HDI is similar to authentic human development, which also recognizes the many needs of humans. Since the HDI makes an appeal to lifespan, the medical industry could find a direct point of contact with this dimension of human well being. I briefly identify some of the factors that contribute to lifespan since they confirm my assertion that the common good should drive health care.

The UN indicates that life expectancy at birth is one of the essential, measureable, elements of human development. Tied to life expectancy are other characteristics of social health, such as adolescent birth rate, health index, homicide rate, maternal

⁹⁷³ Nussbaum, “Human Functioning,” 230.

⁹⁷⁴ For a more robust economics assessment see Eric Davidson, *You Can’t Eat GNP: Economics as if Ecology Mattered* (Cambridge, MA: Perseus Publishing, 2000).

⁹⁷⁵ Rafael Di Tella and Robert MacCulloch, “Gross National Happiness as an Answer to the Easterlin Paradox?,” *Journal of Development Economics* 86, no. 1 (2008): 22-42.

⁹⁷⁶ Khalid Malik, *Human Development Report 2014: Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience* (New York: United Nations Development Programme, 2014).

mortality, overweight children, and under-five mortality rate.⁹⁷⁷ Some of these health care issues have been discussed in previous chapters.

A medical industry concerned with HDI would focus on widely recognized factors of human well being. For example, contraception can reduce adolescent birth rates. Vaccines and primary care can bolster the health index. Public health measures—which must be tailored to the country—can reduce the homicide rate. In the United States, for instance, a serious discussion about gun control and homicide is long overdue.⁹⁷⁸ Maternal mortality can be reduced by better access to health care professionals and medical care, as I argued in chapter three. Focusing on nutrition education and encouraging exercise can diminish the number of overweight children. Finally, improved post-natal and maternal care can reduce the under-five mortality rate. The medical industry can and should focus on these measurements of human development. In sum, gross domestic product cannot be the driving force of governments. Nor can it be the sole motivation of a business within an economic system. GDP cannot capture the health of individuals in the common good.

In this section I have addressed the objection to the fourth principle of green bioethics by offering alternatives to profit-driven commerce. First, the purpose of a business was considered. Then, Sallie McFague’s idea of ecological economics was raised. Third, the alternatives of gross national happiness and the Human Development Index were offered as viable means of assessing the aims of a country and business within that country.

⁹⁷⁷ United Nations Development Programme, “Human Development Reports: 2014 Human Development Trends by Indicator,” n.d., at <http://hdr.undp.org/en/data>

⁹⁷⁸ Associated Press in San Francisco, “Surgeon General: I have no Regrets about Calling Gun Violence Public Health Issue,” *The Guardian*, 16 August 2015, at <http://www.theguardian.com/us-news/2015/aug/16/surgeon-general-i-have-no-regrets-about-calling-gun-violence-public-health-issue>

Oftentimes, there is a connection between commerce and resource depletion. The fear of drop in revenue is the lynchpin in many discussions on climate change. “Human transformation of creation into monetary wealth is at issue in the refusal of nations, corporations and consumers to mitigate their pollution.”⁹⁷⁹ Thus, ethicists must offer an alternative. I have argued that the common good must replace profit as the driving force behind industry. The double-dividend hypothesis says, “it is possible to live better by consuming less and becoming more human in the process.”⁹⁸⁰ Economics does not need to fall by the wayside, but money is not the end of human beings. In the next section I provide policy suggestions for implementing the fourth principle of green bioethics.

C. Policy suggestions

The United States Conference of Catholic Bishops calls upon “government(s) to recognize the seriousness of the global warming threat and to develop effective policies that will diminish the possible consequences of global climate change.”⁹⁸¹ Policies add structure to values, helping values to take shape and then disseminate into the political environment. Policies also make decision-making about complex issues like health care, the environment, or the common good a little easier. Policies are pragmatic and efficient since individuals and groups do not need to evaluate alternatives each time a moral dilemma is presented. In this final sub-section, I present policy suggestions for individuals, doctors, and organizations that provide health insurance. I first offer individual suggestions to medical consumers for participating in financial sharing.

