The Hermeneutics of Nudging: The Reciprocity Between Transhumanism and Nudging

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The Hermeneutics of Nudging: The Reciprocity Between Transhumanism and Nudging

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Introduction

The human condition is finite and weak. We are fraught with imperfections that are out of our control. Transhumanists seek to fix these imperfections and conquer the human condition by merging technology and biology. Popularizing the potential transhumanism offers is no easy feat. Its ideas and theories remain guarded in academic journals, and online, and can require a certain philosophical acumen. Even then, people have to know the search terms to use. In order to popularize and convince people about transhumanism potential we can look to nudging. Humans do not always make the best decisions when it comes to their health and well-being. We consistently misinterpret data, overestimate our abilities, and sometimes act on incorrect beliefs. Combatting and overcoming these deficiencies is a monumental task. Misinterpreting data, overestimating our beliefs, and making decisions based on incorrect beliefs can be catastrophic in the domain of healthcare. One way to overcome deficiencies in healthcare is through transhumanism. Engaging people through a behavioral economics concept known as nudging may provide a path forward. This paper will give an overview of transhumanism, and its prospects. Then it will define nudging, and show how they have been used in a healthcare setting. Lastly, the paper will ask whether it is acceptable to nudge someone toward transhumanism, and how transhumanism challenges our ability to evaluate nudges. This paper argues nudging individuals toward transhumanism raises fundamental questions about the role of medicine, virtue ethics, and how to build an inclusive society while pursuing an ideal body.

1. Foundations of Transhumanism

Transhumanism is not a formally defined discipline. Various academics and laypeople can be transhumanists by subscribing to certain ideals and changing their perception of the human condition and its constituent parts. Each academic discipline contributes to the movement through its methodology and style. While there are various approaches to the movement, the nature of transhumanism is indisputable. Transcending physical and mental limits were once tales found in myths, but now they are being seriously considered because of various technological advancements.
A. History of Transhumanism

Transhumanism is the ripe fruit of the post-Enlightenment humanism tree. Its roots are firmly ground in the soil of empirical science and critical reason. These epistemological sources stand in direct opposition to the once-dominant sources of knowledge of the time of revelation and religious authority. Around the time of the Renaissance, the idea of becoming a well-rounded person who is highly mature scientifically, morally, and spiritually began to take shape. This outright rejection of traditional epistemological sources opened up a new way of thinking, one grounded in rational humanism. This movement sought to persuade people to use reason to make themselves in their image. Benjamin Franklin, Francis Bacon, Giovanni Pico della Mirandola, and other famous figures throughout history, conceived of different ways to become well-rounded people by using reason. The status quo broke once again when Charles Darwin published *Origin of the Species* in 1859. Darwin’s work showed academics and laymen alike that humanity is on the continuum of evolution.

Around this same time, materialism began to take hold in the intellectual sphere. This approach sought to understand the world in a physical sense, reducing everything in the human body to physiological phenomena. The French physician and materialist philosopher, Julien Offray de La Mettrie saw human beings as an animal, or as a collection of springs that wind one another up. Analogizing the human body, this way posed interesting questions. If the body is a collection of springs, like a machine, then it should be possible to manipulate the body. Understanding the human body in this way allows one to exchange parts of themselves to be more efficient, stronger, powerful, etc. in a similar way to cars. While he was a trained physician and a philosopher, de La Mettrie applied his imagination to reconceive the human condition. Transhumanism found another home in literature. Here, transhumanism took off with the rise of science fiction. Authors and scientists allowed their imaginations to sit in the driver’s seat as they took us through worlds where technology and biology were fully integrated. The reception of these works was mixed, oftentimes serving as a warning of what the world might turn into. The first person to use the word “transhuman” was Julian Huxley in 1927 when he wrote that humanity ought to transcend itself.
Once philosophers supplanted religious authority with reason the possibilities of what human beings could accomplish grew exponentially. Immanuel Kant and Friedrich Nietzsche exhaustively interrogated what humans could accomplish and know through reason alone. Nietzsche’s Übermensch pushed people to strive for personal growth and cultural refinement. Whereas Kant’s call encouraged people to be bold and use their intelligence to reach new heights. A through line can be drawn from these calls to be bold and personally grow to the vision transhumanists have today. Transhumanism is a transitional phase in the process of becoming posthuman. Where posthuman is the point of no longer possessing any recognizably human features. Nick Bostrom and other prominent transhumanists view posthumanism in this light. But, this definition of posthuman is controversial and needs to be unpacked. Some posthuman thinkers, like Francesca Ferrando, believe a person can be posthuman today, someone just needs to change their mindset. Ferrando does not see time as a lynchpin in becoming posthuman. The journey to becoming posthuman can begin today by deconstructing humanism, anthropocentrism, and dualism.

More recently, transhumanism made its way into academia. Here, philosophy, political science, computer science, biology, and many other departments theorized how transhumanism impacts their disciplines. There has been a noticeable growth in transhumanist books, academic journals, institutions, and conferences. Transhumanists do not see the movement as a zero-sum game. They see it as part of a solution to existential risks like climate change, disease, and conflicts. The popularity of the movement shows people's belief in its ideas and what it can become. However, transhumanism is not without its critics, among them most notably are Leon Kass, Francis Fukuyama, and Paul Ramsey. This group of individuals and academics have been dubbed “bioconservatives” by transhumanists because they stand against transhumanism and its possibilities for a variety of reasons. The criticisms range from violating dignity to robbing future generations of authentic experiences.

