

THESIS

RADICAL ENHANCEMENT AS A MORAL STATUS DE-ENHANCER

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## ABSTRACT

### RADICAL ENHANCEMENT AS A MORAL STATUS DE-ENHANCER

Human enhancement has worried many thinkers. Some have focused on the potential harms that may befall us, should we walk the path of enhancement. One such harm may be that enhancements serve to undermine our unique human dignity. I argue that the concept of human dignity is better replaced by that of moral status. Others have worried that radical enhancements—those enhancements that give us abilities greatly outside our species typical functioning will lead to a new moral status. I argue that the sorts of enhancements we are likely to seek, namely *direct mental state control*, will give us reason to think the enhanced will have a moral status subordinate to our own. Finally, I argue that despite the radically enhanced not existing, we still have obligations to create them. I call this the *competing known identity problem*. Assuming some persons will exist in the future, we have reasons to create the best versions of these persons.

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## *Radical Enhancement as Moral Status De-Enhancer*

### *Preface*

The prospects for human enhancement become greater with each day that passes. Many are excited about the bountiful possibilities that await us. Our capacities and abilities may be augmented in ways that improve our quality of life. We may one day shape our psychology to make us more compassionate and caring, improving the quality of life for those around us. The path to enhancement will be risky, and many of the blunders of the past should be avoided. The power to enhance should lie with individuals as opposed to a central organization like the state, removing the concerns about eugenics programs of the past (Savulescu, 2001). Rigorous testing and safety protocols can protect and increase the well-being of those who choose to enhance. Enhancement will proceed slowly, but as we master our biology we will become better and better at manipulating it, in just the same way we manipulate other technology around us. By definition enhancements are a good thing (Harris, 2007, p. 36), and should be welcomed by all.

Many have failed to share my optimism. It is often argued that enhancements are malignant in nature. Some opponents argue that enhancements will erode our dignity and strip us of our moral status and special place in the world. I explore this in chapter one and argue that the concept of dignity should be abandoned. If we abandon dignity, then we will need to replace it with a new concept. Moral status can do all the work of dignity, but without any of the baggage.

A second criticism has been voiced by Nicholas Agar who argues that radically enhanced beings will have a superior moral status than mere humans. In chapter two I give a plausible conception of what radically enhanced beings will be like. I agree with Agar that there could be a change to moral status, but I diverge as I argue the radically enhanced will experience a

reduction in moral status. Since the radically enhanced will be better than us along many, if not all dimensions, it is hard to imagine how this could be. I argue that if we view moral status in terms of vulnerability, it is inevitable that the enhanced will occupy a lower moral status threshold than us.

Agar has also argued that since there are risks to us with enhancing, and since we have no obligation to enhance, we should only do those enhancements that are safe and within a species-typical range. In chapter three I introduce the *competing known identity problem*. I argue that we can garner valuable insights into who we ought to be from coexisting and highly similar versions of ourselves. This is then extrapolated to cases where we become radically enhanced, as if it is another normal stage of development. Since it is likely many members will wish to preserve a version of ourselves that has greater capacities, we should create the best versions of ourselves.

## Chapter 1: Dignity & Moral Status

Concepts like dignity are often hard to put into words. This lack of clarity has stopped few from using it as an analytic tool to distinguish humans from the rest of the animal world. This chapter will focus on three views of dignity. The strongest views are held by bioconservatives and the weakest endorsed by transhumanists. The weakest version is offered by Nick Bostrom who argues for dignity as inclusivity. The middle ground position is put forward by Francis Fukuyama who argues for our uniqueness as a species in a secular light. The strongest views are religious in nature and highly exclusive. Leon Kass advances a view of dignity that stems from God. In what follows I will explore these three views in greater detail. It is precisely because of dignity's ancestral baggage that the concept is so muddled and I will argue that attempts to salvage it have failed. Moral status is a far superior concept as it captures what we really care about—respect and fair treatment for all and does so with far fewer complications.

