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HEALTH AND HUMAN WELLNESS IN MODERN TIMES: HOSTAGE TO TECHNOLOGY AND HUMAN INNOVATION

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Abstract

Technology, envisioned and engineered by human innovative quest, has been an effective tool to humankind's progress across the centuries. But when technology becomes so powerful as to usurp human decision making and the human person is so beholden to the spell of technology as to abdicate his/her role in making life's choices and decisions, it does not bode well for humanity's future. Technology appears to have staked a stranglehold on human affairs in the modern times, incapacitating the human person to decide for oneself, calling the very human identity itself. Modern medicine and health care is an area of modern life where this stranglehold of technology is most profoundly felt, determining every choice made on human health and wellness. The following reflection examines the current status of medicine being a hostage to technology and explores how to remedy the situation.

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1. Introduction

Humankind's self-understanding of its own origin and destiny that has endured across the centuries and millennia of recorded and

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remembered history, notwithstanding the diverse religious and cultural world-visions that inform and ground it, manifests an inherent quest to enhance the societies and the manner in which human life is lived. Since the ancient times, the human person has employed his innate intellectual endowments and creative energies to harness the forces of nature, solve the quotidian conundrums that he encountered and explore ways to better life. It is this relentless human quest that begot human cultures and civilizations as we have come to know them and continues to nourish them. The plethora of techniques that human mind has engineered and perfected, dating to the earliest, perhaps, of the orgies of the hunter-gatherers of the ancient wild to the networking of the most modern human communications on the world-wide-web or the sequencing of the human genome in our times, most of which are now ordinarily taken for granted, are the handiworks of this indomitable human spirit and its evolving life-quest. Human life as we live it today will be impossible without these innovations of the human spirit.

The diverse world-visions that ground and guide the human story perceive and interpret this perennial human life-quest in uniquely different ways, even as they esteem and foster it. The strictly humanitarian traditions recognize it as an inalienable constitutive element of simply being 'human'. Theistic traditions, spanning the whole spectrum of monism, pantheism, polytheism or monotheism, assign this quest to the 'divine milieu' in which the human story evolves under the watchful care of the 'Divine'. The human life-quest is part of a larger project underway in the cosmos: Encountering, experiencing and living in and into the 'divine mystery' that is being manifested.[1] Judeo-Christian tradition discovers this life-quest as his/her vocation, integral to his human core as unique handiwork of God, sharing the evolving creative project of God as the creation stories of Genesis proclaim. The Christian vision, however, underscores that human person is endowed with freedom and ability to choose how he participates in this evolving creative enterprise of God and, impacted by the effects of original sin or sin at its origin,

[1]Though the ground-breaking insights of the French Jesuit, Teilhard de Chardin (1881-1955), Paleontologist and theologian, outlined in his magisterial works — *The Phenomenon of Man* and *The Divine Milieu* — were frowned upon and censured by the Church as they were proposed, they have not only found greater currency and approval in our times, but are now inspiring new spiritual quests and spiritualities, incorporating insights from science and the Gospel. A good exposition of Chardin's insights can be found in *Teilhard de Chardin: The Divine Milieu Explained: Spirituality for the 21st Century*, by Louis M. Savary, Mahwah, NJ: Paulist Press, 2007.

he/she tends, often, to engineer his/her future apart from the design and purpose of God. Though redeemed by the death and resurrection of the incarnate Son, human person still labours under the weight of sin and, if unchecked, can be inclined to use his natural endowments even to his own peril.[2]

Whenever the human innovative quest tended to run amok and out of control, causing in the process unfathomable destruction and human anguish, the world-visions that undergird the human cultures and societies have demonstrated remarkable resilience to rally their moral capital not just to issue caution, but channel this quest in creative ways to benefit humanity as a whole. Modern generations are witnesses to the immense good that this moral impulse within societies and cultures can inspire. The modern day campaigns dating back to the struggles that the Church spearheaded for the rights of the labour class in the early industrial age, informed and led by the ground breaking teachings of Leo XIII through his *Rerum Novarum*[3] and the trajectory of social teachings that followed, and the ongoing campaigns on behalf of world peace and human rights that rally everyone on the religious, cultural and socio-political spectrum are the best testimony to the power of this moral impulse within humanity. *Laudato Sí*, the encyclical letter of Pope Francis 'On Care for our Common Home' is the latest of these efforts to infuse caution and advise prudence in this insatiable human quest for innovation in the context of the irreparable damage and destruction that the earth and environment has endured.