B. Prospects of Transhumanism

Transhumanism presents itself as a movement that will help humans transcend their physical and mental limitations. The potential of these technologies quickly conjures up feelings of joy and excitement,
but as one sits with the possibilities, one encounters the potential negative implications of the technology. Some downsides are the loss of individuality, breaking down the barrier between being someone and something, and issues related to access to technologies, creating a second class of citizens.

While the prospects are largely related to physical and mental changes, there are proposals that offer a moral change. Ingmar Persson and Julian Savulescu argue biotechnology should be wielded in a way that makes humans morally better, even if we are no longer biologically human. Their argument differs in marked ways from Bostrom and other prominent transhumanists. While Bostrom argues for physical technology to be implanted in the body, Persson and Savulescu propose to make humans more altruistic in the moral sense. They think this is an integral step to overcoming future existential challenges like climate change and resource depletion. Of course, the proposal by Persson and Savulescu is idealistic. Questions about which morality is best are rarely settled. Throughout history, various leaders have tried to force their morality on populations with varying levels of success.

Savulescu’s ideas about genetic manipulation can be considered controversial. He took them a step further in persuading prospective parents to select the best child by arguing if we can find a gene linked to criminality, we ought to select against it. This justification is taken one step further than his original idea, the Principle of Procreative Beneficence. There, he argues we ought to select children whom we expect will have the best life. In regards to criminality, we ought to select against genes that make for a worse life. This proposal presupposes the good life and ignores the various influences that define a good life. Savulescu’s proposal is a scientific solution to a sociopolitical problem. Further, genetic reductionism is a theme that features prominently throughout transhumanism. Here, a person’s genomic sequence largely dictates a person’s prospects in life. Whether they are predisposed to erratic behavior or have a disability. Disability is put in a different light and is cast off as abnormal in an extreme sense. Questions about the normal body and normal genetic code are raised because of the new space disability occupies in opposition to transhumanism. Savulescu is silent about what selecting against genes linked to disability means for those who live with that disability.
There are numerous motivating factors that drive proponents of transhumanism. Bostrom sees the threat of death as a crucial threat to our freedom. He sees transhumanism as the avenue to conquer death and rob it of its power over humanity.\textsuperscript{16} The goal of conquering death is pie in the sky today, but it might be possible one day. Researchers are working today to slow aging. Some experiments conducted today involve various compounds injected into mice to better understand how they impact aging.\textsuperscript{17} However, humans have not participated in chemical trials yet. There is an extremely high level of uncertainty about how the human body would digest the chemicals, or handle the enhancement. There are various diets that some researchers believe would slow aging. One of these is caloric restriction, which entails having a nutritious, vitamin-rich diet that is low in calories.\textsuperscript{18} The general efficacy of a diet like this is controversial. The diet might work for certain individuals, but not others. Further, there are too many variables to control in an experiment like this. In addition to life extension and anti-aging technologies, transhumanists seek to improve not only a person’s capabilities but also someone’s general happiness. The overarching tone of improving someone’s capability and general happiness creates some issues. Rather than ensuring the world is problem-free and just for everybody, the issue is actually inward, in the human condition.

Overcoming genetic ailments used to be a pipedream. This does not seem to be the case anymore with how people view genetic engineering. Researchers and philosophers see it as a significant part of humanity’s future. The human genome was mapped in 2000, but today researchers are working to unpack and better understand specific parts of the genome. Understanding specific parts give scientists a way to target treatment for a genetic condition or alter the gene entirely through genetic therapy. Genetic therapies exist in two forms: somatic and germ-line. Somatic gene therapy allows changes to be made to a person’s DNA, but those changes do not carry over to the next generation. Germ-line therapy, on the other hand, is performed on sperm and egg cells and those changes can be inherited.\textsuperscript{19} This technology is awesome and can give people the opportunity to have children without inheritable diseases, or selection for certain traits. This technology raises serious questions about genetic determinism which gives too
much leeway to how we view people. The unresolved ethical questions about genetic engineering give people pause because it pushes humanity to the edge of creation. Moreover, genetic engineering presents ethical issues related to self-understanding, where children may not relate to themselves in the same manner because they are not their own makers in the same way we are today. One of the many concerns with genetic engineering is the opportunity it presents in changing a pre-implantation embryo from a subject to an object. The barrier is broken down between being someone and something. Where embryos and people are objects to be tinkered with and mastered. Allowing the genomes to be freely altered opens up Pandora’s box. It raises a litany of ethical issues that we are currently incapable of attempting to answer. For instance, would it be permissible for a child to hold their parents responsible for unwanted consequences as a result of altering the child’s genome? The potential opportunities genetic engineering can introduce can radically change our species. The ability to foresee or even predict how genetic modifications will interact is beyond our current capabilities.