### 1.1 Bostrom & Dignity

Nick Bostrom argues that the concept of human dignity is extendable to posthumans (the radically enhanced). Bioconservatives will deny this compatibilist view, as they view dignity as a unique property among humans that either confers moral status or imbues a sense of worth on us and separates us from the non-human animals. Two fears predominate among bioconservatives. The first fear is that the transhumanist project will degrade our sense of worth, resulting in a reduction of dignity. The second fear is that posthumans, through their superior capabilities, will pose a violent threat to ordinary human beings (Bostrom, 2005, 204-209). Bostrom distinguishes between two notions of dignity that are commonly used in the literature.

1. (R) Dignity as moral status, in particular the inalienable right to be treated with a basic level of respect.

2. (W) Dignity as the quality of being worthy or honorable; worthiness, worth, nobleness, excellence ((p. 209) my additions to his formulation are (R) and (w)).

Some version of (R) and (W) are present in most discussions of dignity. These will be further modified in sections 1.2 and 1.3, where I discuss bioconservative views. Bostrom's own version of Dignity is something closer to (R), "Transhumanists, by contrast, see human and posthuman dignity as compatible and complementary. They insist that dignity in its modern sense, consist in what we are, and we have the potential to become, not in our pedigree or our causal origin" (Bostrom, 2005, p. 213).

Bostrom supports his compatibilist view with the observation that we are enhanced in many respects when compared to our ancestors. We have expanded our intellectual toolkit with the ability to read and write. We have greatly expanded our lifespans and regularly bend technology to our will. We are far more efficient in every domain of life than our predecessors. The numerous cultural and technological enhancements we have endowed ourselves with may make us unrecognizable to our past selves. Despite the enhancements we have developed so far, we still feel a sense of pride, self-worth and an unshakeable feeling that we have moral worth. This shows the compatibility of (R) and (W). Bioconservative will agree with the analysis thus far. Bostrom will diverge from more traditional views as he views dignity as a dynamic, morphable property, rather than the static and rigid property of his opponents. Dignity in this sense can be thought of as basic dignity, and I will describe it in terms of both (R) and (W).

(RW): Dignity as inclusivity. Moral status and self-worth are conserved despite massive permutations to existing human attributes. This conversation is extended even in the event of unique and novel attributes.

I suspect many will be sympathetic to (RW), but I worry that (RW) is too encompassing a concept for bioconservatives to engage with. One problem is that the concept of dignity has



traditionally been used to separate us from the non-human animals, and more contemporarily to distance us from the advancements in A.I. Dignity has often been used to signify our uniqueness amongst other terrestrial life. If dignity is to be identified with inclusivity, it radically alters the concept from what those that have traditionally meant by it. Instead of modifying the concept, it is far easier to use a different concept to talk about the same thing. What we are all concerned with here is moral status.

My main objection to (RW) has little to do with whether bioconservatives will endorse it or not, but rather, with its inability to offer any guidance on when or how we as a species could lose dignity. Presumably, decreasing our capacities will do little to diminish our dignity. There already exists a great distribution in our natural talents and capacities, and it seems hardly fitting to suggest that those with congenital disabilities lack dignity. But many non-human animals have more cognitive capacities and a greater degree of self-reliance than the severely impaired, and the concept of dignity seems unfitting for them. Moral status is a far better fit. A full discussion of moral status will be undertaken in chapter 2. For now we can think of moral status as the thing that affords us certain rights, privileges and beneficial treatment.

Moving in the opposite direction, it is difficult to imagine how enhancements could move one outside the bounds of (RW), as (RW) offers no guidance on how this could happen. As Bostrom prefers that enhancements are pursued by individuals, rather than mandated by the state, it seems reasonable that some individuals would opt to increase some capacities like intelligence, and diverge from the more traditional aspects of humanity that comprise our social and inner lives. These persons may be extreme logic machines completely divorced from humanity. They will certainly have moral worth and status, but, taken to enough of an extreme, dignity may be an unfitting concept. If dignity is a concept worth holding onto, it must have some boundaries, even

if they are fuzzy. Bostrom's account is boundless. If everything has dignity, then the concept becomes meaningless. Two conceptions of dignity offered by Kass and Fukuyama have very clear boundaries. In the next two sections I will argue these accounts are too *exclusive* to be taken seriously.

