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CONTENTS

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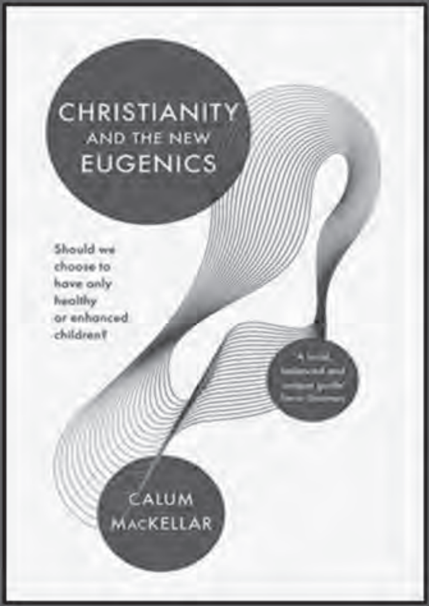

EDITORIAL

A NEW CHAPTER FOR *ETHICS & MEDICINE*

C. BEN MITCHELL, PHD

Ethics & Medicine will enter a new era of publication with the next issue, 36:3. Founded almost four decades ago in Edinburgh, Scotland, by Nigel M. de S. Cameron, the journal is one of the longest running journals in the field. It has been my honor and privilege to edit the journal for more than half of its existence. Both Nigel and I have benefited in innumerable ways from our association with the members of the Editorial Advisory Board and regular contributors to the journal. For those individuals, and their enormous contributions, we are most grateful.

The new editor, I am happy to report, is the formidable Michael J. Sleasman, PhD, Associate Professor of Bioethics and the Director of Bioethics Degree Program at Trinity Graduate School, Trinity International University in Chicago, Illinois. Professor Sleasman previously served for twelve years as the Managing Director and Research Scholar for The Center for Bioethics & Human Dignity (CBHD), well known to most readers of *Ethics & Medicine*. Professor Sleasman has been a colleague and friend and will do an outstanding job.

Under its new editorship, *Ethics & Medicine* will continue to be a peer-review journal. Trinity Graduate School, a fully accredited academic institution will assume publication of the journal under the highest standards of editorial ethics. In addition, readers can expect a more robust online service at www.ethicsandmedicine.com.

On a very personal note, I would like to thank the editorial team of *Ethics & Medicine* for their support of the current editor's work. Carol Marlin has done extraordinary work as our managing editor, persistently, but graciously trying to keep the journal on schedule, though not always finding a cooperative editor. Lillie Salazar has been a trouper—and, before her, Abby Wills and a list of other editorial assistants too long to mention—balancing her own degree work with following up with peer reviewers and preparing copy, following up with peer reviewers and preparing copy, and following up with peer reviewers and preparing copy, ad infinitum. The work of the journal would have come to a halt were it not for them.

As the only international journal I know of that is committed to the revival and cultivation of Christian Hippocratism, *Ethics & Medicine* continues to occupy a niche that is hugely underdeveloped and in need of additional voices. May her witness be multiplied. **E&M**

ERRATUM: *ACGME is the abbreviation for the Accreditation Council For Graduate Medical Education. It was misidentified in the article "'Complex Family Planning' and the Assault on Conscience" in the Spring 2020 issue of Ethics & Medicine. Dr. Marmion regrets the error.*

GREY MATTERS

The Ethics of Naming Epidemics

WILLIAM P. CHESHIRE, JR., MD

“We need to focus on the enemy, and that’s the virus.”— Former Senior Director for Global Health Security and Biothreats, Rear Admiral R. Timothy Ziemer[1]

Abstract

Epidemics and pandemics have profoundly shaped the course of human history. Naming them has ethical consequences because of the value laden in words. Nuances of language can themselves be contagious, influencing attitudes toward people, nations, and other qualities that may be incidental to the initiation or propagation of an infectious disease. A poorly chosen name for an infectious outbreak can divide communities at a time when people should be coming together and collaborating for the sake of the common good. Striving for objectivity in language is helpful, but it is also insufficient, for it omits the ethical framework needed to respond to a pandemic and does not adequately address the meaning of suffering.

Introduction

On February 11, 2020, one month after the first confirmed death from what the media had been referring to as the “Wuhan coronavirus,”[2] the World Health Organization officially named the emerging disease “COVID-19.” Names have a way of sticking in the memory, and some who have persisted in using the original name “Wuhan virus” have been called racist and accused of contributing to its spread by the choice of words that allegedly offend against social justice.[3]

The method for naming epidemics and pandemics follows a long tradition of nomenclature that has evolved over time. Ethics, among other factors, has guided a trend away from naming diseases by their geographic, national, or ethnic associations toward a nomenclature based in scientific objectivity. A brief survey of the naming of epidemics elucidates some of the lessons learned.

Geography as Explanatory

The first cases of COVID-19 were detected in Wuhan, the capital of the Hubei Province in central China, in December 2019. The virus then spread rapidly around the globe and on March 11 was recognized as a pandemic. At the time of this writing, the number of cases worldwide has surpassed one million and the number of deaths 50,000. These numbers continue to soar exponentially, arousing anxiety everywhere as people do what they can to protect themselves and their families, as healthcare professionals step forward to care for those affected or at risk, and as communities unite in solidarity, refusing to give in to fear.

It is natural for rational beings to want to understand how a novel threat emerged and from where it originated. A reasonably cautious person, knowing where the dreaded coronavirus originated, would cancel travel plans to visit Wuhan or any region where the virus has spread for the time being in order to avoid becoming infected.

Geography as Evidentiary

More importantly, there are scientific reasons to zero in quickly on the epicenter of an emergent epidemic, starting where it was first encountered. Whether the infectious agent is viral, bacterial, or prion, the same principles apply. Suppose reports surface of a new viral outbreak causing severe disease. Virologists need to learn how the virus originated, whether it arose from a reservoir of animal carriers, where the reservoir is likely to be found, how it is geographically distributed, what type of contact people might have had with the reservoir, whether the virus crossed species boundaries, where scientists can obtain specimens for study, and how the virus compares to other, known viruses. Scientific investigations have traced previous pathologic coronavirus epidemics to China and specifically to bats, which are recognized as an important natural reservoir host.[4-6]

Cell biologists need to learn how a novel virus gains entry to the human body, what proteins or receptors are involved, how the virus hijacks the host's cellular machinery, how it evades immune surveillance, and what its biochemical vulnerabilities may be. Geneticists need to determine what kind of genetic material (e.g., DNA, RNA, single-stranded or double-stranded) constitutes the virus, whether there are specific mutations that determine its virulence and transmissibility, whether the virus is of natural origin or malicious synthetic contrivance, and what testing methods can be developed to detect the virus in patients. Epidemiologists need to determine the pattern of transmission and assist public health authorities to develop policies and procedures to contain or limit the spread of the virus. Immunologists need to gain this knowledge in order to develop effective and safe vaccines. Clinicians of many specialties need to learn how the virus affects each organ system in the body in order to develop effective diagnostic and therapeutic approaches.

Knowing from where the virus originated is critical to developing a comprehensive understanding of the threat, responding to it, and anticipating and preparing for potential future threats from similar or related sources. Moreover, effective collaboration among all of these disciplines requires a common language in referring to the virus and its manifestations.

There are numerous examples of historic epidemics that were named after the places where they were first detected or studied. The Asian flu of 1957-1958 (H2N2 influenza) was first detected in Singapore. The Hong Kong flu of 1968-1970 (H3N2 influenza) first appeared in Hong Kong. The Marburg hemorrhagic fever virus was first described in 1967 during small outbreaks in the German cities of Marburg and Frankfurt and in the Yugoslav capital Belgrade. The tick-borne Lyme disease, which has long been endemic throughout North America and Europe, was named after Old Lyme, Connecticut, where it was identified in 1976, although earlier descriptions employed various other names. The Zaire Ebola hemorrhagic fever virus, which causes periodic and often fatal outbreaks in Central and Western Africa, was named in 1976 after the Ebola River, where it was first thought to have originated. There are many people who would not have heard of these names if not for the associated epidemics.

Geography as Incidental

There are also examples of epidemics named after mistaken places of origination. A notorious example is the 1918-1919 influenza pandemic commonly remembered as the "Spanish flu," which claimed the lives of more than 50 million people worldwide.[7] The virus did not originate in Spain. Its perceived place of origin drew from an early news report of a "strange new form of disease" in Madrid.[8] The rhetoric of mystery combined with fear branded the novel virus with an inaccurate name that still lingers. A century later, the geographical origin of the 1918 influenza pandemic remains uncertain.[7]

Rocky Mountain spotted fever, which was first identified in Montana, is most prevalent in the Eastern U.S. Avoiding travel to the Rocky Mountains does not protect against this tick-borne bacterial disease.

Haemophilus influenza is yet another misnomer. It was so named because it was first described during an influenza pandemic before the viral nature of influenza was known. Although unrelated to the influenza virus, the bacterium *H. influenza* has kept its original name.

The swine influenza (H1N1) pandemic of 2009-2010, colloquially named "swine flu" because of its origin in a Eurasian pig influenza virus, was transmitted from humans to humans and not by pigs. Nevertheless, its name gave rise to an erroneous public perception that pigs were a danger, leading some countries to ban the importation of pork or even slaughter livestock.[8] As the first cases were recognized in Mexico City, the name "Mexican swine flu" was occasionally applied, although it should be noted that the plague was not caused by the Mexican people.

These examples expose the problem of naming infectious diseases after geographical locations or associated nationalities. Doing so has the unintended consequence of potentially stigmatizing entire groups of people who are in no way at fault for the disease. During the outbreaks of the Great Bubonic Plague or Black Death, which took the lives of up to half of the European population in the 14th century, some blamed the Jews on the erroneous theory that they poisoned the wells. Fear then drove or aggravated a wave of persecution, including massacres.[9,10] Another example of racial prejudice occurred in 1892 in New York City following outbreaks of cholera and typhus as officials applied a selective quarantine to Jewish immigrants.[8, 11]

During the current coronavirus pandemic, a small and ignorant minority, influenced by announcements of the "Chinese coronavirus" or "Wuhan coronavirus," has targeted Asians and even Asian-Americans as potential scapegoats.[12] Whereas the majority of the coronaviruses are found in China,[4,13,14] the Chinese people are not to blame. Nor has any evidence emerged to support the theory that malicious government forces are behind the pandemic, although the fog surrounding any crisis may create occasions for political deception, opportunism, or rumors thereof.[15]

The problem with naming the coronavirus of 2019-2020 after Wuhan, where it was first detected, is the inescapable psychological association of a dreaded infectious disease with the people who live there. My own great aunt, Elizabeth Cheshire, lived in Wuhan a century ago. As a young woman, she left her home in North Carolina and traveled halfway around the world to serve as a Christian missionary. In Wuhan she learned to speak Mandarin and came to understand Chinese culture. With a guide she and her husband explored one of the caves near Yichang, which lies on the Yangtze River 200 miles to the west of Wuhan. In such caves live bats, including those that harbor coronaviruses, although that was not known at the time. From Yichang in November 1915, she wrote to her father: "Imagine this dark rocky cave, about five and a half feet high, and twenty feet broad, and the floor of it for about forty or fifty feet covered with enormous petrified dragons, just like those on the Chinese flag, except the heads are lizard-like." She did not succumb to a coronavirus infection.

Elizabeth served for 16 years in the Hubei Province, teaching women to sew and thereby elevating their social and economic status. It was Christian missionaries of that era who challenged the traditional Chinese custom of binding young girls' feet, a practice that caused lifelong disability. Foot binding was finally banned in 1912, but devaluation of women remained an aspect of Chinese culture. In April 1916, in a letter to her father, Elizabeth commented about a family she encountered during her travels in China: "We asked the mother how many children she had. 'Four,' she said, pointing to the boys. 'Whose are the girls?' we said. 'Oh they are mine,' she answered, 'but they aren't children; they are only girls.'"

Ethical Significance

What this personal connection illustrates at an individual level, and what the coronavirus pandemic demonstrates at a planetary level, is that all people belong to a global community. This is true biologically, because viruses do not respect national borders. This is true medically, because pandemics represent a shared global challenge, and an effective response requires international cooperation. This is true morally, because our choices can affect our neighbors, even neighbors who live far from us, neighbors who may at once be contagious and afflicted, even as we ourselves may become. In our common humanity there are universal diseases that threaten us. There are also universal moral truths that can enlighten us.

Neuroethical Correlations

Shifting from a discussion of geography to neuroanatomy, within the human brain are further correlations relevant to the naming of epidemics. Functional MRI studies have found that, even in the absence of conscious awareness, brain regions involved in semantic processing convey information related to the meaning of words.[16] Whereas the neural representation of concrete words is organized by similarities to sensory experiences, the neural processing of abstract words is emotionally valenced and influenced by associative relations.[17,18] Words and phrases with emotional meaning, including words that signal danger, modulate activity in the amygdala, which is known for its role in processing fear. Emotionally laden words also engage the rostral anterior cingulate cortex, which is associated with emotion processing and plays a role in monitoring and resolving emotional conflict.[18,19] The anterior cingulate cortex is also one of the areas involved in forming first impressions and assessing trustworthiness.[21] In communicating information about epidemics to the public, first impressions matter, as psychology informs people's ideas and behaviors.[8]

What this means for the naming of epidemics is that the human brain is incapable of being perfectly objective or neutral in interpreting the language chosen to designate and describe an infectious threat. Internal linguistic associations, including those based on geography, culture, or ethnicity, will influence how people think about epidemics and perceive potential threats. The media's choice of language to frame an epidemic will influence moods and attitudes, whether consciously or not.[21] When in a heightened state of anxiety, the brain will detect even subtle cues in phrasing in an effort to make sense of a crisis. The brain, in a way, is wired to look for sources of explanation, including blame. When information is incomplete, confusion and uncertainty can tip the balance toward moral panic.[22]

Scientific Objectivity

In response to concerns about causing offense to cultural, social, national, regional, professional, or ethnic groups, in 2015, the World Health Organization developed a set of best practices for naming new diseases.[23] Published in its revised International Classification of Diseases, these standard best practices were the basis for naming the novel coronavirus that emerged from Wuhan in 2019. In unpacking the name of COVID-19, "COVI" is short for coronavirus, a type of RNA virus affecting mammals and birds that derives its name from the corona-like morphology of the club-shaped glycoproteins seen by electron microscopy to project from the surface of the spherical virion. The "D" stands for disease, and the "19" represents the last two digits of the year the strain was first identified. The virus causing COVID-19 was named by the International Committee on Taxonomy of Viruses SARS-CoV-2, as it is genetically similar to SARS-CoV, which caused the epidemic of severe acute respiratory syndrome (SARS) in 2002-2003.

Perfect Objectivity

Establishing objective nomenclature for novel human diseases free from ethnic, cultural, or national associations is a welcome advancement. Objective language based in scientific facts shifts the focus from blame to constructive responses including investigation, prevention, and treatment. An added benefit and accommodation to the anatomical limitations of the human voice is that the name COVID-19 is pronounceable.

Perfection in objectivity, while ethically praiseworthy in the naming of epidemics, is nevertheless incomplete. A physical description of a virus that includes its genome, sequenced in full, along with its molecular size measured to multiple decimal points and exact calculations of population case fatality ratios fails to tell the full story. An epidemic is more. No objective description of the medical consequences is adequate to convey the human suffering and personal loss that occurs. The existential threat of a lethal pandemic cannot be represented numerically. Intuitively aware of this, the human brain naturally rebels against the reduction of meaning to cold, inert, scientific terminology. Searching for answers, people will continue to embellish, extrapolate, and interpret what is missing from a purportedly objective description of an infectious disease. This is especially true for a devastating one.

Beyond Objectivity

The human brain may not be wired for objectivity, but the human mind can aspire to impartiality, particularly in refraining from judging others. In times of pandemic and panic, the main focus of medicine remains care and compassion for the ill and hurting. For the larger task of finding meaning in sickness and suffering, the human brain alone can take only first steps. Communities taking larger strides can go much farther by sharing knowledge and resources and supporting one another. To complete the journey toward healing, restoration, and renewal requires rescue by the transcendent giver of life and ultimate salvation, whose hand is extended to all who believe and confess His name.

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Vol. 36:2 Summer 2020

CLINICAL ETHICS DILEMMA

DARING TO DISCHARGE[1,2]

ROBERT D. ORR, MD, CM; FERDINAND D. YATES, JR, MD, MA (BIOETHICS)

Editor's Note: *This column presents a problematic case, one that poses a medical-ethical dilemma for patients, families, and healthcare professionals. As this case is based on a real medical situation, identifying features and facts have been altered in this scenario to preserve anonymity and to conform to professional medical standards. In this case, discharge planning becomes problematic because of the patient's reluctance to adhere to medical recommendations.*

Column Editor: Ferdinand D. Yates Jr, MD, MA (Bioethics) is a medical staff member at Children's Healthcare of Atlanta and has a private pediatric practice in the Atlanta area.

Question

"My patient is refusing some appropriate medical care and services. How do I transition her to the next level of care?"

Story

Margine is a seventy-three-year-old woman with a history of breast cancer, which was known to have spread to her bones and thus be incurable when she received treatment five years ago. This resulted in a fracture of her left hip last year, requiring short-term nursing home placement. She has been living at home. She began intermittent vomiting a few weeks ago, and an outpatient upper gastrointestinal series showed gastritis and a mass outside the stomach, suspicious for malignancy. She refused CT scanning at that time, saying she was "too sick."