Genetic engineering is central to a goal of transhumanism: morphological freedom. Morphological freedom is the right to self-modification according to one’s desires. This is a foundational right of the transhumanist movement. There is an emphasis on individual freedom so individuals can choose their enhancements because of various conceptions of the “good life”. The emphasis on liberty is parallel to the way societies throughout the world emphasize liberty today. This emphasis on liberty decentralizes authority within the movement and empowers individuals to make decisions for themselves. The positive implications of this are clear. There is no central authority that decides what advancements or enhancements are acceptable. It gives people full reign over their lives and allows their imaginations to govern how they live. The downsides of this are clear as well. Immediately, there is tension between Persson and Savulescu’s proposal of making people more altruistic and morphological freedom. For instance, someone can alter that part of themselves so they no longer act altruistically.
Materialism is central to transhumanism and its mission. Subscribing to a materialist worldview brings about exciting possibilities like molecular nanotechnology. This technology would give individuals the ability to transform materials at the atomic level into new objects. Rearranging atoms can be done in a variety of ways, from chemical reactions to an assembler the size of a nanometer. The image of an atomic assembler used to be a work of science fiction, but now seems to be on the horizon. The ability to manipulate matter at the atomic level is truly groundbreaking and has countless implications for every profession. This technology builds off materialism because, as transhumanists claim, there is nothing inherently special about the way in which objects are formed or their natures. Researchers have manipulated the nature of other organisms, and doing the same to humans is no different or should be seen as controversial.

2. Making decisions with a little help from our friends

We have data that shows people do not make decisions that always benefit themselves. This epistemic base is used in a variety of social sciences. Operationalizing this knowledge presents ethical challenges because it walks the line between respecting a person’s autonomy and acting paternalistically. Navigating this area is an unenviable task. There is a way, however, to help people make better choices by nudging them. Nudge theory is a concept that’s been popularized by behavioral scientists. To aid in decision-making, nudges encourage a particular choice in a variety of ways. Encouraging a particular choice is a foundational concept in nudge theory. This section will explain what nudge theory is, and how nudges are used in the real world.

A. What is a Nudge?

A nudge is altering a person’s choices in a way that does not limit options or alter economic motivations. The line between nudging someone towards a choice and heavily persuading them is thin. Nudging someone towards an option does not mean another option is banned, or taxes are levied on people for choosing the alternative. Individuals must maintain their freedom of choice when they are being nudged. Nudging’s starting point is rooted in the belief that people do not act optimally when making decisions. Claiming people act irrationally is too harsh, saying they do not act optimally gives
people space to be human. The fine line between autonomy and paternalism is crucial to understanding how much a person can be nudged. Walking this line can be difficult in healthcare because of the epistemic advantage doctors and other healthcare professionals have over their patients. Fundamental to nudging a person to make a better choice is creating an environment that aids better decision-making. This role is aptly named “Choice architect”. This involves asking oneself what a reasonable and thoughtful person would want a product to do. Of course, defining reasonable and thoughtful is a task within itself, but the choice architect would have a good sense of their target population’s needs.

Choice architecture is a key to nudging, but it is not without criticism. Critics claim choice architecture ignores the larger factors that contribute to an individual’s decision. The larger factors that contribute to a person’s decision-making pose philosophical questions: like whether we have the power to freely choose. Opponents of choice architecture lay blame further up the chain than private companies or research teams. They claim it allows the government to shirk its responsibility to govern and not use more effective techniques. Further, nudges at a governmental level have negative implications for democracy. Nudges were shown to reduce opportunities for public deliberation in favor of using technocratic tools. In order for nudges to not be an obstacle to deliberation and decision-making they must account for the structural factors that influence a person’s decision-making process, and recognize that nudges are meant to help people make certain decisions. More will be said about the latter part later on in the paper.

The belief and empirical support that people generally act irrationally is fundamental to nudges. The goal of a nudge is to help them make better decisions that will improve their current situation. Nudges can be interpreted by people who claim they are manipulating people or acting paternalistically. Manipulation has been defined in a number of ways. For instance, it can be defined as influencing someone’s beliefs, wants, or emotions in a way that is contra to that person’s self-interest. Manipulating a person’s beliefs, wants or desires can take two forms: intricate and blunt. Intricately manipulation means using known facts, emotions, and feelings of a person to influence their decision-making. While blunt manipulation can be thought of as using general knowledge about people to influence their decision-making. Paternalism can be defined in numerous ways, as well. For our purposes, it can be thought of as
an instance in which a person, B, interferes with another person, T, to promote T’s own good. The distinctions between manipulation, paternalism, and nudges are crucial for our conversation on what constitutes a nudge, and how to justify their use in a healthcare setting.

The theory that supports a nudge is libertarian paternalism. This form of paternalism is considered to be weak and nonintrusive. Being weak and nonintrusive allows policymakers, or in this case, healthcare professionals to recommend or nudge people in a direction that will potentially make their lives better. Conflicts arise when nudges can be interpreted as interfering with autonomy. Before the discussion about how these two concepts interact, it is crucial to define each. Autonomy is a combination of the Greek word *autos* and *nomos*, meaning self-rule. Autonomy is fundamental to Western society and allows individuals to act freely in the manner they decide. There is a broad conception of autonomy where it is seen as an end in itself. This perspective of autonomy is taken for granted in Western society. Using this perspective of autonomy in a healthcare setting is challenging because of how broad its nature is. There are limits on autonomy, which usually extend to when it is interfered with by another person. Various academic disciplines have tried to contextualize and pontificate about the limits and value of autonomy. However, these discussions are not pertinent to this paper.