⁹⁷⁹ Northcott and Scott, *Systematic Theology*, 8.

⁹⁸⁰ Emily Huddart Kennedy, Harvey Krahn, and Naomi Krogman, “Downshifting: An Exploration of Motivation, Quality of Life, and Environmental Practices,” *Sociological Forum* 28, no. 4 (2013): 764-783, at 765.

⁹⁸¹ United States Conference of Catholic Bishops, “Plea.”

1. Consumer suggestions

In the capitalist society, dominated by the free market, there are basically two options for conservation: opt out, or work for change within the system.

Environmentalists typically call on consumers to opt out by spending less and curtailing consumption. Willis Jenkins argues, “wealthy Christians have an obligation to reduce their own consumption.”⁹⁸² Indeed, in my previous chapters I have also proposed that individual medical customers limit their use of the medical industry. In this section, however, I will take another approach by suggesting increased medical spending in certain areas in order to distribute the financial burdens of health care needs worldwide.⁹⁸³ Individual medical consumers can place the common good above profit in health care through financial sharing. This can be accomplished by both centralized and decentralized structures. I will give an illustration of each.

Environmentally literate medical consumers can make good use of their money spent within health care by accepting higher fees for certain personal goods and amenities, with a portion of the money going to fund health care programs and services for the poor. Pope Paul VI provided an example of centralized—or governmental—financial sharing in *Populorum Progressio*. He implored, “On the part of the rich man, it (just economics) calls for great generosity, willing sacrifice and diligent effort.... Is he prepared to pay higher taxes so that public authorities may expand their efforts in the work of development?.”⁹⁸⁴ The question that Pope Paul VI posed to us could take the

⁹⁸² Jenkins, *The Future of Ethics*, 255.

⁹⁸³ Another approach, which I will not use because it is fraught with problems of greed, is “free market environmentalism” (FME). See Terry L. Anderson and Donald R. Leal, *Free Market Environmentalism* (Boulder, CO: Westview Press, 1991). For a theological assessment of FME, see Kathryn D. Blanchard and Kevin J. O’Brien, “Prophets Meet Profits: What Christian Ecological Ethics Can Learn from Free Market Environmentalism,” *Journal of the Society of Christian Ethics* 34, no. 1 (2014): 103-123.

⁹⁸⁴ Paul VI, *Populorum Progressio*, 47.

form of increased insurance payments for those who can afford it, or taxing positional goods,⁹⁸⁵ with a portion of the excess going towards premiums of low-income people.

The Affordable Care Act (ACA) is an example of the wealthy buying into a system in order to support the common good of universal health care.⁹⁸⁶ While the structure of the ACA is not perfect, the notion that the rich ought to pay in proportion to their income is an example of ethical economics. It demonstrates one way individuals can participate in an economic system that protects the human right to basic health care. In addition to governmental oversight of individual contributions to health care, decentralized approaches encourage individuals to financially contribute to health care programs of their choice that support the common good.

There are numerous examples of health care organizations that are not-for-profit, but still deliver basic health care and medical services to the underprivileged. Individuals who donate money to organizations that embody ethical economics is another approach to promoting the common good in health care through financial sharing. In this dissertation I have profiled Planned Parenthood and Doctors Without Borders as two examples of health care providers that depend on financial support to distribute health care needs. I have also mentioned numerous other organizations that place the medical needs of the world above profit. The UN Millennium Development Goals, UNAIDS, World Health Partners, and the World Health Organization all use their humanitarian agenda to benefit the health of the underserved, marginalized, and poor.

⁹⁸⁵ Tim Jackson, “Live Better by Consuming Less,” 27.

⁹⁸⁶ Universal health *care* is objected to on various, shaky grounds, which I do not believe hold up after explanations. However, protesting mandatory, purchased, health *insurance* (i.e., the ACA) is premised on many strong arguments about fairness, economics, and infringement of liberty. Yet the two are often confused, to the detriment of securing universal health care. Replacing mandated health insurance with a fairer system of socialized medicine, as well as a serious reworking of the artificially inflated costs of health care, and an evaluation of non-medical procedures that are covered under health insurance, would be ethically preferable.