### 1.2 Fukuyama & Dignity

In *Our Posthuman Future* Francis Fukuyama worries about the conflict that will emerge between the enhanced and unenhanced. This conflict is political in nature and will likely result in war between the two distinct classes of people. Dignity is the very thing that grounds our political rights and ensures fair treatment. (Fukuyama, 2002, Ch. 8).

According to Fukuyama, we are in a constant battle with one another for recognition and respect. Recognition and respect have been denied to many people over time based on arbitrary criteria. As we are all human, Fukuyama searches for a property common amongst us all. Fukuyama calls this Factor X and it is what grounds dignity.

Our species-typical traits have remained largely the same over the past 100,000 years. Some traits, such as race, sex and hair color, are relatively unimportant as a basic component of dignity. Factor X has to be a non-arbitrary feature, something we all share, a feature that is the *essence* of a human being. We are *unique non-reducible creatures*, and this uniqueness is Fukuyama's target for grounding dignity. This uniqueness comes in the form of (1) a unique human politics, where we cooperate and engage with one another in ways entirely distinct from the rest of the animal kingdom and (2) a unique form of consciousness which constitutes our rich inner lives. Of course we have a unique ability to reason, but Fukuyama sees a similar capacity being developed in computing, and these objects lack dignity (Fukuyama, 2002, p. 162-171). What is needed is something more *unique and complex*. We have a full range of human emotions

that separate us from the rest of life. It is our human emotions that give rise to our fears, goals, desires and is the source of our values. As such, these are the most important contributors to dignity and are what compromise Factor X.

As we have seen, Factor X is a human's propensity for politics, and our consciousness that gives rise to a full range of emotions. These capacities have evolved and are tied to our genetic history. Modifying our genome through human enhancement poses a direct threat to dignity and we risk losing our special status and political rights.

Fukuyama worries enhancement will diminish our inner lives to advance utilitarian goals. Utilitarians aim to maximize pleasure and minimize pain. Pruning our emotional capacities is an effective way to do this. Ritalin has this effect and the added benefit of making children more tractable and other enhancements are likely to follow suit.

What separates Fukuyama from Bostrom is his reliance on the *uniqueness* of humans as the ground to dignity. Bostrom will have no problem extending dignity to non-human animals, or even intelligent machines, but Fukuyama thinks extending the concept of dignity outside of humans will lower our status. Fukuyama is skeptical of artificial intelligence reaching human levels of cognition but, in the event it does, he finds this prospect damning. "If they are right, this will have important consequences for our notions of human dignity, because it will have conclusively proven that human beings are essentially nothing more than complicated machines that can be made out of silicon and transistors as easily as carbon and neurons<sup>1</sup>" (Fukuyama,

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<sup>1</sup> As Fukuyama gives a secular account of dignity this is an odd statement to make. I worry that many attempts to secularize dignity are religious in nature. There is much overlap between Fukuyama's and Kass's account. This is reminiscent of the intelligent design movement. Many advocates attempt to give a "scientific" account that makes no mention of a specific God, but they generally hold a Christian worldview. For example, the works of Michael Behe and Stephen Meyer highlight this well.

2002, p.168). To clarify Fukuyama's position we can modify (R) from Bostrom and add the *uniqueness* component to it.

(RU): Dignity as moral status: Humans are endowed with unique capacities and traits which, when taken as a whole, comprise dignity. Alterations to these natural capacities pose a threat to dignity or moral status.