Nudges exist on a spectrum. If we start with libertarian paternalism’s core approach, the nudges progressively get more targeted as guiding choices through default options. As the nudges become more targeted, the use of empirical support is needed to justify why that option is better. For instance, generic prescription rates increased from 75% to 98% after an intervention in a patient’s electronic health record. The intervention proposed by the researchers in this particular study was not groundbreaking but rather was a simple change in the order the prescription drugs appeared. The study’s implications are clear, generic prescriptions have been associated with higher adherence and better health outcomes. This would be considered an instance of changing defaults. Changing defaults works well when both clinicians and patients do not have strong preferences for the options. The effectiveness of nudges can be enhanced or inhibited if shareholders, clinicians, and administrative leadership personnel are not engaged. Successfully implementing nudges requires a buy-in from all relevant parties. However, implementing
nudges can be challenging because of the complex power relations within institutions. There are various political and social beliefs held by the employees and patients.

As shown, nudges can be a pathway to improve health outcomes and can be successfully implemented in the workplace. However, nudges are not without criticism. Opponents posit nudges reinforce individualism because of their emphasis on an individual’s choice, instead of creating better institutions.\textsuperscript{46} The structural argument against nudges seems to be persuasive, but nudges operate within the structures. Nudges are a way for a preferred policy outcome to be accomplished without overhauling the entire system. Opponents may argue this approach reinforces existing inequalities, or that nudges do not account for the power of external factors, like wealth and social status, to influence decision-making.\textsuperscript{47} They argue we ought to focus on creating a more just society through principles like solidarity rather than tackling individual behavior.

\textbf{B. Why Should We Use Nudges?}

Nudging people to make better choices, especially in healthcare, is a worthwhile venture. In the domain of healthcare, the justifications for the nudges oscillate between promoting a good or preventing harm. While the difference between promoting a good or preventing harm may be negligible in other fields, it matters in healthcare where the stakes can be high. The solutions to a healthier population can be structural, like addressing the social determinants of health or empowering people to make better choices.

The practicality and simplicity of nudges make them worthwhile tools for accomplishing the desired goal. For instance, it is difficult to get a majority of the population vaccinated against influenza. A simple change in the electronic health record of a patient proved to be an effective solution to increasing the percentage of patients that received a flu vaccine.\textsuperscript{48} The integration of technology and medicine is proving to be an effective way to improve patient care. The authors of this study used active choice as a nudge in the flu study. This meant physicians or their assistants would have to “accept” or “cancel” an order for the flu vaccine.\textsuperscript{49} The results of this study suggest active choice within electronic health records can be expanded to other forms of preventive medicine. Implementing active choice resulted in a 37.3% increase in influenza vaccinations.\textsuperscript{50} This nudge is cost-effective and straightforward to implement. Given our
current and future reliance on vaccines, it is clear this nudge may become a permanent feature in electronic health records.

The discussion of nudges usually revolves around helping individuals make better choices for themselves, but nudges can also be used to benefit future people. For instance, nudges ought to be used to improve the decision-making of pregnant women. The implications of nudges for pregnant women are tremendous. However, these implications are not unqualified. When deciding whether a given nudge should be implemented, we ought to ask ourselves if the benefits outweigh the burdens that will be put on pregnant women. There needs to be a stronger justification for a nudge during all stages of pregnancy. To do this, we can look to the harm principle. Nudging pregnant women to make better choices for themselves and their babies walks the fine line between invading privacy and promoting their good. The privacy-good calculus conducted by the nudgers and nudgees would have to be conducted transparently to ease concerns about paternalism and manipulation. Further, this process could lead to building trust between pregnant women, doctors, and social scientists. The effects are not exclusive to pregnant women and their future babies. A nudge like this one serves as a reminder that we have obligations to future people.

As previously mentioned, there’s pushback against nudges because of their focus on individual decision-making. Opponents argue we ought to create better institutions and address structural issues rather than burdening individuals. These tasks are not mutually exclusive. We can, and ought to, address unjust structures while nudging people to make better decisions related to their healthcare. We can use data to empower people to better decisions about their healthcare choices and address structural inequities that put people at risk for poor health. Further, even if we have more just institutions and address social determinants of health that does not mean people will make good decisions about their health. Engaging individuals on a personal basis is crucial to ensure the proposed nudge will have a reasonable chance of succeeding. This will allow future nudges to be more efficient. But it is also important to engage relevant stakeholders, like other employees in the health system and leadership. For nudges to be effective, it is important to have top-down engagement in addition to patient engagement. Engaging all relevant
stakeholders democratizes the nudging process and allows people to provide feedback, potentially making the nudge better.

Nudges are an effective tool in prescribing medications and ensuring people participate in preventive medicine. But, nudges in a clinical setting, where doctors provide information about a patient’s diagnosis and prognosis, have not been explored. Doctors have an epistemic advantage over the patients they treat. This knowledge gap places doctors in a precarious position where doctors can frame information about their patient’s conditions in a way that impacts decision-making. For instance, there is no standard way to deliver a cancer diagnosis to a patient. Doctors can alter how they deliver information to the patient, opting to frame prognoses or treatments in a different light. A paradigmatic case of a clinical nudge is a situation where a patient opts for a cancer treatment that will not benefit her, even though the doctor informed her about the unlikelihood of chemotherapy helping. This is an instance where a patient’s autonomy and medical paternalism interact. Here, the doctor can rely on their epistemic advantage and decide not to offer the cancer treatment as an option before speaking with her. A situation like this becomes more complicated when other principles like beneficence and justice enter into this scenario. However, that conversation is beyond the scope of this paper.