Individuals can choose to contribute to these, and many other, associations that exemplify the health care driven by the common good. Organizations with constrained budgets necessarily prioritize treatments that will have the most significant impact on those in need. Distributing the cost of medical care—whether through centralized or decentralized means—exemplifies ethical economics for individuals. In the next section, I provide suggestions for doctors who are willing to put patient care above profit.

2. Doctor suggestions

Doctors in the United States are paid extremely well, but not all physicians attend to the health care needs of their clientele. Doctors are incentivized to go beyond best practices or adequate treatment, and are compensated for “extra charges, unauthorized charges, (unnecessary) hospitalizations, questionable procedures, (and) unnecessary tests.”⁹⁸⁷ It may be tempting to acquiesce to a system that commodifies health care. Yet physicians can support the common good by focusing on best patient outcomes for clinical diseases. This will require a rejection of unnecessary profit from offering services and tests when they do not benefit the somatic well being of the person.

Some doctors choose to go into practices that are, by nature, high-profit endeavors. Fertility services (what Cahill calls “commercialized reproduction”⁹⁸⁸), cosmetic dentistry, non-reconstructive plastic surgery, and “aesthetics”⁹⁸⁹ are among

⁹⁸⁷ Costa-Filho, “Brazil: Where Are We Going?,” 116.

⁹⁸⁸ Lisa Sowle Cahill, *Theological Bioethics: Participation, Justice and Change* (Georgetown University Press, 2005), 5.

⁹⁸⁹ For several reasons, it is extremely difficult to get precise numbers of how many physicians practice in specialties that do not address human needs as defined in chapter 3. First, there is the overlap between essential and non-essential treatments in the same office. For instance, a dentist may offer dentures so that a person can chew food, but also offer cosmetic teeth whitening. The American Academy of Implant Dentistry reports that 10% of all dental clinics offer (cosmetic) dental implants. American Academy of Implant Dentistry “Dental Implants Facts and Figures,” 2014, at http://www.aaaid.com/about/press_room/dental_implants_faq.html. Their mixed offerings makes it difficult to assert the doctor’s office addresses either needs or wants. Second, there is a lack of reporting and

“medical” specialties that cater to very well off clients, who often present themselves for multiple treatments. Ethicists must acknowledge that when doctors trained in medicine supply lucrative, but non-essential services, excess consumption reigns to the detriment of sustainability. Rubens Costa-Filho elucidates,

Many physicians feel it is not their job to question the benefit of care, instead using a consumer satisfaction standard: ‘They want everything done, and it’s not for me to question their motivations’ ... (But) no one is looking too closely at how much this treatment will actually benefit the patient.⁹⁹⁰

Costa-Filho’s statement rings true for cosmetic medicine as well as medically futile treatments.

Futile treatments in medicine can be defined as “unnecessary therapies, overtreatment, or therapies that will not achieve a desired goal.”⁹⁹¹ Ethicists have pointed out that by avoiding futile treatments, resources could be saved, which could benefit other patients.⁹⁹² And yet, in the profit-driven medical marketplace, there is little motivation for a doctor to curtail futile treatments, especially when they are demanded by patients or family members. Hence, doctors who intend on providing best patient care experience pressure from clients and families—as well as financial incentives—to overprescribe or over-treat.

regulation in other businesses like the fertility industry. The Center for Disease Control recorded 456 fertility clinics in the United States during 2012, but only included clinics that reported IVF cycles and successes. Fertility clinics are not required to publish the number of IVF cycles performed, nor their existence to the CDC. Center for Disease Control, “What is Assisted Reproductive Technology?: Most Recent ART Data,” 28 August 2014, at <http://www.cdc.gov/art/>. Third, some voluntary cosmetic organizations report membership numbers, but these might be lower than actual practicing aesthetic doctors. The American Society for Aesthetic Plastic Surgery distributes over 21,000 surveys to board-certified physicians practicing plastic surgery, otolaryngology, and dermatology. But these surveys do not reflect membership in the society, or all plastic surgeons nationwide. American Society for Aesthetic Plastic Surgery, “Statistics,” 2009-2012, at <http://www.surgery.org/media/statistics>

⁹⁹⁰ Costa-Filho, “Brazil: Where Are We Going?,” 104.