She was admitted to the hospital seven days ago with dehydration, and she requested a Do Not Resuscitate order on admission. She has accepted IV fluids but has intermittently refused both further testing and medications. Her caregivers feel that she needs more treatment and that she clearly needs nursing home care. They predict she will have recurrent and worsening stomach symptoms. She refused to talk with the psychiatry consultant (two tries) yesterday.

She is divorced, has no children and no guardian. Her primary physician, oncologist, and a social worker report she has a long history of intermittent confusion, paranoia, erratic and irrational behavior, including refusal of help from visiting nurses, no-shows for scheduled physician appointments and lab tests, etc.

I spoke with the patient. She says she wants treatment, is willing to accept whatever is needed except nursing home care ("they nearly killed me last time"), and says she will be going home when she is strong enough. She says she will have help from visiting nurses, as well as friends and neighbors, though she was unwilling to give names and seemed paranoid when asked.

Discussion

A patient with decision-making capacity has the right to make her own treatment decisions, even decisions that will compromise her health or lead to avoidable death, as long as she understands the consequences and alternatives. This "rule" becomes problematic, however, if the patient is inconsistent in her decisions or is making irrational decisions. An "irrational decision" is one that is not consistent with her own values (e.g., "I want to live, but I don't want you to amputate my septic gangrenous leg"). In such cases, it is occasionally ethically justifiable to over-ride decisions with life-threatening consequences.

In this case, the patient is frequently inconsistent in her decisions (refusal of labs, later consent) and occasionally irrational (says she wants to survive, but refuses testing or treatment that would enhance that goal). Over-riding a patient's right to refuse treatment is a serious ethical breach and should only be considered if that decision would lead to imminent death or disability and there is no alternative acceptable to the patient.

Recommendations

1. It is ethically permissible to continue to try to persuade this patient that she needs more treatment and nursing home care. It might be helpful to have a meeting of three or four professional caregivers (including someone from the Visiting Nurse Association) along with the patient and those she expects to provide home care to present a united front to her of the need for nursing home care. Care must be exercised that persuasion doesn't become coercive.
2. If there is even a small possibility of successful management at home, it would be ethically permissible to discharge her home with as many services in place as possible to allow her to prove herself. If it should not work, this would force the issue of a long-term care placement.
3. If neither of these situations comes to pass, and she remains in the hospital, it may be necessary to seek a court-appointed guardian with authority to impose involuntary nursing home admission.

Follow-up

She was discharged home three days later with her ex-husband agreeing to help her. She had to be re-admitted two days later with diarrhea. When this was under control, she agreed (very reluctantly) to temporary nursing home placement.

Editor's Comments

Sometimes the patient needs to be saved from the doctor, or by the doctor, but, on occasion, the patient needs to be saved from herself. As in this situation, even refusing to make a healthcare decision is to make a decision. Choices, or lack thereof, have consequences. Occasionally, a patient is so blinded by a past experience or a misunderstanding of information that she obstinately refuses to go forward with appropriate medical care.

So, in the effort to act with care and compassion, the physician facilitates the making of a choice. Sometimes, the judicial system is necessary to advance care through an appointed guardian, but, sometimes, care comes from an unexpected source.

The goal is to provide proper medical care, but this laudable goal is not always easy to accomplish,

Endnotes

1. The article, as originally published, was untitled.
2. Reprinted by permission of the publisher. "Medical Ethics and the Faith Factor," William B, Eerdmans Publishing Company. Grand Rapids, Michigan, 2009, 206-208

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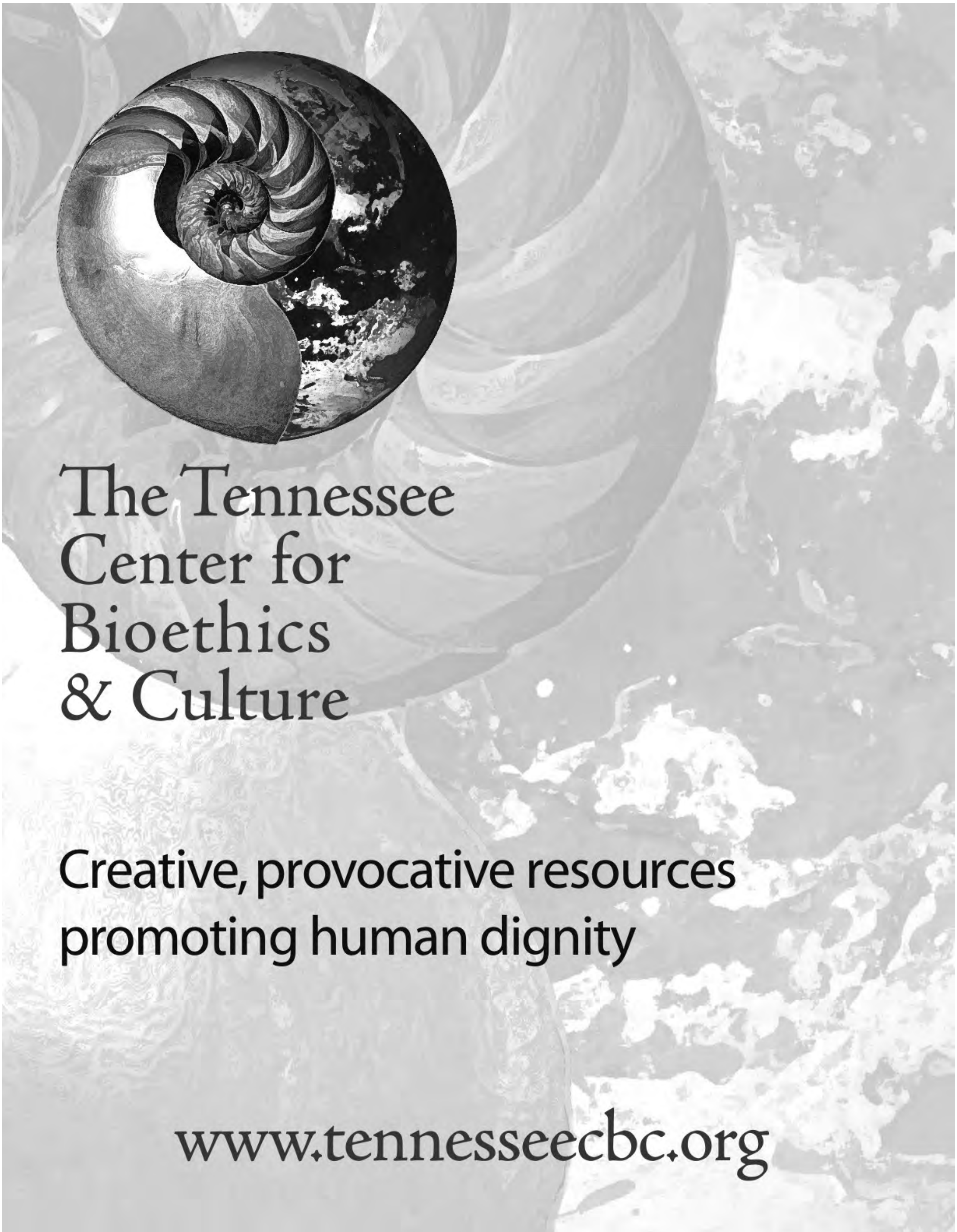

Vol. 36:2 Summer 2020

NaProTechnology: A Medical Embodiment of the Catholic Perspective on an Infertile Couple's Right to Family Planning

SISTER RENÉE MIRKES, OSF, PHD

Abstract

This article considers one question: How does the Catholic Church guide infertile couples to exercise their right to build a family? Part One examines the principal tenets of Catholic social teaching on human rights in general. Part Two focuses in particular on the Church's guidelines regarding the right to family planning for infertile couples. And Part Three contrasts NaProTechnology protocols for infertility with in vitro fertilization and concludes that NaPro provides infertile couples not only a responsible means of conceiving a baby that remedies the injustice of in vitro fertilization but also a medical embodiment of the Church's teaching on the right to family planning.

Part One: The Salient Principles of the Roman Catholic Doctrine on Human Rights[1]

I. Human Rights Stem From the Inherent Dignity of the Human Being as a Person Created in God's Image

The Catholic Church reads human rights and dignity through the lens of Sacred Scripture. The two creation accounts in the first chapters of the Book of Genesis confirm the full truth of human dignity and its source—the Creator God. These Biblical narratives substantiate the Church's first principle on human rights: "The ultimate source of human rights is not found in the mere will of a human being, in the reality of the State, in public powers, but in man himself and in God his Creator."[2]

First, these chapters form a portal through which the Church helps us grasp what it means for God to create man "in his own image and likeness."[3] The human being is set apart from the rest of the animal world by the fact God informs and enlivens only the human body with the breath of life, with an immortal soul: "The Lord God formed man out of the clay of the ground and blew into his nostrils the breath of life, and so man became a living being" (Gen 2:7). At conception, when God informs, organizes, and unifies the human body with the life principle of an intellectual and immortal soul, God gives the human being the highest degree of embodied life. Not just vegetative life, as in plants. Not just sentient life, as in animals. But an embodied life that is, at once, intelligent and free. An intelligent life that allows human persons to know why things are what they are. And a free life that bestows on the human being the self-governance to choose the good that truly perfects him and to reject the evil that really harms him.[4] In contradistinction to animals, then, the human creature is the kind of composite being—embodied, intelligent and free—who is capable both of claiming a right and of fulfilling the duty to honor and protect both his own rights and those of others.

Second, according to the Genesis narrative, God settles the man in the garden of Eden with the duty "to cultivate and care for it" (Gen 2:15) and to "fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all living things that move on the earth" (Gen 1:28). As a free agent, God makes the man his partner. God deputizes the human being, invites him to name the animals, and permits him to have sole proprietorship over those names. In other words, God confers on every human being the dignity of acting as his secondary agents, his collaborators. The Church consistently teaches the way a human person affirms his primacy over things is by perfecting the earth in harmony with the nature of all creatures—but especially in harmony with the dignity of his own nature and the basic human rights that follow therefrom.

Third, the Church also sees the creation narratives as a window onto the truth that men and women are of equal dignity. Genesis is clear: "God created man in his image, in the divine image he created him; *male and female he created them*" (Gen. 1:27, italics mine). The fact that God loves every man and every woman unconditionally, just because they exist, explains why every male or female member of the human race has the desire to be accepted as a person and to be loved unconditionally by others. This universal desire to be loved without qualification underscores the equal dignity and worth of all human beings. It acknowledges our common origin in God's creative act of unconditional love. To the point of our discussion, the fundamental law of human equality constitutes the basis for the demands of interpersonal justice; for instance, that one human being—a spouse—owes the other spouse loving acts of sex open to life,[5] or one human being (a parent) has the duty to render to another (the child) unconditional love and respect for its basic human rights.

Fourth, the Genesis creation narratives convince the Church that the social nature of the human being is an integral part of human dignity. From the time of his conception forward, every human being is a personal subject who stands in relation to his Creator God, to other human beings, and to the rest of the natural world. Human rights, then, are the natural consequence of the social nature of man. As the Church counsels: "Man . . . is not a solitary being, but a social being, and unless he relates himself to others he can neither live nor develop his potential."[6] Since we will discuss the relationship of rights to basic human needs below, suffice it to say here that you and I are meant to live in community and will only thrive when our basic human needs for life, family, society,[7] and the truth are recognized and promoted.[8]

II. Human Rights Are Actualized When Each Person Carries Out His Duty to Recognize, Respect, and Promote the Rights of Every Other Person

Human intelligence and freedom dictate all persons are responsible for the moral choices they make in relation to others. For this reason, the Catholic Church has consistently presented human rights as a double helix of interwoven rights and duties. Human rights must be understood and realized from the perspective of the individual's correlative duties toward the other.[9] Only when every person carries out his duty to recognize and honor not only his own but also the entire panoply of his neighbor's rights, will the entire swath of basic human needs—both bodily and spiritual—be realized.[10] For that reason, the Church insists affirming rights without acknowledging corresponding responsibilities is an inherent contradiction: "Hence, to claim one's rights and ignore one's duties, or only half fulfill them, is like building a house with one hand and tearing it down with the other."[11]

So how does Catholic philosophical teaching specify basic human rights and their correlative duties?[12] The Church distinguishes between four basic general goods to which every person has a right and particular goods that help realize the former. First, since every human being has a basic need to live—that is, to share in the good of life—he has the right to life. The basic human right to the good of life and bodily integrity will only be actualized, however, when the holder of the right not only responsibly maintains his life but also protects and promotes (or at least does nothing to violate) his neighbor's right to life, including related particular rights to food, clothing, housing, medical care, rest, and necessary social services.[13]

Second, the right to life includes the right to perpetuate that life by reproducing the species. Therefore, the common good of each and every species is to reproduce itself. Since the characteristic mode of human reproduction is through the family,[14] every human being needs to be conceived and born into a family and, therefore, has a right to a family. But the basic human right to a family, including the right to procreate[15] and to plan one's family by spacing children, will only be attained when the holder of the right—husband and wife—discharge their duty to conceive children in cooperation with God's plan for human procreation; that is, within the particular goods of a loving act of sexual union that is open to life and a stable, lasting marriage.[16]

Third, since every human being needs the larger society for his development and maturation, he has a right to live within and enjoy the benefits of the society at large. This basic human right to the good of society will only be achieved when the claimant of the right fulfills his duty to live justly with his fellow-citizens. That requires each person respect his neighbors' rights to particular goods: to a good name, to freedom of speech and publication, to own private property,[17] to pursue whatever profession they may choose, to share the benefits of culture— especially education and technical or professional training—and to worship God in accordance with the right dictates of their conscience.[18]

Fourth, every human being needs to know the truth and, therefore, has a right to the basic good of truth. The basic human right to truth—served by the particular right to be accurately informed by free speech and free press, the right to investigate the truth of the physical world, and the right to probe the metaphysical truths of God and the moral order—will only be secured when the human person actually fulfills his duty to seek the truth about current events, about nature, about nature's God, and about moral truth. As Pope John Paul II attests: "While paying heed to every fragment of truth which [the human person] encounters in the life experience and in the culture of individuals and of nations, he will not fail to affirm in dialogue with others all that his faith and the correct use of reason have enabled him to understand."[19]

If all the general goods and their related particular goods are protected and if all persons have a share in them, the consequent social reality constitutes what the Church understands as the common good.[20] Catholic human rights doctrine, then, moves *pari passu* between the two poles of individual good and the common good.[21] The Church insists it will be possible to safeguard the dignity and rights of each person and of every people "only if this is done as a community, by the whole of humanity."[22] In sum, the Church maintains everyone has the right to share in these basic goods, and the common good is only realized when all human beings, in solidarity with each other, share in these goods together.[23]

III. Human Rights Are Best Understood Within a Virtue Ethics/Natural Law Context Based on Reason and Christian Revelation

With his gift of a rational intellect, every human being is able to understand God's plan or God's law for the full flourishing and happiness of human beings. We call our reasoned understanding[24] of how we ought to reach the perfection of our nature[25] the "natural law" or the "natural moral law."[26] A former professor of mine liked to use the 1998 movie *Out of Sight* to illustrate what it means to understand natural law. He liked to point out that, as a viewer of the film, you spend the last twenty minutes of the movie trying to figure out whether bank robber Jack Foley will do the right thing. The important point my professor was making is that there is a right (i.e., just) thing to do, and that *he—and you—know what it is.* How do we know right from wrong? Through our conscience. "Well," you might ask, "isn't that enough?"

The answer is: no! Because we sin, because our culture can be corrupted, because our reasoning is sometimes flawed, our conscience is not enough. It needs to be informed. So, to guide our conscience, God reveals the Ten Commandments that sum up the natural law and gives us the Church's social and moral teaching that applies the Ten Commandments to new problems. When we understand natural law—when we grasp how we ought to embody justice in all our relations with others—we are freely enacting God's Eternal Law. We are appropriating God's plan for ourselves, thus the natural law.

Furthermore, when we consistently give what we owe to others—to the extent we are able—we are perfected in the virtue of justice. You and I become a just person when we give every other person with whom we interact what is his due, not just now and then, but consistently. We have, as Confucius advised, "set our heart right"—as in habitually directing our sense inclinations, emotions, will, and mind—to the good of interpersonal justice. As Catholic philosopher Josef Pieper contends:

> All just order in the world is based on this: that man give man what is his due. On the other hand, everything unjust, implies that what belongs to a man is withheld or taken away from him—and, once more, not by misfortune, failure of crops, fire or earthquake, but by man.
>
> This notion, then, the notion of the "*suum cuique*," [to each his own] which ever since the very earliest times became the common possession of the Western tradition through Plato, Aristotle, Cicero, Ambrose, Augustine, and, above all, Roman law, will have to be discussed *in the context of the virtue of justice*, the intentional habit that enables one human being to give to another what is his.[27] [italics mine]

Pieper's supposition is emblematic of the Church's view that someone is a just person when he exercises the *virtue* of justice. Acting out of the good habit of justice, the just person has the capacity to consistently, readily, and, with a sense of satisfaction, respect the other "as other" and help him to receive his due, his rights. That first step of justice—recognizing the other "as other"—is not mere treacly sentiment, but a firm act of the will. Christians believe the redemptive order of grace endows them, as baptized persons, with the infused virtue of justice so they may even more surely render to others their *suum cuique*,[28] their rights.