Implementing nudges is a worthwhile endeavor, however, it is not without skepticism. The reasons that justify the nudges ought to be scrutinized. This evaluative step brings us to question the purpose of the nudge, and what goal we want to accomplish. The purpose and goal of the nudge can be further unpacked, and various conclusions can be drawn based on the framework used to evaluate the nudge. Before nudges are implemented, the theoretical grounding must be shored up. The justifications for the proposed nudge should avoid a presupposed conception of good health. This is where nudges and paternalism diverge once again. Nudges do not limit the choice options for people, whereas paternalism may ban or prohibit certain options. The evaluation of a nudge is conducted by the nudgee, where the agent seeks to reach their desired end and not someone else’s. Further, the gulf between paternalism and nudges widens when people’s preferences are accounted for. In the context of health, only people who prioritize being healthy would be nudged. Ensuring only the people who want to be nudged are nudged,
can be tricky. In healthcare, the beneficent duty of a doctor to their patient ends when the patient exercises their autonomy. Doctors may believe their patients ought to care more about their health and try to frame information in a way to startle the patient or caution them about their lifestyle. But, as shown, this blurs the line between nudging and manipulation.

3. **Nudging toward Transhumanism: A Perfect Union?**

As shown, transhumanism is an ambitious movement that seeks to eradicate and ultimately overcome ailments that have plagued people for thousands of years. For instance, the opportunity to rid our civilization of general suffering is enticing, but will everybody opt to forgo suffering? Will physical, emotional, and psychological hardships we face in life maintain their value? The answer to the latter is beyond the scope of the paper. However, through nudging, we may be able to make transhumanism more popular among people. The second half of this section raises questions about how transhumanism expands the role of medicine, whether a nudge addresses a fundamental issue or a superficial one, and how we should view potential conclusions once we test transhumanist technologies on humans.

**A. Is it permissible to Nudge someone toward Transhumanism?**

Modern technology, at large, changes our abilities to act. Nudging individuals to become transhuman is crucial to our future success as a civilization. The marquee technologies of transhumanism are ways away, but once they are here, transhumanists believe everybody should welcome them because of the benefits they will offer. The benefit-burden calculus individuals will perform is unique to themselves. Prior to discussing the question of whether it is permissible to nudge someone toward transhumanism, it is important to say something about the kinds of enhancements that will be discussed in this section. This section will discuss a sort of sibling to Persson and Savulescu’s proposal about moral enhancement, and then discuss the biological enhancement Bostrom and others talk about.

The idea of morally enhancing people via genetic engineering raises ethical questions. If people carry genes that make them predisposed to erratic behavior, and this trait is linked to criminality, how responsible is someone for a crime they commit? Identifying genes linked to specific behavioral issues, like violent behavior, is not science fiction. Identifying so-called ‘criminal’ genes reinforce attitudes that
uphold genetic determinism. Where a person’s biology in itself is ethically controversial, and open to politicization because certain traits are deemed risky or abnormal.

Persson and Savulescu’s argument about moral enhancement is not as far-fetched as some may believe it to be. Even if we are years away from genetically engineering people to be more altruistic, there are pharmaceuticals already on the market that can unintentionally alter moral decision-making. While this is a step back from genetically engineering altruism, it represents a real-world case of impacting moral decision-making because these pharmaceuticals are widely prescribed and used. For example, propranolol, a drug prescribed for hypertension, angina, migraines, and posttraumatic stress disorder (PTSD), has been shown to reduce implicit racial bias. Propranolol has a wide range of neural effects, but its main purpose is to block the effects of adrenaline and noradrenaline on the adrenoceptors. There’s only been one study to test this hypothesis, but if it is replicable, then the implications are clear. Propranolol’s unexpected benefits are beneficial from a moral standpoint. Developing methods to tame implicit racial bias causes headaches because they are implicit, our brains make assumptions about what we see subconsciously. This conclusion may be significant because of propranolol’s wide use. However, more studies will need to be conducted to see if this same phenomenon occurs outside of the laboratory.

The popularly prescribed selective serotonin reuptake inhibitors (SSRIs) also have unintentional consequences when it comes to moral decision-making. SSRIs block the reabsorption of serotonin in the brain. They’re used to alleviate depression, mood disorders, and excessive anxiety. One study found SSRIs seem to make people more cooperative and less critical of one another. Another study split participants into pairs and had them play the Dictator game. Here, the ‘dictator’ decides how much money is split between the dictator and another participant. The study found the participants who took an SSRI divided the sum of money more fairly than the control group. Another study found SSRIs increased a person’s aversion to harming. This study’s implications complicate the positive side of SSRIs. If people taking SSRIs are in a position of power, they may be less likely to inflict harm. This may complicate a judge’s role in society. They may be more likely to give a defendant a lighter sentence because of the SSRI. Further, as the ‘dictator’ game showed, those that take SSRIs and find themselves in a bargaining
scenario may acquiesce to a worse deal. They may open themselves up to being exploited because of how they assess what is considered fair while on an SSRI. Whether SSRIs cause morally better or worse behavior is up for debate because of a variety of factors, like the person’s predisposition to cooperation before taking SSRIs. The general conclusions drawn by these studies show that SSRIs may improve moral decision-making. They can affect moral decision-making, but on a whole, it is premature to say whether they are positive or negative.