There have been a lot of efforts in modern times to describe the invasion of technology into human lives in general and critically examine its impact on society and social institutions. Though there has been considerable focus on technology in general, there has been very little attention, perhaps, on the role that technology and innovation play in contemporary medicine and health care, and equally less effort to assess the immense benefit that technology can bring to treating human ailments as well as the harm that it can cause. Any new technology that offers some hope or benefit is easily adopted and integrated into the treatment regimen. A genuine audit

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[2]This perspective on human labour as sharing and celebrating the creative activity of God is explored by the author in "Human Labor: Vocation to Share and Celebrate the Divine Creativity," *Religions-Adyan Journal* 7 (2015) 50-57.

[3]Leo XIII, *Rerum Novarum* (1891). The translation used herein is from *Catholic Social Though: The Documentary Heritage, ed. David J. O'Brien & Thomas A. Shannon.* Maryknoll, NY: Orbis Books, 2009.

on the stranglehold that technology exerts on modern medicine is not just imperative, but it is, perhaps, overdue. The following reflection attempts such a review and audit, informed by the author's own Christian perspectives and world vision, and examines the contours of the course correction and reorientation as needed.

2. Contemporary Times: Era of Technological Maelstrom

The times we live in are unprecedented in the entire human history for the all pervasive presence of technology in our world and the domineering impact it has on every nook and cranny of human life and world today. With the invention of first home computer in 1977 and the first personal computer in 1981, coupled with the debut of windows operating system in 1985 and a cohort of other apps — dial in modem, Wi-Fi, instant connectivity among others — a 'new flat world' arrived, as Thomas Friedman observes, and we were instantly transformed into 'netizens' inhabiting a shrunken 'global village.'[4] Communication apps and facilities leaped in 'generations' and we are now inundated with information, data and technology of all hues. Finally we have now reached the smart era: Smart phones, smart cities, smart cars on autopilot, remote controlled drones, and finally, smart humanoid robot that can think and feel like the humans and take over human functions! But the way we live our frenzied lives today leaves me to wonder if we have become any smarter. On the contrary, we appear to be confused and dazed, unable to chart our ways, eager to surrender our freedom and judgment and be hijacked by the power and prowess of technology. A veritable technological maelstrom is raging around us. All the certainties of the past are being gouged out of us to be reconfigured and recast: family, society, human happiness and human identity itself. Strong under currents are washing away the very sand under our feet and unless we rediscover our moorings and secure our anchors, we and all we have held sacred to human life and happiness are equally threatened to be carried away by the force and fury of this storm raging around us.

3. Technology and Medicine in Modern Era: An Audit

One of the areas that is profoundly and poignantly impacted by this technological maelstrom in our times is the domain of Medicine and how we perceive human life, human well-being and human illness and how we treat human diseases. Medicine and the domain

[4]Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century*, New York: Piccador / Farrar, Straus and Giroux, 2007, 10-11.

of healing is no stranger to technology and vice versa. Dating back to its earliest forms as practiced in the earliest societies as 'folk practice and as religious ritual,' as Albert R. Jonsen informs us in his instructive survey of the evolution of the healing profession and ethics in medicine, *A Short History of Medical Ethics,*[5] medicine/healing and its practitioners relentlessly explored various means to address human illness: pills, potions, psychedelic drugs and every other remedies possible. As early as the fifth century BCE, healing work in the western culture, Jonsen observes:

> (B)egan to evolve into "rational medicine" based on empirical observation and logical reasoning. Healing began to be called an *art or skill (techne)* and its practitioners *craftsmen (demiourgoi),* but it was equally a form of learning (*paideia)*... The new medicine takes literate shape in a collection of 70 treatises known as Hippocratic Collection... The collection is a medley of works with little in common but the Iconic dialect in which they are written and the intent to explain the nature and course of disease, and the means of healing.[6]

These observations that Jonsen makes about the western medicine, he also found, were true of other oriental cultures and civilizations, especially those of China and the Indo-Gangetic plains, which evolved simultaneously with the developments in the West and even cross-fertilizing the different approaches.[7]