⁹⁹¹ Kerz, “Germany: Where Are We Going?,” 135.

⁹⁹² See Ibid.

The “hospital centered model is entrenched in our culture. Many people believe that best practice medicine is linked to high technology, sophisticated and expensive exams. Thus, this scenario pressures mainly private physicians to work on the side of money instead of efficiency and rational and evidence-based protocols.”⁹⁹³ By going “back to basics” like primary care, clinically proven treatments, effective health care delivery, and cost-effective therapies, doctors cooperate with a sustainable health care structure that places the common good ahead of for-profit medicine.

Yet, individual doctors are limited without the support of institutional policies that also promote the common good. Because of the multiple factors that encourage doctors to act for profit, all facets of the health care system must be scrutinized. In the next section I provide suggestions for health insurance policies or the governments that provide health care.

3. Insurance or governmental suggestions

Current health care models are a disincentive towards conservation because there is little sense of planetary limitation and much eagerness to break medical boundaries. This mentality must be reversed so that policies that promote conservation are employed instead. At the beginning of the 20th century Walter Rauschenbusch averred, “the fundamental step in repentance and conversion for professions and organizations is to give up monopoly power and the incomes derived from legalized extortion, and to come under a law of service, content with a fair income for honest work.”⁹⁹⁴ While few medical institutions would be persuaded to give up all profit, Rauschenbusch’s call to return to service is relevant for the health care industry. My suggestions for overseers of health

⁹⁹³ Costa-Filho, “Brazil: Where Are We Going?,” 117.

⁹⁹⁴ Walter Rauschenbusch, *A Theology for the Social Gospel* (New York: Macmillan, 1917), 117.

care policies focus on pharmaceuticals and work under the philosophy that many prescriptions are medicalized and hence gratuitous, as explained in chapter five.

Pharmaceutical corporations are a powerful force, lobbying for novel drugs—some of them with minimal benefit⁹⁹⁵—offering doctors kick-backs for prescribing their version of a pill, and running up an enormous carbon tab. Ecological sensibilities (or “corporate social responsibility”) are unlikely to form in the cultures of drug companies themselves. Therefore, health insurance providers and governmental health insurance must distance themselves from overprescription by curtailing the amount and types of pharmaceuticals offered under insurance plans. For instance, health insurance companies and governments could abstain from covering lifestyle drugs. This would still allow for significant latitude in prioritizing drugs that are important within a given community. Important drugs might also be determined in accordance with the values and needs of individual countries, taking into account limited resources, justice, and accessibility.

Insurance companies, and the governments that oversee health insurance, are invited to prioritize the common good over profit by being selective about the pharmaceuticals they cover. While I firmly believe—and indeed, have even argued—that certain drugs such as antiretrovirals, antibiotics, birth control pills, and other forms of basic care should be used, distributed, and available at a free (or fair) cost, there are numerous prescriptions that need not be covered under health insurance. Tailoring insurance to conform to standards of the common good would set into motion a chain effect of conservation, consonant with the other principles of green bioethics.

Note, first, if health insurance companies only cover pharmaceuticals related to

⁹⁹⁵ Toni Clarke and Ransdell Pierson, “FDA Approves ‘Female Viagra’ with Strong Warning,” *Reuters*, 19 August 2015, at <http://www.reuters.com/article/2015/08/19/us-pink-viagra-fda-idUSKCN0QN2BH20150819>

medical care, there will be more money to fund basic health care, universal access, and medical needs. This resonates with my first principle of green bioethics, which focuses on general allocation of resources. Governmental health insurance would be particularly inclined to adopt this suggestion, since it aligns with their goals of basic care for all citizens.