Nudging someone toward an SSRI or propranolol is hardly controversial, however, further disclosures must be made by doctors and clinicians about their moral side effects. The moral side effects align with making people better, morally speaking. Nudging patients toward these two prescriptions utilizes the knowledge created after studying the side effects. Whether the patients have access to the kinds of unintentional side effects the medications produce is a separate issue.

While Persson and Savulescu’s proposal to genetically modify humans to make them morally better is far-off, products exist on the market that are unintentionally effective in impacting moral decision-making. The more pie-in-the-sky technologies are those that would become a part of our physical bodies. These technologies face numerous regulatory hurdles that prevent testing on human subjects. As things stand currently, physical technologies would not make us act in a more moral sense in the same way prescription drugs or altruistic genetic engineering would.

If we begin with morphological freedom, a fundamental tenet of transhumanism, it seems as though it is permissible to nudge individuals toward transhumanism. Morphological freedom, as previously defined is the right to modify one’s body according to their desires. The right to modify our bodies is supported by our age-old desire for self-creation. Throughout human history we chose new ways to modify our personalities via virtues, though self-creation through adding technology to biology is new. This form of freedom is not new, it’s grounded in and an extension of the language of autonomy. This freedom is a negative right, meaning it can be exercised but others are not obliged to support its exercise. Morphological freedom goes hand-in-hand with how autonomy operates and is viewed within bioethics. Where it gives individuals the right to consent to treatments, research trials, and enhancements.
A prominent proponent of morphological freedom frames it in a way that suggests we ought to nudge people to embrace morphological freedom. Morphological freedom enhances an individual’s autonomy. They can choose to inhabit a physical body or exist in a virtual form.

If we merge the nanotechnology transhumanism espouses with morphological freedom, we see an almost perfect theoretical marriage. This partnership is a complete manifestation of a materialistic worldview. Where organisms and objects can be rearranged at the atomic level. The physical technologies transhumanism strives to merge with our biology have not been tried on human subjects. Transhumanism’s desire to merge biology and technology presents unique ethical questions, in their eyes, we will become new beings through this union. The challenges to human experimentation ought to be looked at, especially given the abuses that took place throughout history. The technologies that would be implanted within humans would raise new and old ethical concerns. If we cognitively enhance the brain via a computer chip, we have to be sure it is secure and cannot be hacked. Further, these technologies may differ in marked ways from current medical treatments. Where the technologies may be centered on cosmetic surgery, and not provide any medical benefit. It seems as though decision-making will be up to individuals themselves because the technologies would walk the line between reducing morbidity and cosmically enhancing a person’s appearance. The proposed advancements of molecular nanotechnology, genetic engineering, and radical life extension allow people to let their imaginations take over and create the life they want to live. It’s a manifestation of expressive individualism. These technologies will give individuals the ability to alter themselves, however, whether the unmitigated opportunity to do so is good, remains to be discussed.

One potential issue that will likely be ameliorated as time goes by is the number of transhumanist options. In order for nudging to be nudging, all available options must be available. If there are only two choices for physical technologies being implanted in the body, where one is opting to have a technological implant and the other is opting not to. Then we run into the issue of defining what “all available options” is. This phrase remains undefined in two ways: the first is whether more than one technological option is available and the other is whether the nudgee knows if all available options are
presented. The latter question is more interesting because of the obligation to inform on the part of the nudger. There is also a level of trust and truth-telling that must be reached in order for the nudgee to know the nudger is being transparent and not trying to manipulate the nudgee’s choice. Trust and truth-telling are integral components of medicine and patient care. The stakes of trust and truth-telling rise as procedures become riskier. In order for trust and truth-telling to exist in nudging someone toward transhumanism, they must exist within society at large. The institutional values are a mirror of what is practiced in society. These virtues will make their way into healthcare if they are practiced by the public. The normative guidance of trust and truth-telling cannot exist in isolation within society, they must be embodied for them to actually exist. However, explaining how common morality ought to be practiced is beyond the scope of the paper.

B. How Transhumanism challenges our ability to evaluate Nudges

The prospects of both transhumanism and nudging seem to push people to make decisions that will better their lives. Transhumanists claim the decisions will make them healthier, happier, and possibly live longer. These outcomes may be true, but health, happiness, and longevity are not always unqualified goods. The components of health, happiness, and longevity ought to be scrutinized. In other words, what goes into defining health can become an ethical issue.

The intersection of nudges and transhumanism brings together a great deal of information. Information the nudgers possess that they want to inform the nudgees about. Transhumanists and their advocates possess information about what a person can accomplish with their new bodies or minds. These two groups of people assume a duty they have to the informed and uninformed. This obligation is an other-directed epistemic obligation, where experts are obliged to ensure other people are informed about new information about a given topic. This obligation to inform others can become troublesome because of a lack of trust between parties. Even if the information is communicated in a way that is easily understandable, that does not mean it will overcome a lack of trust. Trust is a fundamental virtue that requires confidence in another person in that they will act for the right reasons in accordance with broader moral norms. Building trust between and among people is crucial to ensure cohesion. Trust is even more
crucial when it comes to decision-making in healthcare. In order for individuals to be nudged toward transhumanism, they have to trust the evidence behind the nudge and the nudger themselves.