The founding of the first Christian hospital at Caesaria in Cappadocia by St Basil towards the end of the fourth century CE, observes Jonsen, inaugurated the second great sweep of medical history. "The very conception of medicine, as well as its practice, was deeply touched by the doctrine and discipline of the church." This hospital which became a prototype for other similar institutions cast healing of the sick in a radically new perspective: sharing the healing ministry of Jesus, the healer, "the work of caring for the sick was defined as a work of Christian compassion and service of God."[8] St Basil's words about the dignity of medicine and the need to employ diligence in perfecting this art capture the attitudes and vision that inform the Christian apostolate of ministering to the sick down to the contemporary times in the west and as the western Christian model

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[5]Albert R. Jonsen, *A Short History of Medical Ethics,* New York/Oxford: Oxford University Press, 2000, 1.

[6]Jonsen, *A Short History of Medical Ethics*, 2.

[7]Cf. Jonsen, *A Short History of Medical Ethics,* Chapter 3: "Medical Ethics of India and China," 27-41.

[8]Owsei Temkin, *Hippocrates in a World of Pagans and Christians*, Baltimore, MD: John Hopkins University Press, 1991, Ch. 12, as cited by Jonsen, cf., Ch. 2, footnote, 9, page 126.

spread to the rest of the world, it became the paradigm for the rest of the world and other traditions of medicine. St Basil wrote:

> We must take great care to employ the medical art, if it should be necessary, not as making it wholly accountable for our state of health or illness but as redounding to the glory of God... we should neither repudiate this art altogether nor does it behove us to repose all our confidence in it... when reason allows, we call in the doctor but we do not leave off hoping in God.[9]

Soon the church produced handbooks and manuals to instruct the faithful, the priests and the others in the pious work of caring for the sick. The Cathedral schools and the medieval universities that followed cultivated medicine as a discipline, fostering study and research to enhance the discipline. The religious communities that emerged in the middle ages and later in the 18th and 19th centuries that were wholly dedicated and vowed to the care of the sick took the discipline further and research for better cure and care became part of the vowed vocation.[10] The contemporary health care system seen all across the world with care organized in different disciplines and specialties — with minor modifications if ever there are — is the net result of that abiding commitment of the Christian vision and vocation.

Research for better methods of medicine, healing and care, better skills, advanced techniques and technologies, hence, are not anathema or antithetical to the work of healing, rather they are critical to the success of the profession. Humankind must reinforce its efforts to find more effective cure for the ills that plague humankind and design better ways of caring for the sick. However, the technological breakthroughs that science and research have sponsored and furthered in contemporary times, with their infinite possibilities of applications, do pose genuine conundrums as they are increasingly incorporated into healing and health care, often with adequate whetting or evaluation. These cutting edge researches and breakthroughs, unprecedented and momentous as they are, do raise serious questions about the very meaning of health, human well being, human illness, human life and death, and the traditional answers that have been supplied by the various cultural and religious visions in the past appear to be wanting in engaging them, much less answer them. They do raise many pertinent questions that call for serious engagement: What is care? What is human life? Is medicine

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[9]St Basil, "The Long Rule," in St Basil, *Ascetical Works,* trans. M.M. Wagner, Washington, D.C.: The Catholic University of America Press, 1950, Rule 55. Cf. Jonsen, *A Short History of Medical Ethics*, 14.

[10]Josen, *A Short History of Medical Ethics,* 13-16.

invariably obligated to cure the ills or does it have a goal beyond mere cure? Should all that is scientifically and technologically possible be permitted? Should all that is technologically and scientifically possible be incorporated into medicine and health care? Should medicine and the healers minister to life or master life? Answering these questions would call for a familiarity with the type and range of technological breakthroughs that are available for medical applications and are already in different stages of adoption in the medicine and health care.

4. Technological Breakthroughs as Applied in Modern Medicine: A Survey

Answering the questions posed by the modern technologies applied to medicine, as analyzed above, calls for some degree of familiarity with these. The following survey is not intended to be exhaustive or scientific, but a cursory one from the vantage point of a moral theologian, so as to make informed ethical judgments about them. The categories employed need not adhere to any canon or conventional pattern, but are designed for easy classification.