IV. Human Rights Are Universal

The Catholic Church affirms that, based on reason and confirmed by God's revelation, all members of the human family possess the same innate dignity. All human beings, for that same reason, are equal in human rights.[29] As Pope Benedict XVI reiterates:

> Since rights and the resulting duties follow naturally from human interaction, it is easy to forget that they are the fruit of a commonly held sense of justice built primarily upon solidarity among the members of society, and hence valid at all times and for all peoples.[30]

Catholic teaching on human rights is the etiology of what the Universal Declaration of Human Rights expounds: human rights are the common language, the ethical substratum of "interpersonal and international relations."[31] They "apply to everyone by virtue of the common origin of the person, who remains the high-point of God's creative design for the world and for history."[32]

Again, Benedict XVI cautions us that to deny a natural law theory of universal rights is to wander into the land of relativist sophistry:

> The rights that are common to all persons "are based on the natural law inscribed on human hearts and present in different cultures and civilizations." Removing human rights from this context would mean restricting their range and yielding to a relativistic conception according to which the meaning and interpretation of rights could vary and their universality would be denied in the name of different cultural, political, social and even religious outlooks.[33]

V. Human Rights Are Inalienable

Human rights are something I discover or recognize as inherent to a fellow human being;[34] not something that I or the state concoct and then award to the other. Therefore, when I deprive another of his rights, it does violence to the very integrity of his being. To rob another of particular goods which every human being needs for full human flourishing and sanctification desecrates the very embodied, intelligent, free nature of that individual.[35]

But the harm incurred when I alienate rights from another does not stop with the other person. As Pieper points out:

> That something belongs to a man inalienably means this: the man who does not give a person what belongs to him, withholds it or deprives him of it, is really doing harm to himself; he is the one who actually loses something—indeed, in the most extreme case, he even destroys himself. At all events, *something incomparably worse befalls*

> *him than happens to the one who suffers an injustice*: that is how inviolable the rights is! That is how strongly the inalienability of the right asserts itself. . . . Expressions such as this should not be construed as simply heroic hyperbole; they are meant as a very precise description of the condition that justice (and protection and promotion of basic human rights) belongs to man's true *being*.[36] [first italics mine]

VI. Human Rights Are Indivisible

The universality and inalienability of human rights require they be defended "not only individually, but also as a whole."[37] For that reason, the Catholic Church stipulates human rights cannot be applied piecemeal but must be understood and implemented *in toto*, as a total package.[38] Neither should we select one right while neglecting others, nor promote one right to the detriment of others.[39] As correspondents to the integrity and body-soul unity of the human being, human rights entail "the fulfilment of the essential needs of the person in the [totality of his] material and spiritual spheres."[40] The indivisibility of human rights—following from the body-spirit composite of the human holder of rights—demands they be applied, *in toto*, to everyone.

In sum, the salient Catholic principles on human rights proclaim this: the intertwined double helix of human rights and duties is rooted in the incomparable dignity that belongs to each human being as an *imago Dei* and arises from a virtue ethics of natural law, which specifies what each owes to the other in order to attain the common good of justice within the temporal order. The universality, inalienability, and indivisibility of the basic human rights to life, family, society, and truth are the natural consequences of the social nature and equality of human persons.

With the Church's human rights doctrine in mind, we are prepared to focus on the next section of this paper.

Part Two: The Church's Guidelines Regarding the Right of Infertile Couples to Plan their Family

Within the "most important" of human rights, Pope John Paul II includes "the right to establish a family, to have and to rear children through the responsible exercise of one's sexuality."[41] In other words, the basic human right to a family demands the duty of parents to found their family and to plan their family responsibly—that is, in a way that accords with the full truth of the marital act of sex. The important question is: what constitutes a responsible exercise of marital sexuality?

For answers, the Church peers through the lens of Sacred Scripture. Chapter two of Genesis pictures the creation of the woman from the side of the man, signifying her personal equality with him. By virtue of her rational intelligence and freedom, the woman is able to join the man in exercising responsible obedience to God's command "be fertile and multiply; fill the earth and subdue it" (Gen 1:28). Jesus's teaching on divorce, recorded in the gospels of Matthew and Mark, takes his audience (and us) back to the beginning, back to Genesis and God's original plan for human procreation. By integrating the procreative phrase from Genesis chapter 1 ("be fruitful and multiply") with the unitive phrase from Genesis chapter two ("for this reason a man shall leave his father and mother and be joined to his wife, and the two shall become one flesh"), Jesus teaches us that only the security and commitment of a marriage that lasts unto death and the couple's life-giving acts of unitive love can be the proper context for the procreation of a new human being. Just as the married spouses form an unbreakable bond in their two-in-one-flesh union, so also the unitive and procreative meanings of their marital act of sexual love are indivisibly intertwined.

The Divine plan for human procreation and marital sexuality, then, is this: in the same way God creates all life out of His radical self-giving act of creative love so, too, ought the life of a baby be conceived within the intimate union of the parents' bodily act of self-giving love. Only in the context of their sexual act of love and union are parents able to fulfill the demands of justice: responsibly actualizing their right to procreate and to plan a family and their child's right[42] to be conceived within marriage.

Donum Vitae, a 1987 Instruction from the Vatican doctrinal office, applies the Scriptural teaching on the responsible use of marital sexuality to the question of how an infertile couple ought to fulfill their duty to plan their family responsibly. Couples struggling with infertility should seek a treatment that respects both the procreative and unitive meanings of their acts of marital intercourse. In short, they ought to conceive a child within their loving act of marital union. But, since these couples are infertile or subfertile, they have a condition preventing them from conceiving naturally. For that very reason *Donum Vitae* directs them to an infertility treatment like NaProTechnology that diagnoses and treats the underlying causes of infertility so that the couple might conceive a child within their own unitive act of sexual love. This also means the infertile couple ought to avoid a reproductive treatment like in vitro fertilization that replaces the act of conjugal union. *Donum vitae* teaches that, by resorting to IVF, the couple act unjustly. Not only do they fail to fulfill their duty to conceive within the essential unitive dimension of their married love, but they also threaten the newly developing life of their IVF embryo through cryopreservation, destructive embryonic research, and preimplantation genetic testing. The IVF couple fail on two fronts: in their duty to procreate in accord with the responsible exercise of their sexuality and in their responsibility to respect the child's right to life.

Therefore, in the context of how infertile couples ought to responsibly exercise their right to plan their family, we must look first to the Catholic vision of the good of human life.

I. The Good of Human Life

It's the inherent dignity or the ontological goodness of *bios* (human life) that grounds the inviolability of the life of every human person—unique and unable to be given over completely to someone else. For this very reason, *Donum vitae* defines each person's right to life as "a sign and requirement of the very inviolability of the person to whom the Creator has given the gift of life."[43] No matter their size, age, or stage of development, all human beings share equally in fundamental human rights, the first of which is the right to life.

As already discussed, a being whose rational soul is infused by an immediate, creative act of God is a being who stands in an irrevocable relationship with his Creator. The human person, nuptially related to God, receives all of creation, including his or her life and embodied existence—as well as those of other persons—as gift.

The vocation to give self and to receive the other as gift resounds, then, in the nature of every human being created in the image of the person of God, the Radical Giver.

The Church applies three norms pertaining to infertility treatment that protect the child's dignity and basic right to life:

- Infertility interventions must respect the right to life and inviolable integrity of a newly developing human life in utero or in vitro.
- While spouses have a right to marital acts of sex, they do not have a right to a child. Every child, a person to be loved in and for himself, is a gift.
- Every child has the right to be conceived within marriage.

Second, seeking an answer to the question of how infertile couples ought to exercise their right to plan a family, we also turn to the Catholic vision of the good of human procreation.

II. The Good of Human Procreation

God calls a husband and wife to image their inner family life through the language their bodies speak in the act of marital intercourse. The spousal meaning of a couple's vocation to procreate—to share in the divine "mystery of creator and Father"—is *inscribed in* the meaning of their vocation to love, "the mystery of their personal communion."[44] The Church invokes this powerful image of inscription to help a husband and wife better grasp how the procreative meaning of their sex acts—their vocation to parenthood—*defines, activates,*[45] and *demands* its love-giving counterpart. We might even say that in this imagery the Church is exposing infertile couples—and all of us—to a glimpse of the providential mercy of the divine design for human conception. God intends that human beings be conceived naturally so that each and every last one of us could take consolation from, and find security in, the knowledge that *we came to be out of a personal act of our parents' love*. Through the simple but powerful image of inscription, the Church opens the minds of infertile couples to see why their act of sexual union is the *only* genuinely loving, and therefore human, moral, and responsible means of begetting children.

The Church applies two norms pertaining to infertility to protect the infertile couple's right to procreate and to plan a family and their duty to do so responsibly:

- Infertility treatments must assist, not replace, the conjugal act.
- The dignity of conceiving a baby demands the sexual complementarity, the "two-in-one-flesh" union, of husband and wife.

Part Three: NaProTechnology: The Medical Embodiment of the Church's Position on the Right to Family Planning

A medical profile of the two types of infertility treatment contrasted in Part Three will facilitate the subsequent moral analysis, where we apply the norms of *Donum vitae* to IVF and NaPro respectively.

I. Medical Profile of In Vitro Fertilization[46]

Ovarian follicles in superovulated cycles are aspirated using a needle guided by trans-vaginal ultrasonography. Follicular fluids are scanned by the embryologist to locate all available eggs. The eggs are placed in a special media and cultured in an incubator until insemination. If the man's sperm parameters are normal, approximately 50,000 to 100,000 motile sperm (previously collected by the man through masturbation) are transferred to the dish containing the eggs. This is called standard insemination because fertilization occurs in a culture medium rich in essential nutrients and electrolytes conducive to fertilization and embryonic growth. If the man's sperm parameters are abnormal, the embryologist uses the ICSI technique to fertilize mature eggs. This procedure is performed under a high-powered microscope. The embryologist picks up a single spermatozoa using a fine glass micro needle and injects it directly into the egg cytoplasm. ICSI increases the chance that fertilization will occur when the man has a low sperm count and/or poor motility, morphology, or progression. Following the fertilization process, both gametes are incubated in a culture medium for eighteen to twenty-four hours at 39 degrees Celsius in an atmosphere of 5 percent carbon dioxide. For pregnancy to occur, blastocyst stage embryos derived from these fertilized oocytes are placed in the uterus through a process called embryo transfer.

II. Medical Profile of NaProTechnology's Infertility Protocols[47]

NaProTechnology[48] (*Na*tural *Pro*creative *Technology*) has a distinct set of protocols that treat infertility. These procedures have one principal goal in reference to infertile couples: to resolve the condition(s) causing their infertility so they are better able to achieve a pregnancy within their own acts of intercourse. In other words, NaPro infertility protocols take a disease-based approach to infertility or subfertility, viewing it as a symptom of an underlying organic, hormonal, or ovulatory dysfunction. To date, NaPro has been extremely successful in identifying and treating infertility precisely because it comprehensively evaluates and corrects the multiple causes of the "symptom" of infertility.[49] And its diagnostic and treatment strategies manage infertility so well because the Creighton Model Fertility*Care* System of charting precisely tracks the menstrual/ovulatory cycles of the particular infertile patient being evaluated. The characteristic biomarkers of these charts point the physician with consistent reliability to the underlying pathophysiology of the infertile patient. With these charts, the woman and her husband know their window of fertile days or the vulvar mucus cycle. They know that fertility-focused intercourse increases their chances of getting pregnant. Most importantly, the infertile couple understand that if they direct their acts of intercourse to their days of peak-type mucus, they optimize their chances of achieving a pregnancy. NaPro's surgical techniques effectively treat the various organic and structural abnormalities that underlie infertility and do so in a way that prevents postoperative pelvic adhesions that could reduce the infertile patient's future chances of conceiving.

Part Four: Moral Analysis

Let's apply each of the Church's norms protecting the baby's right to life, dignity-as-gift, and the right to be conceived within marriage first to IVF and then to NaPro infertility protocols.

I. Infertility Treatments Must Respect the Inviolable Integrity and Right to Life of Newly Developing Human Life in Utero or In Vitro[50]

Applied to IVF: Donum vitae highlights the logical contradiction of reproductive technologies, such as IVF, that bring life through death. Prior to any fertilization in the laboratory, the IVF specialist arrogates to himself the right to instruct the couple which of their embryos will be transferred, which will be surrealistically suspended through cryopreservation, which will be donated to destructive embryonic research, and which will be discarded because of developmental abnormalities.[51] IVF's failure to respect the life and integrity of the newly developing embryo hallmarks its injustice toward the baby.

Applied to NaProTechnology: All NaPro treatments for infertility respect the right to life and bodily integrity of human beings in utero. Because NPT protocols do nothing to deliberately threaten the right to life of the newly developing baby and do everything to facilitate a healthy full-term pregnancy, they facilitate the couple's just relationship to the baby. Furthermore, NaPro's ovulation induction protocols require the woman be tracked with daily ultrasounds to determine the effects of the drug on ovarian production of mature follicles. If four or more ovarian follicles mature, the couple is counseled not to have intercourse that cycle, and the dosage of clomid, metformin, letrozole, or hCG is decreased the next cycle. In short, the cachet of NaPro protocols is to provide an infertility treatment that is just, one that allows the couple to fulfill their duty to respect the inherent dignity and life of their baby.

II. Infertility Treatments Must Inculcate the Truth that Parents Do Not Have the Right to a Child; Children Are and Must Be Viewed as a Personal Gift, "the Supreme Gift . . . of Marriage."[52]

Applied to IVF: Providers and users of IVF demonstrate an overtly utilitarian outlook that is an injustice against the dignity of baby-as-gift and the dignity of parents as intelligent collaborators with God's plan for human procreation. Infertile couples assume they have the "right" to reproduce in any way they please and to conceive their own baby in the easiest, most expedient way they can. But the tradeoff for expedient baby-making is a devastating depersonalization. IVF specialists reduce the parents to suppliers of fertilization material and reduce the baby to an end-product controlled by scientific technology. With this kind of objectification, IVF's aim is straightforward: to ensure the embryonic "product" it literally makes "by hand" is commensurate with the demand of consumers and conforms to the specification of parental will and design. The quality and number of embryos are judged not by the parents' duty to love their child unconditionally and to receive him as a gift but by "conditions of technical efficiency" which are, ultimately, "standards of control and dominion."[53]

Applied to NaProTechnology: NaPro's approach to infertility, together with the genuine just culture it generates, encourages couples to fulfill their duty to work cooperatively with nature, to use their reason not primarily to calculate the most expeditious way for the greatest number of infertile couples to get pregnant, but to discover and appreciate the laws of their nature—God's plan for human procreation—and to freely cooperate with them. This dispositive attitude of husband and wife toward fertility begets a genuine appreciation of—first—the child as a gift, a person who, equal in dignity to them, has a right to their love and, second, of their duty to love their baby without stipulation—that is, just because he or she exists.

III. Infertility Treatments Must Respect the Child's Right to be Conceived Within Marriage[54]

Applied to IVF: To date, I have not found any serious discussion referencing rights of an IVF child—to say nothing of whether that child has a right to be conceived in a natural way. Nor do I expect to see such a work in the future. In the world of IVF, the rights of parents trump all. However, I have a theory. I suggest the day we as a society recover the rights of the child will be the day we are able to objectively evaluate the injustice of depriving IVF children of a "secure and recognized relationship"[55] to their parents' embodied love from the *first*, and *most vulnerable*, days of their lives.

Applied to NaProTechnology: As already noted, NaPro unambiguously assists infertile couples in fulfilling their duty to conceive a child within their own acts of sexual love. Predictably, this approach to infertility also encourages NaPro parents to appreciate and respect the right of their children to be conceived, in a manner, on the one hand, that neither threatens their life nor thwarts their dignity and, on the other, that intimately connects their children to the protection, security, and, yes, intimacy of their bodily union.

Now let's apply the Church's norms protecting the basic duty of infertile couples to build their family from their natural acts of marital love first to IVF and then to NaPro infertility protocols.

IV. Infertility Treatments Must Assist, Not Replace, the Conjugal Act[56]

Applied to IVF: Because fertilization of gametes takes place in a laboratory, IVF necessarily replaces the conjugal act.

Applied to NaProTechnology: Insofar as the identification and treatment of infertility's underlying pathologies facilitate natural conception, NaPro's medical and surgical treatments unambiguously assist the couple's act of conjugal union to attain its natural end.

V. The Dignity of Conceiving a Baby Demands the Sexual Complementarity, the "Two-in-One-Flesh" Union, of Husband and Wife[57]

Applied to IVF: By ignoring the unitive dimension that alone makes sense out of the mystery of sexuality and human renewal, IVF renders the creation of new human life grossly unjust. The price of generating new human life "sexlessly" requires us "to pay in coin of our humanity."[58] To proceed as if procreation can arbitrarily be separated from sexual union without negative consequences, as IVF does, is an injustice to both baby and spouses. IVF eviscerates the ultimate truth of human sexuality, the ultimate truth of human dignity, and the ultimate mystery of beginning life within the mother's body.

Applied to NaProTechnology: The NPT approach to infertility embraces the wisdom of a natural law insight: the fact that all mammalian reproduction is "the generation of new life from (exactly) two complementary elements, one female, one male, (usually) through coitus."[59] This insight automatically takes on the status of a moral norm when the mammals involved are human persons. Allowing couples to responsibly respect “the language of their bodies” evidenced in their “natural generosity”[60] and desire to have their own baby is the cachet of NaPro’s approach to infertility.