On its face, nudging a person towards a particular choice seems to be an unqualified good. However, this may not always be the case. The option the person is meant to select is supported by empirical evidence they might not have access to. This complicates the issue of autonomy and respecting the person as a knower. The knowledge used to justify nudges is not something found or observed, but rather it is created. This body of knowledge is the product of a process that is shaped by social and political forces. These forces influence how people design experiments, and how the data is interpreted. The knowledge produced is constantly being interpreted in a variety of ways. The data is under a continuous hermeneutical exercise conducted by various researchers. They may arrive at different conclusions after interpreting the same data. The way in which scientists interpret the data is influenced by non-epistemic values, like their cultural values, social values, and personal values. Science, broadly speaking, has worked to mitigate these values so they do not influence research, or impact results, and studies. The creation of the double-blind test and random controlled trials are seen as the gold standard of clinical tests. Their efficacies have been questioned for a number of reasons, one being the methods employed are malleable. The study design, implementation, analysis, and publication of trials require the researchers to make choices about the data and how it is interpreted and published.

The knowledge created helps fill in the image of what a good life might look like. Where everybody is happy because they have an ideal body and brain. But defining an ideal body and brain is troublesome because of what is excluded from the definition of ideal. Nudging people towards an ideal choice that could make their lives better is loaded with ideological presuppositions. Transhumanists are not shy about their ideal body; they want to transcend physical and mental limitations. Transhumanist thinkers write about the need to overcome death or make their physical condition better. Every time transhumanist thinkers write about the ideal body, in their minds, they reject the undesired bodies. The undesired bodies are the disabled bodies. Moreover, the definition of the desired body is fluctuating. Just like knowledge, it is open to the various social and political forces that define it. The body is opened up
for further politicization through defining “ideal”. Social rules, like what the ideal body is, or being transhuman, are regulated by the same fields of knowledge used to support nudging. Transhumanism assumes the authority of defining what a life worth living is. It is a life free from suffering, pain, disease, and ultimately death. Transhumanism assumes this authority by declaring acceptable social norms, even though they are not necessarily supported by government authority.

When we evaluate nudges, we must ask ourselves a question about the nudge itself: is this going to adequately address the disparity we want to address? Some argue the nudge does not address the underlying issue of why the suboptimal behavior takes place or poor decision-making. It is a quick fix, a short-term solution. The proposed transhumanist interventions may treat superficial insecurities individuals have while leaving the true cause for the insecurity untouched. Where the true cause may be a bigger issue, like loneliness, or self-esteem. In other words, the proposed nudge provides a moment of security and comfort without adequately addressing why the individual feels that way in the first place.

Justice and solidarity theorists call for us to address the root causes of inequalities and problems. The larger discourse surrounding justice and solidarity is a prominent feature in virtue ethics, where our interdependence is highlighted and built into our relationships and institutions. Nudging someone towards transhumanism is an inflection point for virtue ethics. If nudges are the end-all-be-all for addressing the inequalities that exist throughout society, we will lose sight of what we owe to one another. We are meant to learn how to reason from one another, and evaluate what options are good for us. Through this acknowledged dependency, we can step back and evaluate the end we are pursuing. Assisting one another through nudging is good, but it cannot be the only option to help people make better decisions for themselves.

While nudging reminds us of our obligations to one another, it might rob us of something greater. Nudges isolate the individual’s decision-making without questioning whether the nudge is right for them. Nudges might remove the opportunity to understand one another more personally and develop friendships. The nudge towards transhumanism might be bolstered by quantitative data, where instead the individuals need to make decisions based on qualitative data. Qualitative data may alter the nudge entirely
and change the person’s mind, or exclude the individual from the nudge because it is not what they need. Rather, they need to address a more fundamental issue the nudge does not address. Here, we can learn about personal histories and understand the good each other is pursuing. When we learn one another’s personal histories, we learn to speak for the other. We learn what good they are pursuing, and we help them flourish. This interaction builds trust among and between people and communities. This relationship allows people to work together to achieve one another’s respective ends. Whereas nudges further isolate the individual in their decision-making. Nudges do not account for the web of relationships that aids them in decision-making. The nudge to transhumanism can be rushed without understanding the end the individual is pursuing.

Merging nudging and transhumanism raises questions about the ontology of medicine and health. Health as a general concept can be bifurcated into neutralism and positive health. Where neutralism is when the body is disease-free, and positive health involves something beyond the freedom from disease. Transhumanism adopts a positive view of health. Where individuals are not merely free from disease, but fundamentally enhanced in some way. This can be thought of as being “well”, or striving for wellness. The nature of health can be further split into naturalism and normativism. Naturalism posits that health is contingent on biological facts, and normativism argues that health depends on normative considerations. Normative considerations, like certain capacities, make health a value-laden concept. This definition and conception align with how transhumanism views the human body. Where we can be healthier if we overcome our biological limitations and disease-caused suffering. This value-laden conception of health is open to endless interpretations because there is an endless dispute over the types of values. For instance, because of the expanded values in health, doctors may be inclined to nudge their patients to adopt a heart-healthier diet. This expanded role for medicine may be good, but it gives doctors and clinicians more latitude in control over their patients’ lives. A patient’s daily life is further medicalized by doctors. A person may not perceive themselves to be unhealthy, but the doctor believes certain aspects of their daily life are unhealthy. This falls in line with transhumanism and nudging because transhumanists see the human condition can always be improved.
The idea that health is seen in a positive light, where there is something beyond freedom from disease, ought to give us pause. It entertains the idea that health is more value-laden than we first considered. The nature and justification of the values in conceiving a positive view of health lead medicine and its goals to be socially constructed. This conception of health is not wrong, but it does have shortcomings. It removes the ends of medicine; they would be made extrinsic to the discipline. An important end that might go by the wayside if medicine, as broadly defined, is entirely socially constructed is the patient-physician relationship. The relationship might be sacrificed and become centered around a physician-society-based relationship. This view of medicine would leave it to be defined by the whims of society. It would be removed from its telos. A socially-constructed view of medicine asks basic questions about who decides what the goal of medicine actually is, whether is it medicine anymore and whether the socially-constructed values are universally applicable.