4.1. Begetting and Caring for the Nascent Life

Until the recent past, begetting a child was a process more subject to the whims of nature or the pleasure of the 'gods'. If and when a couple is blessed with an offspring, the preoccupation was rarely with what sort of a child they were given, but if the child would survive and 'could be given any future at all.' Breakthrough research in modern times has given the human person greater control over the process of human production as well as the quality and future of the product — the offspring as well. Science has the wherewithal that can enhance the natural processes or substitute the processes and even postpone the very process of begetting till it is convenient and conditions are right! Technology has also advanced not just to ensure a future for the nascent life, but also ensure a degree of quality for the same.[11]

4.1.1. Advances in Human Fertility and Reproductive Technologies

Humankind has has always manifested great ingenuity and innovation to deal with various issues encountered with regard to

[11]Michael R. Panicola, "Care of Critically Ill Newborns," Chapter 5 in Michael R. Panicola, David M. Belde, John Paul Slosar, and Mark E. Repenshek, *Health Care Ethics: Theological Foundations, Contemporary Issues and Controversial Cases*, Winona, MN: Anselm Academic, 2007/11, Revised and Expanded, (Hereafter referred to as *Health Care Ethics*), 124-55; Mark Repenshek, "Reproductive Technology and the Quest for Offspring," Chapter 6, *Health Care Ethics*, 156-57.

human sexuality, fertility and conception. But science has unveiled a plethora of technologies and therapies that give the couples power to decide when to conceive, how to conceive, if conceived should it be carried to term and who should carry it to term, biological mother or a mother on rent, abort the process or freeze the process — the embryo — to be thawed to life again at an opportune time in the future. The frequently used among the Reproductive Technologies **(RT)** according to Panicola and others are a) *Artificial Insemination (AI), and b) In Vitro Fertilization (IVF).*

Though both methods differ in strategy, both separate human reproduction from the process ordained by nature: sexual intercourse. In its simplest form, AI involves injecting sperm directly into the woman's uterus. Though originally used to treat infertility in married couples, third party sperm donation has become fashionable since 1975, changing the equation. Heterosexual or lesbian women are resorting to the same process now for begetting children. With the birth of the first 'test-tube baby' Louise Brown in 1978, IVF became the popular reproductive intervention — taking the fertilization of egg outside the body, throwing open various possibilities now: egg and sperm from the same biological parents or from different donors, the embryo being transferred to the prospective mother or another lending services as a gestational mother to carry the pregnancy to term. The obvious puzzle thrown up is three sets of parents: biological / genetic parents, gestational parents and social parents![12]

4.1.2. Contraceptive and Abortive Technologies

Even as modern science offers immense hope and possibilities for begetting a child, it has empowered the humankind, especially the women, with equally immense power to prevent conception or abort a pregnancy. An ever increasing cornucopia of pills, potions, gels, devices and even surgical procedures are available now to prevent conception, temporarily or for the long range. Even reversing the surgically induced sterility is reversible. Alongside, an unwanted pregnancy can be aborted in various ways: Different abortive procedures are available depending on the stage of the pregnancy. Latest to debut is the drug: RU 486 — a combination of two drugs: mifeprstone and misprostol, taken under physician supervision that will decrease the hormones that maintain a pregnancy and cause the embryo to detach from the uterus. Research is still in various stages to come up with less invasive and more convenient procedures.[13]

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[12]Mark Repenshek, *Health Care Ethics,* 157-161.

[13]John Paul Slosar, "Abortion and Maternal-Fetal Care," in *Health Care Ethics*, 94-123.

4.1.3. Technologies to Enhance the Product of Conception

Rapid advances in imaging, egged on by the ever evolving processes and technologies in computing, has made peering into the human body, into the innards and the their working, a sophisticated art well beyond the conventional X-Ray machines we have been accustomed to during a routine hospital visit. Coupled with advances in genetic research, technology today gives us a whole array of arsenal to peer into the future life about to be formed, even before it is contemplated, and determine the quality it ought to have, learning more to enhance the future of human life. The assessment of the current status of affairs that Panicola and his team offers is enlightening and equally perplexing in this regard. They inform us that:

> Today's technology has expanded our ability to detect the risk of passing along genetic conditions to our offspring even before conception occurs through carrier testing (CT), and carrier screening (CS). Diagnosing fetal anomalies inside the womb through prenatal diagnosis (PD) has also become a part of routine obstetrical medical practice today. It is now possible to detect genetic mutations that will result in inherited genetic conditions before implantation in the womb for embryos created through IVF, a technique known as Preimplantation genetic diagnosis (PGD). PGD enables parents to choose which embryos, depending on certain desired or undesired characteristics, they want to have implanted.[14]