Second, health insurance companies might be hesitant to provide drugs that are not connected to clinically diagnosable diseases. The financial benefit would be a reduction of incurred costs from certain prescriptions that cause further resource and medical expenditures. This ties to the second principle of green bioethics. For instance, in the very same NHS booklet that promoted pharmaceutical reduction as a part of conservation, there is a picture of a hand reaching for Tamoxifen—a synthetic drug used to increase fertility in women.⁹⁹⁶ Prescribing a drug that requires a person to use more resources for a nonlife-threatening condition (i.e., fertility drugs to secure a pregnancy, which will then require maternal resources, plus the addition of another medical consumer) is not sustainable. While bioethicists should not endorse health insurance that curtails lifesaving or life-preserving medicine, health insurance policies need not cover lifestyle pills.

Third, a stand against profit-driven drug prescriptions is a stand against medicalization itself. The 1200+ page Orange Book attests to the numerous drugs that are offered for every human inconvenience from lactose intolerance, to “hypoactive sexual disorder,” to sleeplessness. Many of these drugs medicalize normal human variants. Additionally, the explosion of “me too” drugs that change very little of the chemical

⁹⁹⁶ NHS Sustainable Development Unit, *Saving Carbon, Improving Health: NHS Carbon Reduction Strategy for England* (London: NHS Sustainable Development Unit, 2009), 44.

structure of already existing pharmaceuticals is clearly aimed at profit, not the common good.

The NHS advises “to reduce carbon, every organisation needs to consider their approach to commissioning, sourcing and buying. This will include considering if it needs to be purchased in the first place.”⁹⁹⁷ Given that pharmaceuticals are the second largest contributor to carbon emissions within the medical industry, overprescription must end. Health insurance companies can participate by covering pharmaceuticals that are for the common good, not for profit.

V. Conclusion

By the 1920s, hospitals in America were deep into a market approach to medicine. Profit was beginning to trump patient care as a primary outcome of health services. Gunter Risse chronicles that after the turn of the 20th century, hospitals needed to “create effective ‘pull factors’ to lure patients into particular institutions. There was no longer any pretense: health had simply become another commodity to be purchased.”⁹⁹⁸ The business model of health care continues today.

The health care industry in the United States accounts for 16 percent of the gross domestic product.⁹⁹⁹ The massive revenue is not coming from primary care check-ups, vaccines, or emergency care for catastrophes. More and more, health care turns a profit the same way any other business does: by kindling desires for products, selling them with a wide profit margin, and advertising for specialty services. Even the “academic researcher can no longer be counted upon to pursue solutions to major societal problems

⁹⁹⁷ Ibid., 45.

⁹⁹⁸ Guenter B. Risse, *Mending Bodies, Saving Souls: A History of Hospitals* (Oxford: Oxford University Press, 1999), 471-472.

⁹⁹⁹ See Julia Whitty, “Diagnosing Health Care's Carbon Footprint,” *Mother Jones*, 10 November 2009, at <http://www.motherjones.com/blue-marble/2009/11/diagnosing-health-cares-carbon-footprint>

in health and human welfare... Priorities are dictated by commercial rather than social needs.”¹⁰⁰⁰ A panorama of the non-medical side of the health care industry demonstrates a fissure from the goals of medicine.

Some “destination hospitals” offer maternity suites, flat-screen televisions in private rooms, individual menus, and cosmetic add-on’s to medical procedures.¹⁰⁰¹ Hotel hospitals proliferate, offering “guest” (i.e., patients) lobbies with stone fireplaces and waterfalls, room service, and nail salons.¹⁰⁰² New FDA-approved pills and procedures fuel further luxury offerings to the wealthy. Medical developments, which were intended for health care needs, are now used for elective enhancement. The scale of the health care industry continues to swell and collide with the natural limits of the planet.