Conclusion

In sum, there is one critical fact damning IVF as an option to family planning: it is an inherently unjust reproductive technique depriving the couple and the child of their basic human rights. First, formed by a scientific worldview that refuses to respect the comprehensive meaning of marital sexuality, IVF subverts the duty of the infertile couple to conceive a baby within their own sexual act of marital love. Second, driven by a utilitarian view of nascent human life, IVF allows, and even encourages, the repudiation of the right to life of many developing embryos.

NaPro infertility protocols, on the other hand, constitute an inherently just technique for treating infertility. First, they respect couples’ duty to conceive a child within their own loving acts of intercourse. By diagnosing and treating the pathology causing infertility, NaPro protocols optimize infertile couples’ chances of conceiving a baby within their unitive acts of sexual love. Second, these NaPro procedures respect the baby’s inherent right to life and its right to be loved and welcomed into the world unconditionally. They support the pregnancy from day one forward, so mother and baby can live and be healthy through the forty ensuing weeks of gestation and at delivery.

As such, the NaProTechnology approach to infertility, by remedying the injustice of in vitro fertilization, constitutes a medical embodiment of the Church’s teaching on the right to family planning.

Endnotes

1. I am indebted to William D. Virtue, PhD, whose sagacious insights regarding the Church’s social teaching and its implications for human rights were instrumental in helping me shape Part One of this article.
2. Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*, Pontifical Council for Justice and Peace, 2004, #153. [http://www.vatican.va/roman_curia/pontifical_councils/justpeace/documents/rc_pc_justpeace_doc_20060526_compendio-dott-soc_en.html]
3. Francisco Suarez (1548-1617), a Spanish priest and philosopher, expounded a theory of justice that launches the Church’s doctrine on human rights. He argued a universal “jus,” a “justice,” is owed to every human being. This “jus” was translated a “right.” Since human beings are an image of God, they have a dignity as persons created to image God and, therefore, certain things are owed to them as bearers of this Divine image. He assigned three inalienable rights to every human being: the right to life, the right to liberty (the right not to be owned by anyone), and the right to property (the right to provide for our needs).
4. The freedom to choose can belong only to a “moral agent” like the human being. But as the Church likes to remind us: someone who can reason over right and wrong may indeed come to see that he has no right to do a wrong, no right to deprive another of his *suum cuique*, his right, his due.
5. In his encyclical letter *Humanae vitae*, Pope Paul VI explains that a contraceptive method of avoiding a pregnancy is immoral (i.e., unjust) because the couple fail to responsibly exercise their right to procreate. That is, they intentionally suppress the essential life-giving or procreative meaning of all of their unitive acts of intercourse and fail, thereby, to give each other what is their

due: unitive acts of sexual love that are open to life. However, Paul VI explains that, by resorting to abstinence during fertile times and intercourse during infertile times, the couple responsibly avoid a pregnancy, that is, respect the essential procreative dimension of all of their acts of marital union. Each spouse renders to the other what is their due: unitive acts of intercourse open to life. Avoiding a pregnancy or spacing children in the latter way is just because it fulfills the duty of the couple to respect the life-giving or procreative meaning of every act of marital union, strengthening, thereby, the whole reality of their love.

The teaching of *Donum vitae*, on the one side, helps the infertile couple responsibly exercise their right to plan their family by directing the couple to an infertility treatment—like NaPro—that provides the couple a reasonable chance of conceiving within their own loving acts of marital union. On the other, DV directs the infertile couple to eschew the unjust choice of laboratory treatments for infertility—like IVF—that harm the whole of their married love by intentionally subverting the essential unitive dimension of their procreative endeavors.

6. *Compendium*, #149.
7. Christians believe that only in the redemptive order, by the grace of Jesus Christ, are human beings made *reliably* capable of overcoming their asocial propensities, especially their sinful tendencies toward pride and selfishness. Only grace empowers the human being to consistently pursue the goods of loving God above all and neighbor as self, ushering in the perfect justice of the kingdom of God—right here, right now.
8. Mary Ann Glendon artfully traces the influence of Leo XIII in *Rerum novarum* and Pius XI in *Quadragesimo anno* on the secular culture, especially on the UN's Human Rights Commission that was ultimately responsible for passage of the *Universal Declaration on Human Rights* (1948). The emphasis this commission and this Declaration places on: "the 'inherent dignity' and 'worth of the human person,' the affirmation that the human person is 'endowed with reason and conscience,' the right to form trade unions; the worker's right to just remuneration for himself and his family; the recognition of the family as the 'natural and fundamental group unit of society' entitled as such to 'protection by society and the state,' the prior right of parents to choose the education of their children; and a provision that motherhood and childhood are entitled to 'special care and assistance'" is redolent of the language, thoughts, and policies of these two social encyclicals and their definition of basic human rights and the common good. ["The Influence of Catholic Social Doctrine on Human Rights," *Journal of Catholic Social Thought,* 10.1, 2013, 70.]
9. Suarez defined justice as our *duty* to give what we owe to others. He spoke of the relationship between families who live together as a "moral union." A union that begins with the assumption of the duties and obligations that make political life workable. In 1891, Pope Leo XIII, in reference to an ecclesiastical mending of contemporary inflammatory relations between labor and capital, sounded this Suarezian theme: "[T]here is no intermediary more powerful than religion . . . in drawing the rich and the working class together, by reminding each of its duties to the other, and especially of the obligations of justice." These bind both the proletarian and the worker: "fully and faithfully to perform the work which has been freely and equitably agreed upon; never to injure the property, not to outrage the person of an employer; never to resort to violence in defending their own cause, not to engage in riot or disorder; and to have nothing to do with men of evil principles, who work upon the people with artful promises of great results, and excite foolish hope which usually end in useless regrets and grievous loss." [*Rerum novarum,* 1891, #19-20. (http://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_15051891_rerum-novarum.html)]
10. Pope John XXIII, *Pacem in terris*, April 11, 1963, #11-22. [http://www.vatican.va/content/john-xxiii/en/encyclicals/documents/hf_j-xxiii_enc_11041963_pacem.html]
11. Ibid., #30.
12. Thomas Aquinas, *Summa Theologiae* I-IIae, q. 94, art. 1, sed contra. Cf. footnote 26.
13. *Pacem in terris*, #11.
14. Herbert Ratner, "The natural institution of the family," *Child and Family.* Vol. 20, No. 2, 1988, pp. 89-106.
15. In 1891, Pope Leo XIII, inaugurated the Church's papal teaching on human rights with his letter, *Rerum novarum (On new things).* Against the socialist movement and its policy of government takeover of private property, he fought for the human right to private property and strengthened its

defense by presenting property ownership "in relation to man's social and domestic obligations." "No human law," he wrote, "can abolish the natural and original right of marriage, nor in any way limit the chief and principal purpose of marriage ordained by God's authority from the beginning: 'Increase and multiply.' Hence we have the family, the 'society' of a man's house . . . . [The] right to property, therefore, which has been proved to belong naturally to individual persons, must in likewise [sic] belong to a man in his capacity as head of a family . . . ." [# 12]

16. What's more, only when parents fulfill their duty to provide their children with a "moral environment conducive to the growth of the child's personality," [Pope John Paul II, *Centesimus annus*, 1991, 47.1. (http://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html)] only when parents teach their children the meaning of self-gifting love necessary for any life vocation, will the right of family members to choose for themselves the kind of life to which they feel called become a reality. [*Pacem in terris*, #15.]

17. Trying to right the egregious wrongs of the industrial revolution and socialist efforts for governmental takeover of private property, Pope Leo XIII declared: "With reason, . . . the common opinion of mankind . . . has found in the careful study of nature, and in the laws of nature, the foundations of the division of property, and the practice of all ages has consecrated *the principle of private ownership*, as being preeminently in conformity with human nature, and as conducing in the most unmistakable manner to the peace and tranquility of human existence." [*Rerum novarum* #11] In words that would benefit our contemporary debate about socialism, the Pope argued: "Hence, it is clear that the main tenet of socialism, community of goods, must be utterly rejected, since it only injures those whom it would seem meant to benefit, is directly contrary to the natural rights of mankind, and would introduce confusion and disorder into the commonweal. The first and most fundamental principle, therefore, if one would undertake to alleviate the condition of the masses, must be the inviolability of private property." [#15] Forty years later, in the midst of the Great Depression, Pope Pius XI calls for the urgent implementation of Leo XIII's theory of the just distribution of goods for the sake of the common good: "To each, therefore, must be given his own share of goods, and the distribution of created goods, which as every discerning person knows, is laboring today under the gravest evils due to the huge disparity between the few exceedingly rich and the unnumbered propertyless, must be effectively called back to and brought into conformity with the norms of the common good, that is, social justice." [Pope Pius XI, *Quadragesimo anno*, 1931, #58. (http://www.vatican.va/content/pius-xi/en/encyclicals/documents/hf_p-xi_enc_19310515_quadragesimo-anno.html)]

18. *Rerum novarum*, #14. Pope Leo XIII plumbs the depth of the meaning of the Sabbath rest: "The rest from labor is not to be understood as mere giving way to idleness; much less must it be an occasion for spending money and for vicious indulgence, as many would have it to be; but it should be rest from labor, hallowed by religion. Rest . . . disposes man to forget for a while the business of his everyday life, to turn his thoughts to things heavenly, and to the worship which he so strictly owes to the eternal Godhead. It is this, above all, which is the reason and motive of Sunday rest; a rest sanctioned by God's great law of the Ancient Covenant-'remember thou keep holy the Sabbath day,' and taught to the world by His own mysterious 'rest' after the creation of man: 'He rested on the seventh day from all His work which He had done.'" [#41]

19. *Centesimus annus*, #46.

20. As early as 1891, as the industrial revolution and political change swept across Europe, Pope Leo XIII spoke of the appalling conditions of the working classes and explains the common good in respect to the rights and duties of workers and employers: "The employer ought to respect the dignity of each employee and shouldn't view them as slaves. Workers must also have time for their religious duties and must receive tasks appropriate for their sex and age. Workers and employers ought to be free to negotiate and come to an agreement, but natural justice must ensure that wages are sufficient to support a 'frugal and well-behaved wage-earner.' To ensure these rights and duties are maintained, worker's associations ought to exist to work towards the common good." [Commentary on *Rerum novarum*, #45. (https://www.cacatholic.org/teachings/catholic-social-teaching/social-encyclicals/rerum-novarum-new-things)]

21. For example, in answer to the question: How should one's possessions be used? Pope Leo XIII, replies unhesitatingly, with the words of St. Thomas Aquinas: "Man should not consider his material possessions as his own, but as common to all, so as to share them without hesitation when others are in need." [*Rerum novarum*, #22]

22. *Compendium*, #144. Moreover, the Catholic vision of life firmly rooted in the religious dimension helps to achieve the common good, "since recognition of the transcendent value of every man and woman favors conversion of heart." To promote a good that is common to all, we need to heal the universal ravages of sin—broken minds, divided hearts, and addicted passions. The Church believes that this will only be realized in the fullest sense when we rely on the grace won by Jesus's life, death, and resurrection. As Pope Leo XIII eloquently states: ". . . if Christian precepts prevail, the respective classes will not only be united in the bonds of friendship, but also in those of brotherly love. For they will understand and feel that all men are children of the same common Father, who is God; that all have alike the same last end, which is God Himself, who alone can make either men or angels absolutely and perfectly happy; that each and all are redeemed and made sons of God, by Jesus Christ, 'the first-born among many brethren'; that the blessings of nature and the gifts of grace belong to the whole human race in common, and that from none except the unworthy is withheld the inheritance of the kingdom of Heaven." [*Rerum novarum*, #25] And, again: ". . . if human society is to be healed now, in no other way can it be healed save by a return to Christian life and Christian institutions" [#27]. Through this grace comes a conversion of heart that "leads to a commitment to resist violence, terrorism and war" and promote, instead, justice and peace and the entire panoply of basic human rights for every member of human society. [Benedict XVI, Address (Meeting with the members of the general assembly of the United Nations organization), 18 April 2008.]
23. It is only possible to attain, increase, and safeguard the effectiveness of the common good, if society has "the good of all people and of the whole person—as its primary goal." *Compendium*, #165.
24. As Mary Ann Glendon points out: "The 'reason' that the Church defends is not the calculating reason of Hobbes—in the service of the passions—nor is it narrow scientific rationalism. It is the dynamic, recurrent, and potentially self-correcting process of experiencing, understanding and judging that has animated her best theologians from Thomas Aquinas to Bernard Lonergan." ["Catholicism and Human Rights," *Marianist Award Lectures.* 2001, p.19.]
25. Unlike particles that necessarily follow the laws of physics, or molecules that necessarily follow the laws of chemistry, or plants and animals that instinctively follow the laws of biology, human beings follow the laws of their nature freely.
26. Cf. *ST* Ia-IIae, q.94, art. 2: Sed contra: " . . . Now as being is the first thing that falls under the apprehension simply, so good is the first thing that falls under the apprehension of the practical reason, which is directed to action: since every agent acts for an end under the aspect of good. Consequently the first principle in the practical reason is one founded on the notion of good, viz., that good is that which all things seek after. Hence this is the first precept of law, that good is to be done and pursued, and evil is to be avoided. All other precepts of the natural law are based upon this: so that whatever the practical reason naturally apprehends as man's good (or evil) belongs to the precepts of the natural law as something to be done or avoided. . . . Since, however, good has the nature of an end, and evil, the nature of a contrary, hence it is that all those things to which man has a natural inclination, are naturally apprehended by reason as being good, and consequently as objects of pursuit, and their contraries as evil, and objects of avoidance. Wherefore according to the order of natural inclinations, is the order of the precepts of the natural law."
27. Josef Pieper, *The Four Cardinal Virtues: Prudence, Justice, Fortitude, Temperance* (New York: Harcourt, Brace & World), 1965, p. 44.
28. The origin of international law begins with the Spanish colonization of the Indies. The application of the principle of *suum cuique* to both Europeans and native peoples originates with the legal theory of the Spanish Dominican friar and professor of theology at Salamanca, Francisco de Vitoria (1483-1546). *Suum cuique* was central to de Vitoria's legal principles dealing with human rights issues. He argued the concept of *suum cuique* proves that "the entitlements properly belonging to a person are relational to others . . . . What is due one person cannot be correctly understood until what is also due others, who are in relation to the first person mentioned, is methodically considered." And this principle, set down in *De Indies,* a work that discussed the relationship between native peoples of the new world and their European colonizers, lays the foundation for the universality of rights: "What is claimed by one must be the sort of thing that can rightfully be claimed by others." The conclusions de Vitoria reached regarding the legitimate

claims of both native people and Europeans of the 15th and 16th centuries endure today in the Church's social teaching beginning with Leo XIII's *Rerum Novarum* and figure in the premier document defining human rights in international law, *Universal Declaration of Human Rights.* [Araujo, Robert John S.J., "Our Debt to de Vitoria: A Catholic Foundation of Human Rights." 10 *Ave Maria Law L. Rev.*, 313 (2011-2012), p. 314.] The focus of recent studies on the School of Salamanca and, in particular, on its founder, de Vitoria, has been to admit that, despite "the catastrophic effects of colonization [of America] on Indian communities," Spain—above all other European colonizers—"took her Christian duty towards native peoples" most seriously and maintained noble motives regarding trusteeship and conversion of native peoples. [Martti Koskenniemi, "Colonization of the 'Indies,' The Origin of International Law," published as "Colonization of the 'Indies': The Origin of International Law?", in Ylanda Gamarra (ed), *La idea de la America en el pensamiento jus internacionalista del siglo XXI*.]