While the Carrier screening and testing enable couples to so plan pregnancies that they can avoid passing on to their offspring the mutated genes that are responsible for various genetic diseases that are specific to different ethnic and racial groups. A slew of PDs: *Ultrasound, Nuchal fold translucency, Chorionic vill sampling (CVS), Maternal serum marker screening (MMS), Amniocentesis, Testing polar bodies, Testing embryonic cells*[15] are now available and in use — in various stages depending on what area of the world we are surveying — that help couple to decide what sort of baby they should plan or should design. Designer babies are no longer an idea or dream, but a possibility, making yesteryear dreams into today's daydreams and tomorrow's nightmares.

4.2. Ministering to Life as It Flourishes

4.2.1. Neonatal Care

Advancements in the care of critically ill newborns — newborns with congenital malformations, extremely small and premature

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[14]Mark Repenshek, "Reproductive Technology and the Quest for Offspring," in *Health Care Ethics,* 156-190.

[15]Mark Repenshek, "Reproductive Technology and the Quest for Offspring," 161-164.

newborns, and newborns suffering from brain-damaging conditions[16] — have given rise to a new specialty, *neonatal medicine*, which has developed means to save the above mentioned critically ill newborns who previously would have died, shifting their care from general paediatric and obstetric practitioners to specially trained nurses and physicians in neonatology and perinatology.[17] This specialized care has also spawned new organized hospital units designated as neonatal intensive care units (NICUs). Moreover as Panicola observes:

> (T)the diagnostic and therapeutic innovations of the last fifty years in neonatal medicine, coupled with improved prenatal and obstetric care, have contributed substantially to the declining mortality rates of infants (under one year) and neonates (less than 28 days)... Not long ago few newborns weighing less than 750 grams were actively treated. Today, however, newborns weighing as little as 400 grams and newborns delivered as early as 22 weeks' gestation receive treatment in the United States and these limits continue to be challenged.[18]

4.2.2. Preventive and Curative Medicine

The victory and mastery that humankind has achieved in our days in its relentless campaign against human diseases is unprecedented. Scores of epidemics and pandemics that plagued it down the centuries and still haunt human memory have been not only brought under control, but have been eradicated. Polio, leprosy, small pox and malaria to an extent can make the list of the diseases that have been completely eradicated or controlled. Many others are containable and treatable and effective remedies are emerging from human innovation. Cancer may be one of the last frontiers to be conquered. Even as new cancer strains are being discovered, newer and more effective therapies, procedures and drugs are also entering the scene, either are on trial or already are incorporated into routine care. Aggressive research is underway to engineer newer and more effective remedies and cures, with a new one or other being patented every other day. The instant interconnectivity that is available today facilitates real time research, rallying the best minds and resources from across the world, in a real collaborative interface.

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[16]Michael Panicola, "Care of Critically Ill Newborns," 124.

[17]Peter P. Budetti & Peggy McManus, "Assessing the Effectiveness of Neonatal Intensive Care," *Medical Care* 20 (October 1982) 1027-39. Cf. Panicola, "Care of Critically Ill Newborns," in *Health Care Ethics*, 127-128.

[18]Panicola, "Care of Critically Ill Newborns," 128-129; Marilyn R. Sanders, Pamela K. Donahue, Mary Ann Oberdorf, Ted S. Rosenkrantz, and Marille C. Allen, "Impact of Perception of Viability on Resource Allocation in the Neonatal Intensive Care Unit," *Journal of Perinatology* 18 (September-October 1998) 347-351.

Humankind's duel with diseases is not restricted to curing them. Instructed by the past, the human mind has invented, designed and implemented effective preventive measures to equip and strengthen human immunity and preparedness to fight the pathogens that routinely afflict humankind. Strains of vaccines, diagnostic and prognostic procedures, campaigns to educate in hygiene and healthy living and living environments are some of the salient features of the multipronged strategy to prevent illness from ravaging human societies. The success these efforts have achieved is for everyone to see and the contemporary human life indexes, rising life expectancy rates all across the world, reduced infant and maternal mortalities, etc. are some of the pointers in this regard, notwithstanding the new strains of illness and epidemics that are debuting with greater force and fury as well. The progress that medicine has achieved thus far, nevertheless, gives reason to hope and augurs well for the future.