Money does not need to be in tension with medical care, but it cannot be the driving force of the health care industry, particularly given global ecological concerns. Jessica Pierce and Andrew Jameton remark, “If wealthy industrialized societies as a whole are unsustainable, then so are the health care systems housed by these societies.”¹⁰⁰³ Thus, citizens in each part of life must collaborate to reduce anthropogenic climate change. This requires *metanoia* everywhere, and on all levels.

In 1995, Soren Holm observed, “the ethical system propounded by Beauchamp and Childress lacks the necessary resources satisfactorily to handle the ethically complex situations created in the interface between medicine and social justice.”¹⁰⁰⁴ It is undeniable that resource conservation is among the most complex moral issues facing not

¹⁰⁰⁰ Angell, *The Truth About Drug Companies*, 161.

¹⁰⁰¹ See Risse, *Mending Bodies, Saving Souls*, 474.

¹⁰⁰² See Elisabeth Rosenthal, “Is This a Hospital or a Hotel?,” *New York Times*, 21 September, 2013, at http://www.nytimes.com/2013/09/22/sunday-review/is-this-a-hospital-or-a-hotel.html?_r=0

¹⁰⁰³ Pierce and Jameton, “Sustainable Health Care,” 366.

¹⁰⁰⁴ Soren Holm, “Not Just Autonomy-The Principles of American Biomedical Ethics,” *Journal of Medical Ethics* 21, no. 6 (1995): 332-338, at 332.

only humanity, but also the medical industry today. Consequently, I have argued that environmental sustainability must be a feature of modern health care ethics.

And yet, conservation must not be the god of health care. Thus, I have made a second, and more profound claim. I have also contended that the common good must be the ethical foundation of health care ethics and health care delivery since it accounts for the flourishing of the individual and the betterment of society. In each of the four principles of green bioethics I have emphasized the common good as the foundation of theological bioethics. Through consensus, cooperation, and participation, environmental bioethics can move into the 21st century, with the common good as its guide.

CONCLUSION

Green bioethics has undertaken the formidable task of providing a coherent framework for sustainability in the medical industry. Rather than examining how to retrofit health care systems for conservation, it has proactively surveyed health care at the level of medical developments, techniques, and procedures. Through four principles, grounded in the common good, I have paved the path to return to Potter's vision of bioethics. Yet, green bioethics will confront challenges from conventional bioethics, which firmly retains its bio-medical sensibilities, prioritizing the patient-physician relationship and the Georgetown mantra.

Since a prominent feature of traditional medical ethics is the unmovable individualistic premise, green bioethics aims at being incorporated into modern bioethics, rather than supplanting Beauchamp and Childress altogether. Hence, in order to build consensus for conservation within the health care community, green bioethics must be relevant to, and conversant with, the language and principles of well-accepted Western bioethics.

This conclusion will provide one preliminary practice and one area for further work for green bioethics—both centered on the doctor-patient relationship. As a practice of green bioethics, “green informed consent” would combine best patient care and sustainability. As an area for further work to be done in green bioethics, ethicists must argue that the scope of patient-physician relationships should be enlarged from the one to the many through public health. Public health would adjudicate between carbon-intensive treatments for the patient and health impacts of the carbon emissions of these treatments.

Utilizing the framework of sustainable health care and traditional bioethics, I turn now to a first practice for those endorsing green bioethics.

Informed consent entails that patients are educated about options and alternatives to treatments, with the benefits and drawbacks of each. For green bioethics, I propose “green informed consent,” which would provide the patient with further information on the carbon footprint, or estimated resource expenditure of the respective treatments, along with the carbon footprints of any anticipated side effects or follow-up care. Notice that green informed consent would mirror both the information about the variety of treatments to choose from (along with carbon data), and information about the ramifications of each choice, from recovery time, to cost, to resource use.

While some bioethicists might be concerned that green informed consent would compromise best treatment, it would not necessarily be the case that the best treatments would have the highest carbon footprints, as I have argued throughout this project. And, even if the best treatments were the most carbon intensive, it would not necessarily be the case that ecologically minded patients would choose the least impactful medical treatment.