29. The Church also acknowledges a valid pluralism regarding the diverse means of protecting basic rights and of resolving the tensions among rights. "Universality of rights need not entail homogeneity [of application]". In fact, "the more that Western groups promote a top-down, homogenizing vision of human rights, the more credibility they add to the charge of Western cultural imperialism." [Glendon, "Catholicism and Human Rights," p.18]
30. Benedict XVI, Address, 2008.
31. The Church's insistence on the universality of human rights stands as a bulwark against those who subscribe to historicism, relativism and the theory that rights are culturally relative. [Benedict XVI, Address, 2008] All too frequently, their beliefs—there are "no common truths to which all men and women can appeal, . . . there are no human rights, and universal rights are really just instruments of Western cultural imperialism"—become justification for flagrant subversion of what is due to the other." [Glendon, "Catholicism and Human Rights," p. 19.]
32. Benedict XVI, Address, 2008.
33. Ibid.
34. The Church incisively teaches that from the order of creation, something is inalienably owed to another because God has created every human being as a person. Precisely what Kant acknowledged: "We have a divine Sovereign, and his divine gift to man is man's right." From the order of redemption, we humans have inalienable rights and duties because Jesus Christ has taken on human dignity and restored its primal sublimity in his incarnation, death, and resurrection. [*Compendium*, #153]
35. Bartholomew de las Casas (1474/1484 – 1566], a Spanish Dominican priest and member of the Salamancan school of philosophy, contended the Indians and Blacks of the 'Indies' were already human and therefore possessed the rights of life, freedom, and property against the Spanish conquistadores and colonialists who maintained that because these indigenous peoples were not yet human, they could be treated as property. [G. C. Marks, *Australian Year Book of International Law*, p. 26 and *passim*.]
36. Pieper, *The Four Cardinal Virtues*, p. 47.
37. Ibid.
38. On the occasion of the 1998 fiftieth anniversary of the *Universal Declaration on Human Rights*, Pope John Paul II cautioned against a fading sense that human rights are indivisible: " . . . the tendency of some to choose one or another right at their convenience, while ignoring those which are contrary to their current interests occurs too frequently. Others do not hesitate to isolate particular rights from their context in order to act as they please, often confusing freedom with license, or to provide themselves with advantages which take little account of human solidarity. Without doubt, such attitudes threaten the organic structure of the Declaration, which associates every right with other rights, duties and limits required by an equitable social order. In addition, they sometimes lead to an exacerbated individualism which can lead the stronger to dominate the weak and thus attenuate the relationship between freedom and social justice which is firmly established by the text." [http://www.vatican.va/content/john-paul-ii/en/speeches/1998/november/documents/hf_jp-ii_spe_19981130_50th-onu.html]
39. As Pope Leo XIII sagely notes: "It would be irrational to neglect one portion of the citizens and favor another, and therefore the public administration must duly and solicitously provide for the

welfare and the comfort of the working classes; otherwise, that law of justice will be violated which ordains that each man shall have his due.” [*Rerum novarum*, #33]

40. *Compendium*, #154.
41. *Centesimus annus*, #47.1.
42. Because his nature is that of a person, a human being cannot be reduced to the level of a thing. So, for example, the child cannot be used as an object or a mere instrument to the fulfillment of his parents’ desires or goals. Since a child has the right to be conceived within his parents’ sexual acts of unitive love, spouses have the duty to love their child into existence in the same way God creates every human being: with unconditional acceptance.
43. John Paul II, *Evangelium vitae* (March 25, 1995), #39. [http://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_25031995_evangelium-vitae.html]
44. *Donum vitae*, Introduction, n. 3.
45. John Paul II, *Theology of the Body: Human Love in the Divine Plan* (Boston: Pauline Books & Media, 1997), 398.
46. Cf. Sister Renée Mirkes “The Ethics of Infertility Treatment: An Upbeat Update.” in *Live the Truth*, Proceedings of the Twentieth Workshop for Bishops, Edward J. Furton, ed. (Philadelphia, PA: National Catholic Bioethics Center) 2006, pp. 207-11).
47. Ibid., pp. 211-21.
48. NaProTechnology is a dynamic, universal women’s health science developed by Dr. Thomas W. Hilgers and his colleagues at the Saint Paul VI Institute, Omaha, Nebraska, U.S.A. Evolving over five decades of clinical research, Natural Procreative Technology (NPT or NaPro) utilizes a standardized and prospective system of charting the ovulatory and menstrual cycle whose biofeedback is critical in helping women understand their health and fertility. One abiding hallmark distinguishes NaPro’s 45-year history: its family planning component, that is, the regulation of a couple’s fertility and the treatment of female reproductive abnormalities are realized *in cooperation with, rather than suppression of,* the woman’s natural procreative system. In contradistinction to mainline OB/Gyn, then, NaPro’s diagnostic and treatment practices eliminate the need for contraception or sterilization as a method of family planning; exclude the use of the birth control pill for treatment of gynecological situations like endometriosis, polycystic ovaries, irregular periods, and premenstrual syndrome. And, to the point of this discussion, NaPro’s approach to infertility replaces production of human life in a lab via in vitro fertilization with medical and surgical protocols that help to resolve the roadblocks to pregnancy so that infertile couples are better able to conceive a baby within their own acts of marital intercourse.
49. The cumulative pregnancy rate for 1,054 infertile women who were treated at the Saint Paul VI Institute clinic with NaPro for the full spectrum of infertility-causing diseases demonstrates that over 60 percent of these patients became pregnant within twenty-four months, and nearly 70 percent of them within thirty-six months. [Thomas W. Hilgers, *The Medical & Surgical Practice of NaProTechnology* (Omaha, NE: Pope Paul VI Institute, 2004), p. 536.]
50. *Donum vitae*, II, introduction.
51. Moreover, usurpation of dominion over the lives and deaths of these in vitro embryos is not limited to decisions to transfer, to cryopreserve, or to destroy. Denial of the embryo’s right to life also extends to serious endangerment of the baby’s postnatal life and health. The number of multiple births that occur through IVF bring a commensurately higher risk for premature birth which compromises the child’s chances for normal motor and mental development. And in the wake of a high-order pregnancy, the IVF specialist is confident that, if necessary, the woman’s OB or perinatologist will suggest the mother “reduce” the pregnancy from triplets to twin or twins to a singleton birth by selecting the least health baby for termination.
52. *Donum vitae,* II. B. 8.
53. Ibid., 4c.
54. Ibid.
55. Ibid., II.A.1.
56. Ibid., II.B.7.
57. Ibid., II.B.4b.

58. Leon Kass, *Toward a More Natural Science*, (New York: The Free Press, 1985) p. 114. *Donum vitae* (II, Introduction) warns couples who utilize IVF that they also become the victims or patients of the same unjust “dynamic of violence and domination” that is leveled against the child who is to be conceived.
59. Leon R. Kass and James Q. Wilson, *The Ethics of Human Cloning* (Washington, DC: AIE, 1998), p. 24.
60. *Donum vitae*, II. B. 4b.

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Ethical Considerations for Offering Non-Invasive Prenatal Tests Within a Public Healthcare System: A Rule Utilitarian Perspective

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Abstract

Non-invasive prenatal testing (NIPT) appeals to the general obstetrical population due to its reliability and safety in fetal aneuploidy screening. However, it often attracts ethical concerns when offered via publicly funded healthcare systems. Using moral reasoning, this paper makes rule utilitarian arguments to address the ethical question: How can NIPT be ethically offered to the general obstetric population via a public healthcare system for the detection of fetal aneuploidy? Three moral arguments were constructed deductively, upon which three governing "rules" are based. According to rule utilitarianism, policies that consider and conform to these rules should lead to maximization of utility for the greatest number of people. This paper provides a moral foundation for formulating policies that govern the roles of NIPT in fetal aneuploidy screening programs and may, therefore, have implications for many people, including pregnant women, the disabled, and society as a whole.

Keywords

Moral theory, rule utilitarianism, non-invasive prenatal testing, aneuploidy, screening

Introduction

Cell-free fetal DNA (cfDNA) was discovered in maternal blood in 1997.[1] With technological advances, clinical screening for fetal aneuploidy by non-invasive prenatal testing (NIPT) became feasible and matured over time.[2,3] Nowadays, NIPT can be used to screen for three common trisomy conditions, namely Patau syndrome (trisomy 13; relative frequency of 1.4 in 10,000), Edwards syndrome (trisomy 18; 2.3 in 10,000), and Down's syndrome (trisomy 21; 1 in 500).[4,5] There is currently no cure for these three conditions of trisomy.

As a prenatal screening test, NIPT is available in many developed countries, such as the USA, Western Europe, and China.[6] Nonetheless, it remains a self-financed prenatal screening test. In Canada, for example, NIPT is not publicly funded in general, but in certain circumstances may be provided as a "second level contingent test" to women at risk for trisomy 13, 18, and 21.[7,8] In America, NIPT is offered as a direct-to-consumer test via commercial laboratories or individual practitioners.[9] Pregnant women who wish to test for fetal aneuploidy must self-finance or use insurance coverage. In the Netherlands, NIPT has been offered since April 2017 to low-risk pregnant women, who previously had to go abroad for the test.[10,11] In Hong Kong, NIPT is mostly offered by the private healthcare sector, costing approximately HKD 5,000 per test.[12] A local study revealed that despite its relatively high cost as a screening test, NIPT appeals to pregnant women because of its safety (in comparison with other invasive testing modalities, such as amniocentesis) as well as result accuracy and reliability.[13] Pregnant women commonly believe that NIPT provides early access to fetal information, thereby providing a certain level of reassurance regarding fetal health.

The clinical superiority and societal utility of NIPT makes it an attractive prenatal screening modality for health policymakers, and many countries show keen interest in offering NIPT ethically within a public healthcare system. While Hospital Authority (the largest government-funded healthcare provider in Hong Kong) actively plans for a territory-wide provision of the test, the question of how to implement NIPT is not only morally important but also central to relevant policies. During health policy formulation, conclusions that are based on moral theories can stand up to public scrutiny as to why terms within the policies are thus constructed. Healthcare resources are limited, and one may never exclude that when a policy claims to be justified by certain ethical principles (such as those concerned with equality); others may disagree by asking why one principle ultimately takes precedence over others. For the benefits of social solidarity, healthcare policymakers are required to consider the moral aspects of each policy (including NIPT-related policies).

Some clinical practitioners may argue that ethical questions can be completely addressed by merely referencing various ethical statements from international professional bodies.[14-18] Indeed, professional societies or health institutions may “prescribe” or “stipulate” guidance on what ought to be done—or is expected to be done—by conferring a degree of “obligations” to certain parties (frequently professionals, such as physicians and nurses). However, applying general ethical principles may at times fail to adequately respond to the public’s inquiry with respect to the morality underlying the policies that govern the offering of NIPT. By contrast, a systematic analysis based on moral theories with deep-rooted origins in philosophy may provide a stronger base for soundly constructed arguments for or against ethics-related policy allegations in society. Therefore, this paper responds to the urgent need of policymakers (both local and worldwide) by proposing and answering a key question related to the welfare of pregnant women and society, which is on the basis of rule utilitarianism: how can NIPT be ethically offered to the general obstetric population via a public (publicly funded) healthcare system for the detection of fetal aneuploidy?

To address this ethical question, we shall first begin with a short literature review that outlines the current landscape of the relevant moral debate, thereby highlighting the unique knowledge gap that this paper attempts to address. Then, we shall give an account of the ethical position, along with the significance and scope of the present moral discussion. Central to the philosophical views of rule utilitarianism, the concept of utility will then be interpreted in the context of antenatal screening. The philosophical concern as to why NIPT should be offered with an aim to promote reproductive autonomy will be addressed, and by doing so, the principle of utility can be satisfied. Three moral arguments are then proposed, from which certain governing “rules” that are of moral importance are derived as a response to the ethical question.

This paper argues that using these derived rules in guiding the policy formulation process will enable the ethical offering of NIPT within a public healthcare system. For clarity, we shall use the term "non-invasive prenatal testing (NIPT)" in this paper to refer to the screening tests that analyze the fetal genome based on cfDNA in maternal blood.[4] This definition is consistent with the definition of NIPT in a medical context. The word "non-invasive" refers to the way by which the cfDNA sample is obtained.

Ethics of NIPT Application in Detecting Fetal Anomalies: A Short Review

Using the relevant terms (including "ethics," "considerations," "morality," "NIPT," "non-invasive prenatal test," "screening," and "fetal aneuploidy") and the Boolean operators "AND" and/or "OR" where appropriate as the connector, the scope of the electronic search was maximized across four major healthcare databases: EMBASE, CINAHL, MEDLINE, and PubMed.

A total of sixty studies were found, five of which provide important ethical insights into the debates regarding NIPT application in antenatal care.[19,9,10,20,8] Historically, arguments concerning the ethics of NIPT varied considerably when different aspects of morality were evaluated against various sociocultural contexts with different foci of ethical concerns.[21-24] Summarizing this entire spectrum of views is not the primary aim of this paper, as it is not intended to be an integrated literature review. Nonetheless, a general overview of some arguments of relevance to this paper is needed to outline the foundational landscape around which the contemporary moral discussion of NIPT application revolves. Two contrasting schools of thoughts are evident when discussing the morality of offering NIPT as a prenatal screening test in a public healthcare system.

Arguments in favor of using NIPT to screen for fetal anomalies are largely beneficence-based and derived from a deductive approach. Proponents are mostly consequentialists who appeal to the two-fold benefits of NIPT to the welfare of children and the psychological well-being of prospective parents and families.[25,26] Since the emergence of genomic-based technologies in prenatal testing, the notion of offering genetic tests to prevent the birth of an affected child has been widely proposed in the literature. The traditional belief is that some fetal anomalies, such as those arising from mutations that randomly result from a naturalistic course of gene interactions, are not preventable by measures during the prenatal or perinatal stages. Thus, offering a screening test is morally justified if the test ultimately leads to fewer persons who must bear life-long physical and/or psychological suffering due to congenital conditions. Proponents also believe that their argument makes sense, particularly for medical conditions that are characterized by severe or significant disabilities and continuous non-palliative pain.[27] By their interpretation, the severity of a genetic condition should be sufficiently great such that non-existence may be seen legitimate in the best interests of an affected child. In a similar vein, the concept of minimizing "suffering" is applied to pregnant women, as well as couples. The psychological or mental well-being of the prospective parents is of concern here. Studies point out that the negative implications of having an affected child are multi-dimensional, yet they may not stem from the child's suffering per se.[28-32] Mothers may subject themselves to anger and grief by attributing their failures in preventing the congenital condition(s) from occurring, although—in a strict scientific sense—congenital diseases are beyond the control of the mother. The perceived obligations of parenthood may also burden mothers by worrying about failure in providing adequate or ideal care to support an affected child. As a result, this type of moral discussion often concludes that offering NIPT to screen for fetal anomalies is ethical because (1) it helps prevent the birth of children whose lives are likely to be severely and negatively affected by congenital conditions and (2) it protects the mother from the possibility of having psychological distress that may impair her own mental health.

Apart from the above beneficence-based school of thought, arguments against offering NIPT in the healthcare system originate from two groups of people, one that is inclined to a deontological line of thinking[33,34,10] and the other disability rights advocates. Arguments from the former tend to be constructed on the premise that the life of a fetus is sacred.[35] Since the conditions that NIPT screens for are rarely treatable, offering NIPT is nothing more but to hint at the choice of selective abortion for pregnant women if an affected fetus is found. Because abortion sacrifices the sacred life of a fetus and NIPT provides the basis upon which pregnant women may decide to terminate pregnancy, offering NIPT is morally wrong. These arguments have been criticized because their proposed linkage between NIPT and selective abortion could only be justified if NIPT had been offered to encourage women to terminate affected pregnancies. However, a positive result from NIPT should not only be interpreted as a single reproductive choice—abortion is possible but not necessary. Furthermore, bioethics literature does not seem to have a consensus on the moral status of a fetus in the context of reproductive ethics. Supporters who argue from a deontological perspective are also challenged for their views on whether abortion is equivalent to murder if the moral standing of an unborn fetus is not equivalent to that of an adult. Certain ethics studies assign a lower moral status to the unborn fetus when the fetus is at an early stage of neurobiological, psychological, and cognitive development.[36] As a result, the deontological-based opposition against offering NIPT to pregnant women receives relatively little support in the literature.

As for disability rights advocates, concerns regarding the discriminatory and/or stigmatizing messages that are "implied" or "inseparable" from prenatal screening tests often form the basis of their arguments against offering NIPT in a public healthcare system.[37-40] These advocates ask: if certain screening tests are offered for reproductive choices, then why is the screening scope subjectively set for specific genetic conditions but not for others? These kinds of questions initially arose for Down's syndrome, when it was being tested as part of a prenatal care program in the past.[41] Their concerns were intensified when NIPT presented itself as a new screening technology with greater accuracy for detecting trisomy. The following direct quote regarding Down's syndrome appears to fuel their argument: "[B]ut whatever is done, the survivors continue in a state of permanent dependence that imposes a severe burden on their families and on existing forms of social organization."[42] To disability rights advocates, this quote is ethically problematic for its underlying notion that people with Down's syndrome are considered a "burden" on the rest of the society. These advocates then constructed a slippery slope statement that highlights the undesirable societal impacts of the introduction of NIPT. They argue that when NIPT screens and attains its aim to reduce the birth of children affected by a certain genetic condition, people who are living with that condition will be marginalized in terms of social resource allocation. They deduced this consequence from the fact that social resource allocation is negatively influenced when the affected population represents a minority in society and is hence less visible and less vocal.[43] Considering that rule utilitarian appeals to empiricism, the disability rights critique may not hold true, particularly when empirical evidence disputes that their predicted consequences are occurring.[44] Studies revealed that pregnant women who choose selective abortion for an affected fetus after a positive NIPT result frequently choose out of good will to prevent a life that is medically known to present with severe suffering.[45] Another common reason that selective abortion is chosen is that pregnant women perceive themselves as incapable of providing the best conditions to care for a child with disability.[46] Researches highlight that the decision-making process of pregnant women in the face of an affected pregnancy is complex and not simply based on the reason that the fetus is not as healthy as one desires or expects.[47,48]

Following this overview of existing literature, diverse publications were seen in relation to the morality of applying NIPT for different purposes and in different sociocultural contexts. Most studies adopted a generic approach in examining the problem, mostly grounding their views on a selected set of principles in bioethics, such as the principle of justice. Nonetheless, conclusions derived from the selected principles may sometimes conflict with one another. Through the lens of rule utilitarianism, the use of an established normative theory in the analytical framework may allow for a systematic analysis based on a set of philosophical beliefs. Unfortunately, the current body of literature regarding the ethics of NIPT is not often constructed via this approach.

Ethical Position, Significance, and Scope of Moral Discussion

Like other technologies in the field of reproductive genetics, the limitless application and indiscriminate use of NIPT may lead to ethical concerns regarding the long-term impacts on the general welfare of society. Some examples that frequently attract moral debate include the morality of sex selection via NIPT to fulfill the expectations of a cultural group or social norms and the morality of selecting desired traits by NIPT at the expense of fetal lives. Thus, deriving certain rules that are congruous with rule utilitarian values via moral discussion is important for offering NIPT in an ethical way that maximizes utility under a public healthcare system.