4.2.3. Regenerative/Reconstructive Medicine and Life Enhancement Technologies

The days when those who had to bear the stigma of living with disfigurement, sustained either from birth or from traumatic events or accidents, are bygone. Science has advanced and fostered new lines of medical and surgical procedures that heal those with disfigurement. Plastic and other reconstructive procedures are believed to have existed from the ancient days, and according to Wikipedia, reconstructive surgery techniques were being carried out in India as early as 800 BC. Sushruta, the Indian physician, is credited to have made important contributions to the field of plastic and cataract surgery, dating back to 6th century BC and is revered as the Father of Plastic Surgery.[19] Varieties of reconstructive procedures are available in the market now, depending on the desire of the client and his/her wallet.

Plastic surgery is a medical procedure with the purpose of alteration or restoring the form of the body. Though cosmetic or aesthetic surgery is the most well known kind of plastic surgery, plastic surgery itself is not necessarily considered cosmetic and includes many types of reconstructive surgery, craniofacial surgery, hand surgery, microsurgery, and the treatment of burns. While plastic surgery focused on restoring the form of the body, the increasing success of organ transplants, coupled with the advances in

[19]https://en.wikipedia.org/w/index.php?title=Plastic_surgery&oldid=709941930 (Retrieved March 13, 2016)

stem cell research and genetic medicine, has streamlined a new line of medicine: restoring and regenerating the bodily functions which were handicapped or atrophied due to illness or accident. Add to the melee, the increasing number of sex change procedures available — known under different names: SRS (Sex Reassignment Surgery) or GRS (Gender Reassignment Surgery) — brought into public glare and discussion with the high profile announcement or self-proclamation of Bruce Jenner of Kardashian/Jenner breed changing himself to Caitlyn Jenner and adorning the cover page of Vanity Fair in 2015. Anything is within the reach of those who have the money and chutzpah: Facelift, nose lift, breast reconstruction, and in our own days, even acquiring a new identity!! The breakthrough research in Genomes and Genetics, currently underway all across the world, gives the human person the ability and the arsenal as well to 'breed out' undesirable traits and promote desirable traits, either voluntarily or otherwise.[20] Possibilities of 'desirable societies' are immense today, raising the nightmares of yesteryear Nazi experiments in eugenics once again.

4.3. Accompanying Life as it Ebbs Out

For all its boasts of the prowess and power over illness, pain and human suffering, humanity finds the most vexing and perplexing questions in the care of those at the end of life — End of Life (EoL) care — and have to come to grips with the inevitable reality of human mortality. End of life (EoL) care refers to the care of the persons who have been diagnosed with a terminal illness, those who are actively dying and near death, and those who have made a conscious choice to shift the goals of their care from curative and aggressive to comfort-oriented.[21]

With all the technology and advances in medicine, death and pain attending on the last phase of life remains a perplexing puzzle. With the misconception that modern medicine and technology has fostered among the medical fraternity and the general public about the goal of medicine invariably oriented to cure and healing, everyone finds it difficult to acknowledge the reality of death. Coming face to face with the last frontier on this side of life, some reckon it a failure of medicine to accept the point when treatment is futile. Many tend to flee the concept and reality of medical futility: understood as any effort to

[20]John Paul Slosar, "Current and Future Applications of Genomic Technologies," in *Health Care Ethics,* 217-241.

[21]David Belde, "Rethinking End-of-Life Care," *Health Care Ethics,* 326.

initiate or continue treatment when it is unlikely to succeed in achieving its desired ends.[22] Others would settle down to fight for clinging on to life at any cost, hooking up the patient to every other instrument that can prolong life including artificial nutrition and hydration. Pulling the plug to let life take its natural course sounds ominous. Others would not find any meaning in the pain and suffering that accompany the final departure from life and would advocate a compassionate end to life, assisting the patient to die with dignity, no matter what euphemistic terms we use to describe the process: Euthanasia, death with dignity, Physician assisted suicide, letting the person courageously choose death etc. Some even would look down upon switching to 'hospice' or 'palliative' care as the failure of medicine! Decisions in the end of life situations are painful and perplexing, especially when medicine is tied exclusively to the goal of curing. This is best borne out by the contemporary research in some quarters to find remedies to perpetuate youth and virility, delay aging and its effect on the human physique and even cure or conquer death!