In everyday life, we make decisions by balancing values. Just as carbon offsets are offered to people using air travel, ecology can be creatively integrated into a life plan. If we imagine the application of green informed consent for a 40-year-old female diagnosed with breast cancer, it might be that chemotherapy would be more resource intensive than a mastectomy. Yet, because a patient values her breasts, or dislikes surgery, she might choose to “offset” the high-carbon procedure through other trade-offs in her life. She might use a more fuel-efficient vehicle, eliminate red meat from her diet, or the like.

Green informed consent would further respect the values of patients who support conservation. Health care workers may tailor information about medical treatments to the individual's values, supporting the ideals of the patient and community. Making reference to the carbon cost, or projected amount of resource use, would give the patients the fullest information available, leading to a truly informed consent. In fact, one could argue that once carbon expenditure of a given procedure is known, a doctor would be withholding relevant information if she did not provide the patient with environmental data. One article from a 2009 issue of *Virtual Mentor* indicated that, in some cases, educating patients on the environmental effect of various procedures is already a part of informed consent in some health care facilities.¹⁰⁰⁵ Green informed consent could be integrated into regular practice as a first step in green bioethics.

Of course, informed consent is a two-way street. The doctor would have to be persuaded that the ecological aspects of health care are salient factors in one's decisions about medical treatments. Yet, with growing consensus that the balance of the ecosystem is an urgent priority that deserves attention and action, and with green hospital practices already abounding in health care—from recycling bins in clinics, to local food in cafeterias—it appears that green informed consent would be a natural progression for shifting environmental bioethics from institutions to individuals. In order for this to be effective, the doctor must be able to determine the carbon cost of a medical procedure. Thus, this proposed action for green bioethics requires a second component.

There are some logistical obstacles to implementing green informed consent, the first of which would be calculating carbon emissions, or resource use of individual

¹⁰⁰⁵ Louise P. King and Janet Brown, "Clinical Case: Educating Patients as Medicine Goes Green," *Virtual Mentor* 11, no. 6 (2009): 427-433.

procedures. Yet, as I mentioned in chapter two, carbon calculation seems inevitable. Once these medical developments, techniques, or procedures have a carbon footprint attached to them, doctors could refer to the information at patient consultations. This data should be accessible to the public as a part of informed decision-making and consumer education. If there were a drastic revolution in the approach to sustainable health care, these environmental valences might even factor into wider democratic deliberations on which procedures institutions and health insurance companies are willing to offer.¹⁰⁰⁶

As it stands, however, doctors in the U.S. who do not have to work within the parameters of socialized health care and who have a wide assortment of health care options to offer to their patients do not consider the ecological effects of procedures. Under the Georgetown mantra, physician responsibility is to the patient above all else. Health care providers may feel that their ethical obligations extend only to the person in front of them, and best patient care might include numerous high-carbon interventions, tests, procedures, or treatments. Thus, green bioethics must address the concerns of sustainable health care from the physician's perspective.

Suggesting that environmental cost be factored into health care decisions leads some people to believe that the doctor-patient relationship would be jeopardized by environmental interference. Even the mention of carbon cost of medical procedures in the U.S., let alone policies about distribution of high and low-carbon medical procedures, are ignored or strongly rebuffed.¹⁰⁰⁷ Although the NHS has managed to produce carbon

¹⁰⁰⁶ See, for example, Oregon Health Plan, *Prioritized List of Health Services*, 1 January 2015, at <http://www.oregon.gov/oha/herc/Pages/PrioritizedList.aspx>

¹⁰⁰⁷ Cristina Richie, "What Would an Environmentally Sustainable Reproductive Technology Industry Look Like?," *Journal of Medical Ethics* 41, no. 5 (2015): 383-387; Laura Donnelly, "Single Women Should not Get Free IVF, say Ethics Experts," *The Telegraph*, 25 July 2014, at <http://www.telegraph.co.uk/news/politics/10988963/Single-women-should-not-get-free-IVF-say-ethics-experts.html>

reduction guidelines for the U.K., if these were to be introduced in the United States it is very likely that both patients and doctors would view conservation as limiting the freedom of full medical options.