Transhumanism and its proponents seem to eschew questions about the nature of medicine and adopt a socially-constructed positive view of health.

The hopes that transhumanism offers are promising and inspire hope for everybody, but we ought to be cautious when it comes to interpreting and acting upon the data that shows the technologies are efficacious. Testing neural implants and other transhumanist technologies on humans won’t happen in the immediate future. But when it does happen and results are published, we ought to scrutinize the results and evidence. There is evidence that false findings are published in a variety of social science disciplines. The issue of non-replication produces confusion about the legitimate conclusion of the study. Good science is predicated upon the ability to reproduce the findings, in the same manner, repeatedly. Researchers and policymakers ought to be suspicious of test results, given the stakes of transhumanist technologies and the possibility of nudging people toward them. Even reaching a definitive conclusion in a given study might be impossible given the ambiguity of identifying the truth in any research question. Further, if we examine who is publishing the research, we can sometimes see pharmaceutical companies funding and publishing the research. This is an obstacle to accessing the real results. The truth, in science, maybe a Platonic form, where we never truly experience it. It may be the
case that as time progresses, the regulations for human trials will improve along with the methodologies used in scientific research.

Transhumanism is marketed as an intervention. However, there seems to be a theoretical disparity about what it treats. Contemporary medical interventions treat high blood pressure, depression, blood clots, etc. These medical issues are supported by various theories of diseases. Diseases generally have two constituent parts: they must create some sort of dysfunction, and that dysfunction must be deemed harmful. Transhumanism, at its core, challenges this theory of disease. An ideal, healthy body is problematized because, in its natural state, it’s deemed unhealthy. Creating and marketing transhumanistic medical interventions challenges our conceptions of health. Further, nudging people who perceive themselves to be healthy toward this raises ethical questions. Caution ought to be exercised in how these truly awesome technologies are marketed and designed. The idea of overcoming suffering is alluring, it might not be alluring while risking our self-perception.

We are only starting to understand the social determinants of health and how they impact our well-being and overall health. Social determinants are forces outside of medicine and one’s biology that influences how healthy a person is. This is troubling for transhumanists because the social determinants represent forces outside of a person’s control. They are forces that someone is born and raised in. Addressing social determinants is also out of the purview of nudging. In order to adequately address the social determinants, structural changes would have to be made. Nudging an individual towards transhumanism ignores the structural factors that contribute to someone’s unhealthy state. The opportunity to enact structural change and alter individual decision-making may present itself. But addressing the structural factors might change an individual’s mind about choosing transhumanism. Addressing structural inequities that lead to poor health outcomes means ending the status quo, like austere policies and neoliberal thinking. Here, we see another virtue ethic against nudging someone towards transhumanism, nudges can be an obstacle to solidarity. Nudges can ignore the larger collective responsibility we have toward one another and, instead, reinforce the individual ontology that prevails in the West.
Conclusion

Transhumanism presents a groundbreaking opportunity to overcome mental and physical limitations. It’s an ambitious movement that forces us to grapple with our own physical and mental limitations. The mental and physical limitations people have are difficult to face, they’re our weaknesses. Nudging provides an opportunity to aid people in overcoming their shortcomings. Libertarian paternalism ensures the nudges do not breach the line of paternalism or manipulation. This is an ideological offspring of the libertarian vein of American society, where individual agents are largely left alone to make decisions about their lives. Nudges are a powerful tool in healthcare and ought to be further explored. They are a cost-effective and simple measure for improving decision-making and a person’s health. It is important to be mindful of how nudges and autonomy interact. The line between paternalism, nudging, and manipulation must be respected. Simply rearranging choices likely does not violate autonomy, but the use of subliminal messaging or framing information in a particular way might violate autonomy. Further as previously stated, nudges serve as a reminder that we have obligations to future generations. Nudging can be used to ensure people are more moral. If appropriate, people can be nudged towards particular SSRIs. The unintentional consequences are well-documented. However, when constructing and implementing nudges, we must be mindful of the direction we are nudging people toward. The direction we want to nudge people is loaded with presuppositions and faulty assumptions. Where people may not need the nudge, but actually need assistance dealing with an underlying issue. Also, we have to consider what this nudge may say about what we, as a society, value. This is problematized by transhumanism excluding the disabled body in favor of a being without it. When healthcare professionals nudge people toward an option, they must be mindful of what the nudge is actually doing. The effects of the nudge extend beyond the clinical encounter and into a person’s life. Where certain choices are considered suboptimal. The nudges that may rob a person of the opportunity to undergo an exercise is self-interpretation. Where they decide what is ultimately best for them and their needs.
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