5. Ethical Puzzles Raised by Technology in Modern Medicine

The advances that medicine has achieved in our times have churned up a plethora of issues that ought to engage the contemporary societies and cultures. Some of the pertinent ones are outlined here below.

5.1. Technological Imperative

This is the description that is increasingly used by those alarmed at the tyrannical domination that technology commands in today's medicine and health care in general. The term connotes the inclination among physicians and the families of the sick for "giving the best care that is technically possible; the only legitimate and explicitly recognized constraint is the state of the art."[23] Medical fraternity is eager to embrace and use novel treatments even when evidence supporting their use is lacking. If a novel treatment appears to be effective and available, clinicians are eager to incorporate it into the treatment, leading to what some would say: 'treatment imperative.' Any new technology on the market ought to be immediately absorbed into treatment, no matter the cost or the risks

[22]Michael R. Panicola, "Forgoing Treatment at the End of Life," in *Health Care Ethics,* 298.

[23]Fuchs V.R., "The Growing Demand for Medical Care," *New England Journal of Medicine* 279, 4 (1968) 666-673. As cited in "Editorial," *Mayo Clinic Proceedings* 88, 7 (July 2013) 661-644.

involved. Technological imperative highlights the modern tendency to surrender to technology the human freedom and responsibility to make choices that best serve human flourishing. Technology drives and decides the choices in life, especially in human health and well-being.

5.2. Lopsided Understanding of Health and Human Wellness

As Chris Huebner insightfully reminds this tendency to assign decision making role to technology — technological imperative — betrays a deeply skewed understanding of health and human wellness. Health is understood in a very narrow sense of freedom from physical pain and suffering, and medicine is expected to harness all technology that can 'provide us with means to exercise ever greater control over our lives.'[24] Our own times, egged on by the infinite supply of technology that affords greater control over our lives, tends to promote a false conception of health and wellness that contravenes the well established WHO definition of health, adopted by the international community: *Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*[25]

5.3. Derailed Human Self-Understanding of the Meaning and Purpose of Life and Human Flourishing

The prevailing paradigm of medicine, commandeered by technology, presupposes a set of specific moral convictions and assumptions about human life, diametrically opposite to the vision of human life that has endured down the centuries. Notwithstanding the diverse religious and cultural world-visions that inform that vision, human person is across the board understood to be a social being growing and blossoming in a human community and are not made to be his/her own master. The Christian anthropology, grounded in the scriptures and tradition, perceives him/her to be 'created in the image and likeness of God' and is called to grow and flourish in a community of relationships. It is this vision of the human person with those twin orientations — transcendental and social — and called to live the love commandment that inspired the original health care model of St. Basil of Cappadocia that became the template for the paradigm in the west that has survived to our days,

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[24]Chris K. Huebner, "Bioethics and the Church: Technology, Martyrdom, and the Moral Significance of the Ordinary," *Vision* (Spring 2003) 74-81.

[25]Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946.

and was copied all across the orient and occident. As Huebner reminds the technology led modern medicine is grounded in assumptions about human autonomy and radical individualism, artefacts of an enlightenment era paradigm that has been already debunked and militates against the very convictions that inspired the Basilian model of health care that was referred to above. It is worthwhile to quote Huebner's prophetic words to identify the confusion raging in contemporary times:

> The issues and dilemmas that preoccupy contemporary bioethics (and by extension, contemporary medicine) can be read as reflecting a profound confusion about who we are: Are we people whose identity is shaped by the good life as defined by technology or by the good life defined by Christian faith?[26]

I discern that the Gospel vision of the human person and his origin and destiny can provide the urgently needed antidote to the contemporary health care policies and decisions, pathologically beholden to the individualistic and self-autonomy drives of a section of the western society. The Catholic Moral Theology with its rich trajectory of social justice teachings can provide the community grounding that modern medicine needs.