Furthermore, policies that stress environmental conservation might imperil “the physician/patient relationship, which is built upon trust. If a patient must wonder whether their doctor is worried more about rationing resources or saving the environment, then the physician/patient relationship is damaged.”¹⁰⁰⁸ However, there is a way to deliberate between individual patient needs, carbon costs, resource limitation, and planetary health. Indeed, in two ways green bioethics could alleviate the seeming tension between the obligations of the physician to her patient and the reality of resource depletion.

First, bioethicists must protect the physician-patient relationship while expanding the conception of “the patient.” Green bioethics could argue that patient-centered care includes all potential patients, even those outside of the hospital. There are many ill and ailing people who need medical attention but cannot access any health care; these people are patients too.

Furthermore, it is well documented that climate change causes health problems.¹⁰⁰⁹ Thus, choices made within the hospital affect those outside of it. These are real lives that are impacted by the choices made inside the walls of health care facilities. In fact, even the individual patient who is submitting to medical treatments is affected by

¹⁰⁰⁸ Jason Lee Fishel, *The Green Staff of Asclepius: Envisioning Sustainable Medicine* (Ph.D.) dissertation (University of Tennessee, Knoxville, 2014), 112.

¹⁰⁰⁹ World Health Organization, *Global Health Risks: Mortality and Burden of Diseases Attributable to Selected Major Risks* (Geneva: WHO Press, 2009), 24; Kim Knowlton, Miriam Rotkin-Ellman, Linda Geballe, Wendy Max and Gina M. Solomon, “Six Climate Change-Related Events in the United States Accounted for about \$14 Billion in Lost Lives and Health Costs,” *Health Affairs* 30, no. 11 (2011): 2167-2176; Cheryl Cox Macpherson, “Climate Change is a Bioethics Problem,” *Bioethics* 27, no. 6 (2013): 305-308; Cheryl C. Macpherson and Muge Akpınar-Elci, “Caribbean Heat Threatens Health, Well-being and the Future of Humanity,” *Public Health Ethics* 8, no. 2 (2015): 196-208.

the pollution of hospitals and health care facilities once outside the walls since carbon expenditures of procedures being given to the patient may cause climate-related health problems later on. Conservation through sustainable medical treatments for individual patients will have the aggregate effect of preventing thousands of sick and dying patients from requiring medical care. Physicians work against themselves when they interpret the patients in front of them as monads without considering the needs of all their patients—present and future.¹⁰¹⁰ Physicians must also be concerned with the health of their clients when they are not undergoing any treatment, that is, in day-to-day life. Physician-patient relationship must be thought of, not one-to-one, but one-to-many.

Second, green bioethics could argue that the physician-patient relationship would benefit from a public health approach. While “medical ethics is more concerned with individual autonomy and the duties of single health professionals, public health ethics focuses more on equity and efficiency in the distribution of health resources as well as on the community in having its health protected.”¹⁰¹¹ In public health, the rights and freedoms of individual patients are important, but they are not the only factor to consider in medical care and treatment.

Doctors must account for those who are affected by climate-change related health problems, and utilize best patient practices within the realm of public health, since they are public servants. Public health magnifies the values of traditional bio-medical ethics, considering all people affected by medical actions instead of the individual alone. The integration of public health initiatives into the traditional principles of bio-medical ethics establishes precedent for ethical obligations beyond the patient-doctor relationship. The

¹⁰¹⁰ Thanks to Lisa Sowle Cahill for pointing this out to me.

¹⁰¹¹ Nancy Kass, “Public Health Ethics: From Foundations and Frameworks to Justice and Global Public Health,” *Journal of Law, Medicine and Ethics* 32, no. 2 (2004): 232-242, at 235.

innovation of public health—as a concept—also demonstrates the continual need to re-evaluate and integrate the demands of a rapidly changing world for health care. The work ahead of green bioethics will require a universal dialogue and a global commitment. Thus, it is appropriate to start with informed consent as a first practice for green bioethics and return to the patient-physician relationship as a primary inroad to sustainable health care.

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