(RU) is far more exclusive than Bostrom's own account. (RU) better matches our intuitions, as it allows us to recognize our uniqueness in the world. But it has several drawbacks. First, it is not necessary to stunt our inner lives when seeking out enhancements. Enhancements can move in both directions and it is readily imaginable that many people will augment their emotional and creative abilities. It remains unclear why human enhancements that increase complexity will not confer additional or even new forms of dignity. Fukuyama seems to be exhibiting the status quo bias. To test if we are unduly and irrationally preferring what is, rather than what could be, Bostrom has given us the reversal test.

Reversal Test: When a proposal to change a certain parameter is thought to have bad overall consequences, consider a change in the opposite direction. If this is also thought to have bad overall consequences, then the onus is on those who reach the conclusions to explain why our position cannot be improved through this parameter. If they are unable to do this, we have reason to suspect that they suffer from status quo bias (Bostrom, 2006, p. 664-65).

Fukuyama seems to think we have reached a local optima. But this seems unlikely, as it is possible to make humans more complex, compassionate and caring.

Second, it seems that some human beings fall largely outside the norms of engaging in politics and possessing a rich inner emotional life. For example, autism is a disorder characterized by a focus on systematizing and the inability to empathize (Baron-Cohen, 2012). The inner life of an individual with autism is radically different from our own; they have difficulty forming relationships and seem ill suited for the sort of public engagements that

constitute our politics. It is unclear why this would make a difference to dignity, given that individuals with autism have many of the attributes we deeply care about. They still form relationships, have wants, needs, desires and goals. They are still persons, and personhood seems to be much more important than the constitution of our genome.

Factor X is a poor choice for dignity as it is too exclusive. The very traits that Fukuyama cites to establish dignity can be augmented. This should maintain dignity if it is a threshold concept or increase it if dignity is viewed in a scalar light. Since this does not happen Fukuyama may be exhibiting the status quo bias. Further, this view is troubling as it has the potential to exclude many members of the present population. Those that fall far below species-typical functioning can be excluded from having the coveted dignity, unless Fukuyama wants to start drawing arbitrary lines. If this is the case, then Fukuyama needs new criteria for Factor X. Dignity makes much more sense when it is left as a fuzzy concept. We know it when we see it, but it becomes readily apparent the problem with the concept when we attempt to get clear on what exactly it is. Next, a religious conception of dignity will be explored.

### *1.3 Kass & Dignity*

The strongest conceptions of dignity are religious<sup>2</sup> in nature. Leon Kass is a bio-conservative who, like Fukuyama, has served on the president's council of bioethics. Kass has argued for the importance of human dignity which has had profound consequences on our social policy. For Kass, two main elements comprise human dignity. The first is a basic human dignity, which sets a base threshold for how we ought to treat one another. The second is full human

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<sup>2</sup> It will become apparent throughout this work that I have few sympathies for religion. Monotheistic religions are particularly unfriendly to human enhancement in as much as they teach human beings are the center of the universe. However, not all religions are equal. For those religions that don't view humans at the top of the great chain of being, I hope you find this interesting, engaging and plausible.

dignity, which manifests when we actualize our full potential, show our excellence and display our *true* human nature.

Basic human dignity sets a minimum threshold for how we treat one another. All humans have a basic set of human worth. One reason for wanting this is largely practical and political. It would be unsettling if our organs could be used for the benefit of others, or if we could be enslaved and used as tools for the benefit of others (Kass, 2017, p. 170).

This is certainly an ideal to strive for, but it says nothing about the great differences between humans across our society and why the non-human animals, who exhibit many of our coveted capacities, lack entrance into a base level of dignity. Kass grounds our dignity in our distinct humanness. Distinctively human traits include thought, freedom, moral choice, acts of kindness and love and friendship. These traits come from our God-given capacities; to realize our full human dignity we need to actualize these traits and maximize their potential. While this ensures that all human beings are endowed with dignity, it does not guarantee that we all possess the same level of dignity.