We approached the ethical question from a rule utilitarian perspective due to two considerations. First, any plausible moral theory that justifies offering NIPT under a public healthcare system must consider the principle of beneficence, that is, the welfare of pregnant women in society. Rule utilitarianism values utility, and hence its consequentialist reasoning is helpful in the formulation of healthcare policies. The application of rule utilitarianism for our ethical question is thus appropriate in this context.

Second, rule utilitarianism demands an objective assessment of the consequences of offering NIPT to pregnant women.[49] Thus, whether NIPT is offered in an ethical way under a public healthcare system depends on whether the principle of utility has been satisfied. Rule utilitarianism enables us to consider the morality of offering NIPT to pregnant women in terms of the goal of promoting welfare. It also requires us to make an impartial choice that favors good outcomes. Rule utilitarianism emphasizes that if certain rules devised to maximize utility are conformed to, the social utility of NIPT can be maximized in the long run.[50]

Areas that are not within the intended scope of the present moral discussion include the morality of interventions that pregnant women employ based on the results of NIPT, whether it is ethical for a pregnant woman with a positive NIPT result to terminate her pregnancy and the moral status or standing of a fetus and its associated rights.

Interpretations of the "Utility" in the Context of Antenatal Screening

Two lines of thought are morally important when the societal utility of NIPT appears central to rule utilitarian-based arguments. When NIPT is offered under a public health-oriented screening program, the aim of NIPT is likely the reduction of morbidity and mortality of certain congenital genetic diseases in the population.[25,23,24] Thus, the societal utility of NIPT can be evaluated, in a sense, by several quantitative measures, such as the termination rates of affected fetuses subsequent to a positive NIPT result. This line of thinking, which positions NIPT as an instrument (means) to lessen the overall burden of disease on society, may be ethically problematic, even from a rule utilitarian perspective. Considering the circumstances in which an extreme application of economic models can quantify the societal utility of NIPT—whether pleasure (or happiness) can be maximized for the greatest number of people in society—remains doubtful. Suppose that an economic model assesses the societal utility of NIPT in terms of the benefits derived from the abortion of an affected fetus after the test. In this model, it is assumed that if a woman does not abort the affected fetus, the screening test is regarded as bringing zero societal benefit. On the contrary, the screening test will be considered to have great societal utility if the abortion that follows a positive result ultimately leads to savings in public expenditure on the provision of costly medical care to the seriously affected child, decreases in the utilization of expensive health services and treatment modalities for children with trisomy, reduction in family expenditure on taking care of an affected child, and the increased maternal output that would otherwise be lost due to parenting an affected child. In the long run, society may become less inclusive to the disabled, discouraging those traits that are deemed less productive in economic terms. Discrimination and stigmatization for persons living with trisomy will be intensified. Women who choose to give birth to an affected child may be perceived as burdening the societal healthcare resources. Not only parents but also families with an affected child may face great societal pressure for their "irresponsible" reproductive choices (although these choices are meaningful to the parents at least). Similar concerns over the use of such monetary-centered models in evaluating the societal utility of NIPT were raised in the bioethics literature.[51] After all, as rule utilitarian, we are convinced that in the aforementioned circumstance there could hardly be a maximization of pleasure and happiness for the greatest number of people in the long run.

The ethical pitfall in offering NIPT as a public health instrument can be prevented if the aim of NIPT is to promote meaningful reproductive choices by pregnant women. This gives rise to the second line of thought that we are arguing for in this paragraph. That is, for NIPT offered in the antenatal context, the societal utility of NIPT should be evaluated by the pleasure and happiness of the affected pregnant women themselves. Priaulx[52] offers an inspiring philosophical view in his article titled "Rethinking Progenitive Conflict: Why Reproductive Autonomy Matters." The article offers a detailed philosophical account on the social values of reproductive autonomy. We wish to highlight a few points raised in the article to support our interpretation of utility. The social values of reproductive autonomy can be justified by three ideological tenets: the significance of (1) reproduction, (2) respecting human needs, and (3) respecting bodily integrity. Basically, a woman owns her body and no one is in a better position than her to determine what her pregnancy means in terms of self-definition and sense of self in relation to society. Pregnant women are the best situated to determine in what ways reproductive choice is meaningful. A woman who functions as a member in society and parent in the family should be respected for her welfare and interests in knowing critical information regarding fetal aneuploidy. With such a philosophical view in mind, the societal utility of offering NIPT as a screening test for fetal aneuploidy distinguishes itself from the utility of antenatal tests (such as screening for hypertension or rhesus status) that promote the health of the mother and fetus. Societal utility, as it relates to the subsequent arguments in this paper, should not be viewed in relation to economic interests in a quantitative dimension (as certain politicians and pragmatists may favor this approach). Instead, the contextual understanding of societal utility herein should factor in the value of humanity in a civilized society and thus consider the classical interpretation of utility offered by Jeremy Bentham and John Stuart Mill—that is, the pleasure and happiness of pregnant women in the context of reproductive autonomy (or freedom).

Argument Concerning Informed Choice Prior to the Test

This argument contains two central premises (one factual and one normative). Evidence from the literature will be provided to strengthen each premise. Following that, the concluding statement of this argument will form one of the three derived rules.

Firstly, NIPT provides pregnant women with valid and reliable information regarding fetal aneuploidy. A recent high-quality, meta-analysis indicated that NIPT shows highly accurate performance as a prenatal screening tool in the detection of trisomy 13, 18, and 21 for different obstetrical populations.[53] The sensitivity and specificity of detecting each trisomy are 99% and 99.92% for Down's syndrome, 96.8% and 99.85% for Edwards syndrome, and 92.1% and 99.8% for Patau syndrome, respectively. A negative NIPT result was also highly reliable for the exclusion of these conditions.[54] Studies also suggested that false positive results are substantially lower than those achieved with a combined ultrasound and biochemical screening. NIPT can yield accurate and reliable results as early as the tenth week of pregnancy. Furthermore, the results are readily available within seven days.[55] Therefore, we argue that information from a NIPT enables reproductive choices and facilitates the decision-making process.[22,56,57] Early screening provides pregnant women with additional time to consider other confirmatory prenatal tests or reproductive interventions. They can also enjoy a longer period of decision making following a positive test result. For those who will not consider abortion of an affected fetus, a positive NIPT result may be sufficiently informative even without confirmatory testing. In other words, these women are enabled to make their own meaningful reproductive decisions. They have access to early monitoring for fetal development and can consult relevant professionals (midwives, obstetricians, and genetic counselors) to address their concerns. This helps them be in a better position to make a well-reasoned decision in the event of a positive result. The women would also be able to prepare for the birth of a disabled child and thus improve care.

Based on the above discussion, the first premise (as a factual claim) can be established, i.e., NIPT provides pregnant women with valid and reliable information about the presence (or absence) of fetal aneuploidy during early pregnancy (from the tenth week of gestation). The availability of a fetus' genetic information greatly facilitates decision making regarding reproductive choices. Therefore, offering NIPT leads to positive impacts on the welfare of pregnant women.

Another premise (a normative claim) is that in the context of reproductive autonomy, the decision to take any prenatal screening test (including NIPT) should be an informed choice because a pregnant woman has the right not to know about fetal aneuploidy, even if it exists. This premise is grounded in the following evidence: to start with, informed choice is often defined as a choice that is based on relevant knowledge, consistent with the decision maker's values, and behaviorally implemented.[57,58] Often in reproductive ethics literature, an informed choice of whether or not to take a prenatal test is thought to be crucial in the context of enhancing reproductive autonomy.[9,17,18] The need for an informed choice acknowledges the fact that pregnant women have the right not to know. Pregnant women should be made aware that they may be confronted with several unanticipated choices and decisions with the NIPT results. They may wish to avoid the test, if the possibility of these consequences were made known.[10] To make an informed choice, a pregnant woman needs to understand the scope, limits, and purpose of NIPT, as well as its potential risks and implications.[59] A qualitative study found that reproductive choices and autonomy are compromised if a woman does not engage in an NIPT with an informed choice.[10] Some women may feel regretful to be informed of a positive result for a wanted pregnancy. Some think that if they had not been informed of fetal aneuploidy, then the reproductive choices would be paradoxically "easier" and not morally difficult. After all, an informed choice of whether to undergo NIPT should be made by women to protect themselves from the abovementioned negative consequences that affect reproductive autonomy.

Therefore, the concluding statement of this argument and hence the first derived rule would be that a pregnant woman who makes an informed choice of undergoing NIPT should be offered the test because, as a valid and reliable prenatal screening tool, NIPT provides crucial information that enables her to make autonomous reproductive choices.

Argument Concerning Genetic Counseling

There are three premises in this argument. The first premise is that offering NIPT for prenatal screening of fetal aneuploidy may provide several benefits to pregnant women. Firstly, a negative result may reduce maternal anxiety over fetal health.[9] NIPT may also reduce the need for invasive follow-up tests (such as amniocentesis and chorionic villus sampling), which have a 0.1–0.2% risk of miscarriage;[9,11] it may also help women decide if they wish to pursue further invasive tests.[60] Moreover, NIPT reduces the likelihood of unanticipated births of children with aneuploidy[61] and allows women to prepare for an affected child.[60] If a woman decides to terminate her pregnancy, terminating the pregnancy at an earlier time is less physically risky and less emotionally traumatic.[62] Furthermore, NIPT does not have an upper limit for gestational age. Women who present late for their first prenatal visit may still be able to take the test. Such women may otherwise only be able to assess screening modalities with lower sensitivity and specificity rates.[63] Undergoing NIPT, compared with amniocentesis or chorionic villus sampling, is associated with a significantly reduced fear of pain and discomfort.[64] NIPT can be offered in more settings than can invasive testing, making it more available to women. Moreover, a sample of maternal blood can be drawn by a nurse, whereas chorionic villus sampling or amniocentesis require the skills of a specialist physician.[65,66]

Despite that the mentioned utility of NIPT enhances reproductive autonomy, potential risks may also be present under several circumstances.[61,18] False reassurance may result from false-negative test results, although reproductive geneticists generally believe that the likelihood of a false-negative NIPT result is technically rare. On the other hand, false positive outcomes (a likelihood of approximately 0.1%) are possible due to placental mosaicism, obesity of test recipients, presence of a maternal tumor, and/or the influence of ethnicity, such as Afro-Caribbean descent. Some worries may also arise from incidental findings that are of unclear clinical significance.

The benefits and potential risks of NIPT are well recognized in the literature on ethical and policy considerations of the test.[10,8] In general, ethicists acknowledge the listed benefits and potential risks and agree that NIPT demonstrates a superior and favorable utility profile as a prenatal screening test.[9] Various professional societies, such as the American College of Obstetricians and Gynecologists (ACOG), the International Society for Prenatal Diagnosis (ISPD), and the National Society of Genetic Counselors (NSGC), favor the adoption of NIPT for prenatal screening in the healthcare system. They unanimously agree that the benefits (i.e., the utility) of NIPT outweigh the involved risks for pregnant women.[67]

The second premise is that, from a rule utilitarian perspective, the offering of a prenatal screening test is ethically justified when the way in which it is offered can result in the maximization of utility with minimal associated risks. This premise follows the views of rule utilitarianism that a morally right action is the one that produces the most favorable balance of good over evil, everyone considered. Applied to the context of prenatal screening, the rule utilitarian view of whether NIPT is offered in an ethical way within the public healthcare system depends on how the maximization of good (benefits of NIPT) and reduction of associated risks can be achieved. The ethical framework of UNESCO (the United Nations Educational, Scientific and Cultural Organization) shares similar views with rule utilitarianism and specifies that for a prenatal testing offer to be ethically justified, the advantages (utility) should outweigh the disadvantages.[17] Therefore, in addition to the well-argued and favorable utility profile of NIPT, there is a need for a third premise to help fulfill the rule utilitarian views on the ethical offering of NIPT within a public healthcare system.

The third premise argues that non-directive genetic counseling before and after NIPT may maximize the positive outcomes with a reduction in unwanted risks, maximizing the net benefits to pregnant women. Research on the ethics of prenatal testing suggest including information in pre-test genetic counseling, as it is important for pregnant women to make autonomous reproductive choices to maximize the utility of NIPT.[68,18] This information should include the nature (as a non-mandatory prenatal screening test), aim (to enhance reproductive autonomy), and validity of the test, complete information about the tested disorders (including names and general characteristics), possible treatments in case of positive findings, possible unexpected (or unclear) findings of the test, and the kinds of test-outcomes. Pre-test genetic counseling should emphasize that NIPT is not intended for use as an unlimited scope for genome analysis of a fetus. Studies point out that identifying traits with low medical morbidity or uncertain clinical significance may undermine reproductive autonomy.[69] Post-test counseling, by contrast, should be non-directive. High-quality and non-biased information should be offered by trained professionals and should serve to provide options and correct misunderstandings. The norms, values, and attitudes of women towards having a child with a disability should be adequately explored.[70,8]

Therefore, in this argument, the second derived rule is that NIPT should be offered based on a favorable utility profile for which non-directive genetic counseling should be conducted during the pre and post-test periods.

Argument Concerning Testing Fee

Three premises set the basis of this argument. The first premise argues that free-of-charge NIPT may not bring the greatest utility to pregnant women. Charging test recipients a small amount is instead shown to be more appropriate because ill-considered testing may compromise utility. Free-of-charge NIPT may seem to benefit the greatest number of women but does not necessarily lead to the greatest social utility. The literature has raised concerns over the negative ethical implications of ill-considered testing, particularly on the original aim of NIPT in enhancing reproductive autonomy.[10] It was found that asking women to pay for prenatal screening increases the chances that a truly informed choice was made prior to the test.[71]

The second premise, as a normative claim, emphasizes that in addition to a favorable utility profile of NIPT, rule utilitarianism also demands that the greatest number of pregnant women should benefit from the offering of the test. Some may argue that however small the NIPT fee is, it is inevitable that less financially capable women will be marginalized. Such a hypothetical circumstance logically leads to the conclusion that to bring maximum utility, unlimited access to the test is required with the local government (i.e., taxpayers) bearing this needed social cost for the provision of basic prenatal care. Nonetheless, it should be noted that rule utilitarianism values utility as much as it values the number of beneficiaries. Considering the greatest utility of NIPT is to promote reproductive autonomy; a hasty decision to take the test due to its free-of-charge nature is likely to bring the opposite effect. Therefore, rule utilitarianism argues that government subsidies for the less financially capable women may be necessary as a safety net to secure a larger base of beneficiaries.

The third premise suggests that government subsidies for the less financially capable women may help in securing a larger base of beneficiaries if NIPT is offered under the public healthcare system. Reproductive health is a collective responsibility, for which some studies on the ethics of NIPT-related health policies argue that the government should play a role in to facilitate reproductive health at a population-wide level.[9,72] If a government has a role and responsibilities in the reproductive health of its citizens, then it should enable the greatest number of women who can benefit from NIPT; thus, rule utilitarianism supports the provision of government subsidies for the less financially capable groups to undergo NIPT.

To conclude this argument, the third rule is derived, wherein rule utilitarianism favors the offering of NIPT at a small fee and that government subsidies should be provided for the less financially capable groups to enable the greatest number of beneficiaries.

Counterarguments for the Routinization of NIPT

Based on a rule utilitarian line of deductive thinking, consequences are what matters when determining morality over how NIPT is offered. By the three arguments previously discussed, one may pose a morally important question about why NIPT is not routinized as part of the current antenatal screening program. This proposition seems intuitively true in that routinization is more likely to guarantee the greatest number of beneficiaries if the societal utility of NIPT has been adequately argued from the philosophical aspect and found to sufficiently satisfy the principle of utility. Nonetheless, as rule utilitarian, we are conservative as to whether the routinization of NIPT would result in the maximization of societal utility. There is evidence in the literature that leads one to argue that the ultimate aim of NIPT—promoting reproductive autonomy—may not be fulfilled when the test is routinized. Antenatal ultrasonography is a good example of this;[73,74] it was offered with the primary intention to assess gestational age, detect structural anomalies, and monitor the general development of the fetus. It then became normalized in the context of reproductive medicine, and, rather unexpectedly, society gradually viewed it as an opportunity to promote fetal-maternal bonding because the mother can visualize the fetus through ultrasonography.[75,76] Ethical problems then arise when parents are eager to visualize non-medical traits, such as for the hidden purpose of sex selection to meet sociocultural norms and expectations. From empirical experience, the routinization of ultrasonography—serving as a good analogy for NIPT as it is also associated with minimal clinical risks for the detection of fetal anomalies—unpredictably undermined women's informed consent.[77,78] It cannot be excluded that women's autonomous reproductive choice may be compromised by subtle pressures from their partners, families, and society based on ultrasonography test results.