5.4. Need for Education in the Foundational Stories, Ethics and Discernment

If medicine and human well being ought to be liberated from the stranglehold of technology in our times, it is incumbent upon the society today to retrieve and reclaim the foundations on which human saga is all built. We ought to rediscover that we are not disparate individuals, making disparate choices when faced with critical exigencies, rather we are parts of a seamless fabric of humanness that is firmly rooted in shared sacred stories, histories and ethos. We ought to grow in the realization that our choices and decisions flow from somewhere and they need to be located and discerned within the context of the larger story of ourselves and humankind. Our choices and decisions reflect who we are and who we ought to be; they reveal our identity.[27] As such we and the future generations need to be instructed and formed in the stories, sagas and the visions that ground and make our identity so that making ethical decisions is not merely responding to contingencies, rather they are interpreting life situations in the light of the ideals of human

[26]Huebner, "Bioethics and the Church...," 78.
[27]Huebner, "Bioethics and the Church," 78.

flourishing that guides us. The society and, in particular, those who lead the society and obviously those who enter and lead the medical profession ought to be trained to be thinking ethically. Much desires to be happening in this regard as much of the curriculum at medical schools and other centres has a very narrow focus in imparting medical expertise and very little in forming professionals able to think ethically and discern. Very little emphasis is placed on general education and ethical formation and very often administrators are eager to prune even the existing, religious studies/ethics programs for various reasons. Even the moral theology programs in our seminaries and religious institutes have a preoccupation with the routine hot button issues like abortion, euthanasia, etc., and the attendant casuistry and much less effort is expended on training the future leaders in discernment.

6. Conclusion

The human spirit is profoundly resilient and it has decisively manifested itself down the centuries, especially during times when humankind encountered genuine threats to its own identity and survival. With its immense resilient skills, humankind has resolutely faced every major existential crisis it has faced, reacting with a sense of urgency to address the immediate emergency at hand and then settling down to chart out the future course with great poise and confidence. The victories that this resilient human spirit has won are celebrated by history and cultures all across the world and across time.

The current state of medicine and vision of human wellness, commandeered by technology, urgently summons humankind once again to rally its resilient reserves and skills, to give medicine fresh direction and infuse a new sense of purpose into the contemporary health-care pursuits. Birth of bioethics, as Joel Shuman traces its origin, was indeed an emergency response to the contingencies and questions that medicine faced in the early 1960s with the debut of the new ground-breaking procedures in the beginning of life issues — abortion, IVF, stem cell research and the like.[28] Bioethics and the ethicists and other experts that pioneered and piloted bioethics as a discipline ought to be commended for the yeoman and ground-

[28]Joel J. Shuman traces the beginning of Bioethics to 1962 when a committee of experts was formed in Seattle to determine which patients and in what priority would be eligible to receive the newly available kidney dialysis. Cf. Joel James Shuman, *The Body of Compassion: Ethics, Medicine, and the Church*, Boulder: Westview Press, 1999, 52-56. Cf. also Huebner, "Bioethics and the Church," 74-75.

breaking discernments that the discipline has made as well as the progress and direction it has achieved. But I do judge it is imperative now for the society and its policy makers to sit down to discern for the long haul, retrieving the best of humanity's moral reserves to design a wholesome vision that can guide medicine and technology as they strive to foster human flourishing. In a highly pluralistic and interconnected world of today, this project ought to be pursued, not in isolation or suspicion of one another, but in an environment of dialogue, cooperation and esteem for the diversity that characterizes the humankind. The academia and the different religious visions that ground different societies and cultures have decisive roles to play in this endeavour.

Gospel and the Christian world vision that it inspires and guides can play a strategic role in this endeavour as they have done in the past. Just as the Christian ideals became foundations for the health care paradigm that became the template for medicine in general in our times as reflected earlier — the model of the hospital dating back to the pioneering efforts of St Basil — the same ought to be catalysts in this new project, guiding and enlightening the process and the product. Commendable efforts have already been made in different local churches and the universal church at large. The Ethical and Religious Directives for Catholic Health Care Services issued by United States Conference of Catholic Bishops in 2009,[29] the directives and clarifications issued by the Holy See as well as by various national and regional bishops conferences from time to time are commendable in this regard and they have already become a reference guide to many international and national professional bodies and policy makers. The sense of awareness and urgency that is visible among the health care fraternity, policy makers, government agencies and religious leaders all across the world gives me reason to hope that medicine need not continue to be a hostage to technology and human innovation, but a worthy help and powerful tool to foster true human wellness and human flourishing.

[29]Issued by United States Conference of Catholic Bishops on November 17, 2009, they can be accessed at www.usccbpubishing.org.