If NIPT becomes a routine test, women may face increasing difficulties in refusing it for fear that declining a screening test with low risk of miscarriage can hardly be justified.[79] Some women may be worried that they will be judged by society as irrational or irresponsible parents-to-be.[79] Eventually the trust of pregnant women in public healthcare services and opinions from professionals may lead women to undergo NIPT without fully understanding the purposes of the test because NIPT following routinization will likely be perceived as "another standard check-up during antenatal consultations." Even healthcare professionals may find it less important to inform pregnant women of the purposes, aims, possible consequences, uncommon findings, and significance before the test. Whether a woman is truly informed regarding NIPT and the impacts on her subsequent decision making on reproduction will hardly be ensured. Some women may then be wholly unprepared for adverse findings. The circumstances discussed above may not lead to a positive impact on the reproductive choices and autonomy of pregnant women. Therefore, when routinizing NIPT, the societal utility of NIPT may not be as much as the current proposed option in which a woman retains the full right to choose whether she wishes to have this optional (non-mandatory) test or not. Several studies have also raised ethical concerns over the effect of NIPT routinization in the literature.[80,81]

Conclusion

By grounding arguments in rule utilitarianism, this paper has merits regarding its novelty. It derives important policy insights using a philosophical and theory-based approach of moral reasoning to solve a contemporary moral issue. Relevant healthcare policies that govern the roles of NIPT in fetal aneuploidy screening programs at a population level should give due consideration to the derived rules. Policymakers should recognize that the ethical offering of NIPT within a public healthcare system may have implications for the welfare of many people, including pregnant women, the disabled, and society as a whole.

As a prenatal screening modality, NIPT shows a favorable utility profile. If it is offered ethically in terms of rule utilitarianism, maximized social utility could be brought to the greatest number of pregnant women via the public healthcare system. Three rules are derived from the moral discussion addressing the proposed ethical question. When healthcare policymakers conform to these rules, it is believed that the social utility of NIPT can be maximized in the long run.

In summary, the derived rules are (1) a pregnant woman who makes an informed choice of undertaking NIPT should be offered the test because, as a valid and reliable prenatal screening tool, NIPT provides crucial information that enables her to make autonomous reproductive choices; (2) NIPT should be offered based on a favorable utility profile for which non-directive genetic counseling should be conducted at the pre and post-test periods; and (3) rule utilitarianism favors the offering of NIPT at a small fee and with government subsidies offered for less financially capable women to enable the greatest number of beneficiaries.

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Overlooked Costs of Legalizing Assisted Suicide and Euthanasia

ARTHUR J. DYCK, PHD

Introduction

Human beings are naturally inhibited with regard to intentionally ending their lives and those of innocent others; human beings naturally love their lives and those of others, and human beings naturally regard human lives as having inalienable worth that is not diminished by or lost by an individual's circumstances or condition. What do all these natural human proclivities have in common? These natural proclivities are acknowledged, sanctioned, and protected as the basis and justification of homicide law. By so doing, homicide law has the effect of defending the natural right to liberty: I will refer to liberty and freedom as self-governance. Being what it is, homicide law grants everyone the right to privacy, that is, immunity from intrusions and restraints on their self-governance. As it now stands, anyone who obeys the laws, particularly homicide law, is free to be self-governing. I now move to consider what would happen to homicide law and what it provides for our inalienable rights to life and liberty when physician-assisted suicide (PAS) and euthanasia are legalized.

The Inhibitions Against Killing Innocent Human Beings

Human beings are naturally inhibited against killing any innocent human beings. If that were not so, it is difficult to see how any laws against intentionally killing innocent human beings could be enforced. Indeed, one can scarcely imagine that such laws would be enacted or that communities could survive or even be formed. In any event, the inhibition against killing innocent human beings is a requisite of the existence and sustenance of individual and communal life.[1]

Preserving and acknowledging the need for—and possibility of—the persistence of the inhibition against killing any innocent human being depends upon viewing the worth of human beings as inalienable, that is, in no way changed by circumstances and conditions of individuals. Furthermore, this persistent worth is legally enforced and is a key basis for homicide law.[2]

Proposals to enact a law that permits the practice of PAS do not accept the whole idea that the worth of human life is inalienable and that our laws should be based on such a concept. Rather, this concept—that life's worth is inalienable—is directly or indirectly attacked, and the worth of life is asserted to be contingent on the circumstances and conditions individuals find themselves in. In effect, then, individuals should be free to find that they no longer wish to live and that being assisted to end their lives should be part of a right to autonomy (self-governance) and a practice that physicians should be legally permitted to render as a service upon request.[3]

Since there are countries and states that have legalized PAS, we can document what happens to our natural inhibitions about killing and having individuals killed by physicians. The natural inhibition that restrains any willingness to kill innocent human beings or allow individuals to do so, is definitely weakened, even severely eroded. Let us now consider some current examples.

In the Netherlands, once physicians who were assisting individuals to end their lives by lethal means were not being prosecuted, physicians also engaged in euthanasia. And the practice of euthanasia has been extended to ending the lives of patients who have not requested having their lives ended. Furthermore, these patients need not even be terminally ill.[4] Clearly, the inhibitions of the physicians (against killing innocent human beings) who indulge in such practices are very weak indeed: physicians act on the basis of what circumstances and conditions they believe make the lives of individuals no longer worth living. For them, then, the worth of any individual life has no enduring, inherent, and unqualified worth. Later below, we shall examine how this dramatically changes the physician-patient relation and the very role of physicians.

The country of Belgium is undergoing the same kinds of behaviors that can only occur if the natural inhibitions against killing innocent human beings are all too feebly present in physicians who assist patients to commit suicide and euthanize them with and without their consent. Furthermore, the law in Belgium now permits ending the lives of children as well. Toni C. Saad in his review of euthanasia in Belgium comes to the following conclusion: “Is it possible to regulate euthanasia and prevent its abuse, risks, and harms? The case of Belgium appears to indicate that the answer is no.”[5]

Legalization of PAS in Oregon presents us with a very dramatic sketch of what a physician can claim to be a justified reason for assisting in a patient’s suicide. Dr. Kade (a pseudonym) professes to be surprised by the desire of one of his patients to have him terminate her life. Though terminally ill, her life did not seem to him to be “terminal” because, as he observes, it is rather:

> in most respects quite remarkable. She was engaged to be married; she still pursued many meaningful activities; and she had a devoted and invested family. She did not seem to manifest any of the characteristics that I considered constituted intolerable suffering…She had no pain, maintained an adequate appetite, and was no longer bothered by night sweats.[6]

So what was there that constituted suffering in her case? She could not live her life as fully and independently as she wished and saw as defining her. As a result, her love of life began to wane and slip away from her. That was a suffering of soul and mind as of body. Dr. Kade could not at first consider what she was suffering as severe.[7]

Dr. Kade saw himself as involved in a vexing dilemma. On the one hand, he believed that all his patients had the right to make informed decisions providing they were capable of that and the decisions were legal.[8] Yet he opposed the legalization of PAS because it opened the door for a seeking of death for the wrong reasons.[9] He describes himself as caught between his belief in patient “autonomy” and his belief in “protecting the public.”[10]

Some months after aiding his patient to end her life, Dr. Kade expresses his confidence that he “made the right decision for her.”[11] And he considers the decision his patient made the right one. He defends the decision he and his patient made. First of all, the patient had the right to choose to end her life because she saw it as futile and as a decision the Oregon statute allowed her to make. At the same time, Dr. Kade, who resisted at first to honor her request but changed his mind, redefined her suffering as "intolerable."[12] He pointedly notes that the patient's love of life was slipping away.[13]

By tying what constitutes intolerable suffering to individuals' loss of love for their lives, Dr. Kade is not thinking of the worth of life as inalienable, as something that cannot and should not be changed. Love of life is, after all, one of the reasons courts have upheld the constitutionality of homicide law that rejects legalizing PAS.[14] Dr. Kade does not indicate any concern about the natural love of life supported and embedded in homicide law. Nor does he provide any reason to reject people's claim to have lost their love of life and to be suffering intolerably as a result.

Suicide prevention hinges on efforts to sustain and strengthen the love of life in anyone, such as those who are depressed. Nor does he recognize the role of physicians changing from unconditional advocacy of life to physicians who allow for advocating ending one's life.[15] Consider that, in the Netherlands, some physicians actually advocate for euthanasia and terminate the lives of their patients, even when they are not terminally ill. One such instance involved a patient being sustained by medication prescribed by her doctor and living what can be described as a meaningful, quite independent life. She's told by her doctor that she should have her life ended. She complies. The doctor then no longer supplies her with any more medication, and her life ends in three days.[16]

Are there sound reasons for regarding love of life as a natural phenomenon characteristic of human beings as such? There surely are. Our love of our own lives and those of others—that is, wishing the self and others to exist—is the cognitive basis for preventing suicides, suicidal thoughts, and thoughts about perpetrating violence against ourselves and/or others. This perception is based upon the natural love of life expressed in people's behavior and our many efforts to protect and perpetrate it in all of us.

Love of life occurs abundantly in the human desires and actions to have children and nurture them so that they have every chance to live and thrive. Consider our communal efforts on behalf of the love of life. These are numerous. Communities have police forces, military forces, firefighters, medical care, both in hospitals and by medical personnel, and enforced restrictions governing life-threatening substances, whether in food, air, water, or medications. All of these efforts are generated by an acceptance of the worth of every human being's life as such, whatever their circumstances or conditions. That is the conviction that is being knowingly or unknowingly neglected or rejected by proposals to legalize PAS and euthanasia.

The love of life is a natural impulse that is requisite of individual and communal life. No child would come into being and survive—nor would any community—if we did not naturally have a love of life for ourselves and others and strong inhibitions against the killing and harming of ourselves and others. Denying that such requisites exist and persist is simply a denial of our real world. This is a denial of why the human species has so far survived. One would think that would be obvious, but the proponents of legalizing PAS and euthanasia appear to be oblivious to the truth concerning what has ensured and will continue to ensure the survival of the human species.

Killing innocent human beings is so threatening that it is regarded and tried as a crime against humanity in an array of circumstances. The practice of involuntary euthanasia by some German doctors in World War II is one of those circumstances. Consider the practices that we have documented as occurring in the Netherlands and Belgium. Freedom from legal prosecution for doctors simply cannot be and is not limited to assisting to end or ending the lives of terminally ill patients. Physicians move from voluntary PAS all the way to involuntary euthanasia, and they do so with impunity, free of being prosecuted. Despite this, proposals to legalize PAS expect to limit PAS to when patients are terminally ill and request it. Where is the evidence that this will be enforceable?

One of the most appealing arguments for legally allowing physicians to end life under these very limited circumstances is that physicians already do just that when they no longer intervene to prolong life—or at least support life—and when they then provide interventions for comfort only.

The Harmfulness of Killing

The most compelling argument—on the face of it—is that of regarding the refusal of medical efforts to prolong life while terminally ill as morally and legally equivalent to having it ended by physicians supplying such patients with lethal means to end their lives. Among the similarities between refusing life-supportive therapies and ending a life by means of PAS, Beauchamp and Childress contend that there is one that puts the burden of proof on those who think it is morally justifiable to let people die but taking active steps to help them die is not. This they believe they have accomplished by specifying when death harms the one who dies, however that takes place. If an individual, they assert, desires death rather than life's more typical goods and projects, then causing that person's death at his or her autonomous request does not at all harm the person who is terminally ill. In other words, the wrong in killing is that individuals killed are thereby deprived of interests they may otherwise pursue and lose the very capacity to plan a future in pursuit of their interests. But individuals who desire death are presumed by Beauchamp and Childress to have no further interests they wish to pursue and so cannot be harmed by taking their lives or having them taken. Beauchamp and Childress have in effect argued that, for individuals desiring death, life has lost all its worth, at least all worth that may be considered morally significant. Add to this individuals who do not desire to pursue life in order to escape from suffering; then denying them their plan is the harm that should be avoided.[17]

Beauchamp and Childress throw out their challenge to those who justify some instances of comfort-only care but no instances of PAS and euthanasia: they must give a different account of the harmfulness of killing than the one offered by Beauchamp and Childress. That is not the difficult task Beauchamp and Childress assume they are setting, since one that now exists is definitely one that is the basis for homicide law and its support for state laws that ban PAS and euthanasia. Now, I turn to what is wrong about killing and requiring oneself to be killed.

What's wrong with killing and having oneself killed is clearly stated in homicide law. To begin with, current homicide law grants everyone the right to freedom (self-governance) by leaving people to make their own moral decisions, subject to obeying the laws of the land against being killed and harmed in a variety of ways, including invasions of privacy by such means as unwarranted searches and seizures. When Beauchamp and Childress declare that individuals who are terminally ill should be permitted to ask to be killed or assisted to commit suicide, they are sanctioning those individuals and others to violate homicide law. What presently is required of individuals—namely obeying homicide law as it now exists—is what allows people to be free (self-governing): Disobeying homicide law results in a loss of one's freedom.

Consider the presuppositions that are not at all examined and acknowledged for their implications by those who propose legalizing PAS and euthanasia. Such a proposal creates a situation in which individuals have no moral responsibility to live in accord with the moral requisites of individuals and communities; natural inclinations to obey these moral demands is what makes it possible to form and sustain communities and enact laws that protect the individual members of these communities. Beauchamp and Childress do not portray individuals as having such moral responsibilities. In any event, they could argue that the terminally ill no longer need be expected to be bound by such moral responsibilities, as long as they pose no threat to the lives of others by any actions they remain capable of carrying out.

The arguments of Beauchamp and Childress noted above suggest some further unexamined assumptions behind their view that one can be harmlessly killed when one has no more interests and opportunities that one wishes and should be required to retain. Beauchamp and Childress have posited an outlook that sees the worth of life to us as human beings as a matter of having interests and projects—interests and projects no one is morally bound to entertain. For them, this affirmation is the most definitive, compelling reason to legalize PAS and remove the restraint of our current homicide law against doing so. Beauchamp and Childress are presupposing that the worth of being alive is not something that endures and should not be required by law to endure; individuals should be free to repudiate life's worth.[18] Homicide law as it now exists regards lives of human beings as always worthy and people as naturally inclined to regard life as worthwhile. To be devoid of such inclinations is not characteristic of human beings; indeed, these inclinations are at the very basis of our laws against killing and being harmed.[19] What are these natural inclinations?

Courts that uphold state laws banning PAS, and so euthanasia as well, cite our natural love of life. This love is normally continuous, and it is upheld, protected, and encouraged by law. People who find their love of life eroding or waning are expected to regain it. That is why we have treatments for depression and other efforts to prevent suicidal ideation and attempts to commit suicide. Homicide law is justified on the basis that the worth of a human life should never be questioned. The worth of a human being should not be subject to being changed by law. The right to life in homicide law is treated as inalienable. To endorse enacting laws that repudiate or ignore this reality is to defy the unqualified endorsement of the natural inalienable right to life found in the Declaration of Independence, issued by key founders of what became the United States. That affirmation of an inalienable right to life is at the same time an affirmation of an essential moral requisite that makes it possible to form and perpetuate a community.

Those who are terminally ill need not and should not shed all interests and projects. All human beings have a moral responsibility to act in accord with the moral requisites that forbid killing and harming innocent lives and asking anyone to kill them or any innocent individual. Retaining those interests and projects is something terminally ill persons can and should do. By various means they can specify their dedication to continuing to affirm the worth of their lives by remaining in compliance with the moral requisites that make their lives and communities realizable. They can specify that their lives not be ended by lethal means and that, under certain circumstances, they wish to be attended by comfort-only medical services. What they are thereby achieving is retaining their worth and freedom to retain it to the very end of their lives.

They are also doing nothing to subvert the interests and projects they view as the most important responsibility of physicians—that is, to remain as advocates of life in every way that their skills and knowledge allow them to carry out these professional responsibilities. These are indispensable interests and projects that are not morally justifiable to curtail; they are interests and projects now supported and enforced by homicide law, affirming that the worth of human beings is not and should never by abrogated by a practice or law. Contrary to the claims made by Beauchamp and Childress, individuals who disown all interests and projects are harmed when they are killed.

The proposals being made by Beauchamp and Childress and the like-minded have us wondering when suicides are to be prevented. When we come upon a person poised to jump off a high bridge, are we to ask them whether they have the proper reasons for ending their lives? Or are we to leave them free to do what they intend to do and free to hold the reasons they have for doing so?

One wonders also what basis for homicide law Beauchamp and Childress and the other advocates for legalizing PAS and euthanasia have to offer. What laws and what view of life’s worth can ward off what is happening in countries like Belgium and Holland, once you accept as their basis the view that life’s worth is justifiably ended when PAS and euthanasia are allowed by the law of the land? Our present homicide law certainly does not justify any laws or practices that claim it should be permissible by law, for those who choose, to dispense with the worth of life. It is a very serious threat to the very survival of individuals and communities to reject the notion that humans by nature love life and are naturally guided by the very moral requisites for the existence and continuation of individuals and their communities. Beauchamp and Childress do not explicitly attend to or address these unfortunate consequences of legalizing PAS and euthanasia.

Among the untoward and life-threatening results wrought by the legalization of PAS are the changes in the role of physicians and physician-patient relations. First and foremost, physicians who prove willing to engage in PAS are no longer predictably or completely advocating and working on behalf of sustaining the lives of all their patients. Herbert Hendin, a U.S. psychiatrist, has called attention to the effect upon physician decision-making in the Netherlands by the practice of ending human lives.[20] On the basis of the considerable data on the practice, Hendin concluded that “euthanasia, fought for on the basis of the principle of autonomy and self-determination of patients, has actually increased the paternalistic power of the medical profession.”[21] Advocacy for the lives of their patients is at a low ebb indeed when you have physicians ending the lives of patients by means of involuntary euthanasia, and, for some of them, on the grounds that their patient has a low quality of life.[22] And so whether physicians advocate for the lives of their patients is literally a matter of life or death. Robert Twycross is clearly asserting advocacy for life and for improving the quality of life for patients in the care of hospice in an article entitled "Where There is Hope, There is Life: A View from the Hospice."[23]

I will present two of the cases cited by Twycross, beginning with the situation of Sydney Cohen. He was told by his physician that he had cancer and would die a painful death in less than three months. Sydney Cohen described himself as "bedbound by pain and weakness, having been unable to drink water for six weeks… desperate, isolated and frightened, wishing for euthanasia."[24] If this is all one knows about Sydney's condition, there are those who would argue that it is humane to grant him a painless death instead of three months of agony if the prognosis is presumed to be correct. Had the law then allowed it, that would have been highly likely to happen at his request.

However, this is not the whole story. Eight months after being diagnosed with cancer and told he had three months to live, Sydney wrote, that under the care of the MacMillan Service (hospice home care), he is still alive and enjoying life because his pain is gone, eating normally, regaining his weight and strength, and thus feeling he is living a full life, worth living. He and his wife have changed their minds about euthanasia: they now oppose it on religious, moral, intellectual, and spiritual grounds.[25]

Sydney's experiences illustrate what a profound difference it makes to be cared for by physicians and nurses who are advocates for life. In his case, it means care that works to increase the quality of life of their patients rather than end the life of patients who profess and/or are deemed to have a low quality of life.

Consider another case in which not only the prognosis is wrong but so is the diagnosis. Mr. CJ at age forty-eight was diagnosed with cancer, told he would die in two months, and would go blind during that time. Yet, thirteen months later, he had suffered no blindness and was in an improved condition that allowed him to go back to work, and that is what he did.[26]

Again, those who sanction and practice PAS and/or euthanasia would consider CJ an appropriate candidate for putting an end to his life before going blind. But during this thirteen-month period in 1989-1990 this was not a legal option: Hospice care was available then and still is now.

What we learn from these two cases is how highly important homicide law's unconditional support of human life is; it allows for and supports the traditional advocacy for human life as a necessary, morally justifiable guide for all medical practitioners, puts a floor under hospice care, and also promotes the efforts to improve the quality of life of all patients in the care of medical practitioners.

There are some additional undesirable consequences that may ensue from legalizing PAS and euthanasia. Such a law may stipulate that all physicians engage in such practices when they receive a request from a terminally ill patient who requests what they are legally allowed to receive. Making such demands of physicians mirrors similar demands for people in business who do not wish to compromise their convictions by being forced to comply with requests from would-be customers that they regard as doing just that. This same problem could possibly arise with respect to the obligation to provide informed consent for patients. Physicians could well be compelled to inform patients who are terminally ill that PAS and euthanasia are options for them to receive upon request. These situations would in many instances weaken or destroy trust in physicians. At the very least, patients opposed to PAS and euthanasia would need to seek physicians who also oppose PAS and euthanasia and will not engage in them, thereby remaining as life-advocating physicians.

No one is able to ascertain all the consequences that will follow from legalizing PAS for the U.S. health care system that now obtains. All we know is that it does change and complicate the lives of physicians from whom the practice of medicine is already more complicated than many would ideally desire. Am I wrong in thinking that people generally would want a physician who errs on the side of life?

The Metaphysical/Theological Nature of Life and Death Decisions

In addressing the question whether PAS and euthanasia can justifiably be practiced and legalized, the term “sacred” is one of the ways in which the worth of the lives of human beings has been characterized. Does this mean that those who refer to life’s worth as sacred are expressing a religious conviction? That has not been the case in every instance.

In 1980, The American Bar Association drew up the Model Penal Code. That code asserted that “the interests in the sanctity of life are represented in the criminal homicide laws” and are “threatened” by anyone “who expresses a willingness to participate in taking the life of another even though the act might be accomplished with the consent, or at the request of the suicide victim.”[27] That an individual’s life is sacred is to describe its worth as continuous and in no respect contingent on life’s circumstances.[28] That in homicide law the worth of human life is not diminished by a person’s medical condition and the wishes of the one whose life is at stake is the view enforced in homicide law by defending life’s sacredness and inviolability.

The characterization of human life as sacred is to be found in the Supreme Court of Canada’s decision in 1993.[29] That court ruled that the law should completely prohibit PAS, since the argument for doing so, as Judge Sopinka wrote, “focuses on the generally held and deeply rooted belief in our society that human life is sacred, sacred and inviolable.”[30] To ban PAS expresses a state interest in not permitting human life to be “depreciated” by “allowing life to be taken;” it is also an interest articulated in the Criminal Code that prohibits “murder and other violent acts against others notwithstanding the consent of the victim.”[31]

Sopinka was well aware that the belief in the sacredness of human life is espoused in the Jewish and Christian traditions. He wished to avoid any entanglement with the issues surrounding the relations between the church and the state. This he did by denying that he at all appealed to authority but rather relied on logic and facts to legitimize his decision to ban PAS.[32] That decision equates “sacred” with “inviolable.” Metaphysically, Sopinka is assuming that human beings naturally affirm the inviolability (sacredness) of their life and thus the continuity of their worth. That same assumption is found in the Christian tradition arrived at from a theological and rational perspective.

In an anthology of Christian responses to suicide, Robert Orr's article clearly articulates a theologically derived affirmation of the sacredness and inviolability of the worth of human life.[33] Orr considers the reality of the sacredness and inviolability of the worth of human life to be one of the strongest arguments against PAS. That is because, theologically, human beings are portrayed as created by God in God's image and they, therefore, have the knowledge of right and wrong and are inclined to do what is morally right. This means that:

> We are not totally autonomous but accountable to a sovereign God who has said "Thou shalt not kill" and has also shown the compassion of the Good Samaritan. We must treat each other with the reverence and respect befitting vessels containing God's image.[34]

In a nutshell, physicians' use of lethal means to assist suicides at their patients' requests to put an end to their lives is strictly an unjustifiable violation of life's sanctity and so of the continuous worthiness of human life under all circumstances; legalizing PAS would undercut homicide law's current support for the sacredness and inviolability of human life.

Theologically, the injunction against killing is described as a commandment of God. However, that killing is a wrong-making characteristic of our actions and is affirmed in our common morality and in homicide law. Indeed, as explained earlier, legally enforcing adherence to this moral requisite is also a requisite of individual and communal life. Were humans not naturally possessed of this inhibition against killing, the human species could not exist. To initiate these practices and laws that undercut this inhibition threatens the existence of the human species.

There are, then, rational and empirically sound reasons to uphold homicide law and the understanding of the image of God put forward by Christian scholars like Robert Orr. On that view of the image of God, human beings are endowed with the necessary natural abilities to make moral decisions and to do so on rational and empirical grounds.

John Kilner has provided us with a remarkably thorough and extensively documented study of the Christian notions of the image of God, in historical and contemporary scholarship.[35] There are differing conceptions of the image of God; most notably, the idea that being in the image of God is something one can lose by losing rational, moral, functional, or relational capabilities. Kilner, like Orr, is among those who affirm that being in the image of God is never lost; our worth as human individuals is inviolable and continuous. For Kilner, that is because being in God's image is not a matter of traits or capacities people have and can lose. Accordingly, we should never portray any human being as unworthy of life. He cannot agree with those Christian scholars who have decided that PAS should be legalized since doing so supports the view that an individual's life can become unworthy of life—that is to say, not worth continuing.[36] We know, historically and even now, the tragic consequences of acting on such an idea.[37]

I am fully aware that there is much more to be said about arguments on behalf of and against legalizing PAS and euthanasia. I have provided more detailed accounts of these matters in *Rethinking Rights And Responsibilities* and in *Life's Worth*.[38] However, what I had not sufficiently discerned and highlighted in either of those publications is that the indispensable basis for rejecting PAS and euthanasia is found in the rationale of our homicide law. What homicide law does is affirm and protect for us the very moral requisites of life that make it possible for individuals and communities to come to be and be sustained. Change homicide law in the way and on the basis of the legal change being sought by proponents of PAS and euthanasia, and you destroy the current protection of behavior vital to the survival of individual and communal lives and existence respectively.

Surely, therefore, we do not dare legalize PAS and euthanasia. The price of legalizing PAS and euthanasia is too high. It is nothing less than the weakening or destruction of the natural forces that have so far fueled the survival of the human species. That is the price for enacting laws that sanction PAS and euthanasia. That is a price too high to pay. We must not and should not pay it.

References

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2. Ibid. See in particular, *Washington v Glucksberg* 177 S.Ct 225 (1997); *Vacco v Quill*, S. Ct, 2293 (1997); *Washington v Glucksberg*, 2265; *Rodriguiz v British Columbia* (107 D.L.R. 4th 342, 1993), 389. See also Arthur J. Dyck *When Killing Is Wrong: Physician-Assisted Suicide and the Courts* (Cleveland, Ohio: Pilgrim Press, 2001).
3. Timithy Quill, *Death and Dignity: Making Choices and Taking Charge* (New York: W.W. Norton & Co., 1993).; Walter J. Kade, "Death with Dignity: A Case Study," *Annals of Internal Medicine* 132, no. 6 (March 21, 2000), 504-506; Ronald Dworkin et alia, "Amicus Curiae Brief" to U.S. Supreme Court reprinted in *Issues in Law and Medicine* 15, no. 2 (Fall 1997), 197.
4. Herbert Hendin, "Seduced by Death: Doctors, Patients and the Dutch Cure," *Issues in Law and Medicine* 10, no. 2 (Fall 1994), 123-68. Richard Fenigsen, "Other People's Lives: Reflections on Medicine, Ethics, and Euthanasia," *Issues in Law & Medicine*, Vol. 26, No. 3 (Spring 2010), 267. Fenigsen cites the official report of the Dutch Government's Committee on Euthanasia that provides the following statistics: In 1990, 4,941 patients who did not request or consent to euthanasia were actively terminated by doctors. Of these patients, 27 percent or 1,334 were fully competent.
5. Toni C. Saad, "Euthanasia in Belgium: Legal, Historical and Political Review," *Issues in Law and Medicine*, vol. 32, No. 2 (Fall, 2017), 204. This conclusion comes at the end of Saad's thorough review.
6. Walter J. Kade, "Death with Dignity," 504.
7. Ibid.
8. Ibid.
9. Ibid.
10. Ibid.
11. Ibid, 506.
12. Ibid.
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15. Hendin, "Seduced by Death." See especially pages 160 & 163.
16. Richard, Fenigsen, "Physician-Assisted Death in the Netherlands: Impact on Long Term Care," *Issues in Law & Medicine* 11, no. 3 (Winter 1995): 283-97. See especially p. 295.
17. Beauchamp and Childress, *Principles of Biomedical Ethics Fifth Edition* (New York: Oxford University Press, 2001), 146-149.
18. The freedom to treat and regard the lives of some individuals as living an unworthy life is based on a dangerous concept, especially when physicians and their government adopt it. The idea of ''life unworthy of life" is what was behind the atrocities committed by Nazi doctors and urged

by the German government. See Robert J Lifton, *The Nazi Doctors: Medical Killing and the Psychology of Genocide* (New York: Basic Books, 1986), 21-144. See also the chapter entitled "The Destruction of Lives Not Worth Living," in Robert N. Proctor, *Racial Hygiene: Medicine Under The Nazis*, (Cambridge, Mass.: Harvard University Press, 1988), 177-222.

19. *Washington v Glucksberg*, 2264 & 2272-3.
20. Henden, "Seduced by Death," 123-168.
21. Ibid, 163.
22. See, for example, John Keown, "Euthanasia in the Netherlands: Sliding Down the Slippery Slope?" *Notre Dame Journal of Law, Ethics and Public Policy* 9, no. 2 (1995), citing data on page 428, data showing that in 31 percent of every 1,000 cases of involuntary euthanasia physicians gave "low quality of life" as their justification for such acts. See also Henk Jochemsen, "The Netherlands Experiment," in John F. Kilner et al., eds., *Dignity and Dying: A Christian Appraisal* (Grand Rapids, Mich.: Eerdmans, 1996), 165-179.
23. Robert G. Twycross, "Where There is Hope, There is Life: A View from the Hospice," in John Keown, ed., *Euthanasia Examined: Ethical, Clinical, and Legal Perspectives* (Cambridge: Cambridge University Press, 1995), 142.
24. Twycross, "Where There is Hope," 142.
25. Ibid, 142-143.
26. Ibid, 158.
27. *Washington v Glucksberg*, 225.
28. Ibid.
29. *Rodriguez v British Columbia*, 107 DLR 4th 342 (1993).
30. Ibid, 389.
31. Ibid, 396.
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34. Ibid, 69. See also Francis J. Beckwith, "Absolute Autonomy and Physician-Assisted Suicide: Putting a Bad Idea Out of Its Misery," in *Suicide*, 223-253.
35. John F. Kilner, *Dignity and Destiny: Humanity in the Image of God* (Grand Rapids, Mich.: Eerdmans, 2015).
36. For a Christian scholar's defense of legalizing PAS, see Daniel C. Maguire, *Death by Choice* (Garden City, N.Y.: Doubleday, 1984). For a moral argument favoring PAS, see Karen Lebacqz, "Reflection," in Lammers and Verhey, eds., *On Moral Medicine: Theological Perspectives in Medical Ethics* (Grand Rapids, Mich.: Eerdmans, 1998). Maguire is a Roman Catholic; Lebacqz is Protestant.
37. For numerous examples, see Kilner, *Dignity and Destiny*, ch. 1.
38. Arthur J. Dyck, *Rethinking Rights and Responsibilities* and *Life's Worth*.

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BOOK REVIEW

The Disappearance of Moral Knowledge.

Dallas Willard, Edited and completed by Steven L. Porter, Aaron Preston, and Green A. Ten Elsof. New York: Routledge, 2018.

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Dallas Willard worked for years on a book about the way that moral knowledge has disappeared from our societies. Many projects pulled him away from this book, including many of his popular-level treatments of spiritual formation and related speaking engagements. But he continually returned to it and talked about it with students and peers. Willard's untimely death left the project unfinished, but one of the last things he did was agree to allow three men (the editors noted above) to finish the book for him. The resulting eight chapters are predominantly Willard, with the most editorial work done in chapters six and seven. Through Willard's careful thinking and the caring work of these editors, Willard's final work presents a strong and important thesis for understanding our modern world and our understanding of right and wrong.

In the first chapter, Willard lays out his argument for his basic thesis: though moral knowledge was once commonly studied and taught as a serious body of knowledge, that is no longer the case. He notes that this could happen in one of two ways. First, there could have been a time in history when a reasonable case was made to change this view. Second, it could have simply happened through a variety of complex causes. Willard argues that the second is the case. No one actually proved that moral knowledge is inaccessible or nonexistence; rather, various ideas caused this shift. He names a few: discarding religion as authoritative in any way, removing the human self from the arena of true knowledge, the fact that morality varies from culture to culture and that morality could be used as a power play, to name a few (8-11). After laying out these causes and a couple others, he spends the rest of the chapter laying out the implications of this change and the way authoritative institutions have made the change (universities, via both administration and faculty, specifically). This chapter provides the best overall sense of what Willard wants us to see across the whole book. Chapters 2-7 dive into specific treatments of moral knowledge and why they ultimately failed to overcome the disappearance he has charted.

Chapters 2-7 are composed of close readings of important philosophers and movements that impact the changes Willard traces. He argues for "stages" in the disappearance of moral knowledge. The first stage was the late 1700s to the mid-1800s, when the prevailing ethical understandings in Europe began to fall apart. The second phase, covered in chapter 2, responded to this change by attempting ethics as a "science," as a body of secular knowledge. This included the work of G. E. Moore, the focus of chapter 3, leading into nihilistic interpretations. Noncognitivism, especially Emotivism, represents the third phase, making moral judgments not really about anything at all. Willard covers these issues in chapters 5 and 6. From 1950 to the present, the fourth stage represents various attempts to pull back from Emotivism and ethical Nihilism without reverting to the types of ethical knowledge that had fallen apart in the first stage. Willard focuses on two examples for this phase: Rawls (ch. 6) and MacIntyre (ch. 7). He finds both ultimately failing.

Willard concludes the book with "Prospects for a Return of Moral Knowledge," which the editors' note he did not finish. Ultimately Willard views the disappearance of moral knowledge to be related to two main failures. First, "the failure to identify one subject as *the* subject matter of moral theory and to stay focused upon it" (352). In other words, the fact that ethical inquiry quickly jumps from persons to communities to issues and so on, has weakened its ability to keep a necessary focus. Second, "a persistent tendency to try to force moral knowledge into a model or form of knowledge which it simply cannot assume" (352). In other words, ethics overreaches, tries to do too much, fails to do that, and then encourages skepticism about the possibility of ethics at all. Willard's unfinished "steps forward" center on the idea that ethics should focus on the good person as the central subject of ethical theory, and should emphasize the life and challenges of particular people in particular relationships in particular situations, rather than grand theorizing.

Willard's work in this book demonstrates his genius, breadth of thought, and careful analysis of the philosophical tradition. He makes a good case for what has gone wrong with ethics over the past 250 years, and even though his steps forward remain a sketch, they show promise in avoiding the main problems he identifies. After completing this book, it is easy to see why Willard viewed it as such an important scholarly contribution. It is certainly that, though as a scholarly contribution it asks a lot of the reader: a hefty price tag to begin with, but also the patience to go deeply and slowly through the key players. The book is certainly worth being aware of, but only plan to obtain it if you've counted the cost, in money and in time, to engage it well.

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