Kass often illustrates dignity through everyday examples and even short vignettes, making it a more abstract than principled concept. Dignity is the sort of thing we feel and experience, rather than analytically describe. It is as if we are equipped with inborn dignity detectors. For instance, consider former slaves, who reclaimed their dignity upon earning their freedom and fighting in the Union army during the Civil War. Or we can perceive the loss of dignity in the dutiful husband, whose wife treats him as an object of ridicule, and even goes as far as to make him a cuckold (Kass, 2017, p. 164-65). As a cuckold, his dignity is stripped from him. These examples are relatively uncontroversial, and readily capture what is meant by the use of the concept of dignity.

Identifying worthiness is at the heart of the preceding examples. Our full human dignity, our full worth, is exemplified in those that exhibit the virtues of courage, compassion, generosity and righteousness. These may be exhibited in the most outstanding moral characters of our time but can also be found in the everyday ordinary acts of human beings, such as preparing a meal, washing a baby, or even helping out in the community. Like Fukuyama, Kass appreciates our voluminous emotional range: “No account of the dignity of being human is worth its salt without them” (Kass, 2017, p. 169).

So far, Kass has given us two components to dignity, that of full human dignity, and that of basic human dignity. This account adds little to Fukuyama’s apart from the grounding, where Kass turns to God. Humans have a dual nature, that of a higher dignity (being human) and lower dignity (human being). Our higher dignity is exemplified in the characteristics of our mind and our lower dignity in the passions of the body. We are dependent on the gift of our bodies from God to sustain life. Our bodies command our own respect and respect from those around us. We were created in His image, which includes our hearts and minds. Exercising the heart and mind allows us to exhibit our true human nature, the God-like qualities inherent in us all. This brings Kass to his critical conclusion “the inviolability of human life rests absolutely on the higher dignity—the godlikeness—of human beings” (Kass, 2017, p. 175).

This version of dignity calls for a new principle. In line with Fukuyama and Bostrom, Kass is concerned with respect and, like Fukuyama, Kass is also concerned with the uniqueness or specialness of our standing. He diverges from other views in how unique we are and the source of moral worth. This new conception is Respect-Uniqueness-Worthiness-God (RUWG) and states:

(RUWG): Dignity as moral status and worthiness. Dignity is constituted by our uniqueness in form and capacity, by our complexity, and by our god-like natures.

Like Fukuyama, Kass is worried about our uniqueness being undermined. Not only does he worry about radical changes, like genetic engineering, but he views technology as a threat to what it means to be human: “It seems dehumanizing to be reducing yourself to 29 scientifically tested, match-relevant ‘dimensions’” (Kass, 2017, p. 65). This is in reference to the online dating website eHarmony. But this seems to diverge from the most central elements of dignity and show that this is a love for the old ways, for a more conservative time, rather than a deep insight into the nature of dignity.

This becomes even more apparent when we start to compile several of his views together. Much of his views focus on our sexual relationships. Courtship and the defense of a woman’s Honor are especially important (p. 48), morality is contained in our sexuality and that “safe sex is the self-delusion of the soul” (p. 57). Men are largely boorish creatures that rely on women to teach them morals through use of their sexual power (p. 61), and women best exercise their virtues when they are sexually modest (p.65). Kass’s view is problematic in that it is unlikely to resonate well in a secular crowd. It will run into further problems amongst those of differing religions and even amongst the various Christian denominations. Some denominations relegate women to more traditional roles. Why not view dignity in these terms, instead of just sexual modesty? Kass’s views on eHarmony and the role sexuality should play in our lives feels more like strongly held personal convictions, as opposed to deep insights into the metaphysical nature of reality.

#### 1.4 Concluding Remarks

I have shown that dignity as a concept is too problematic to endorse. Weak versions, as put forward by Bostrom, are too inclusive to capture what is traditionally meant by dignity and unlikely to persuade anyone who uses it as a guide to morality. Moderate versions, as put



forward by Fukuyama, are too exclusive. His view focuses too narrowly on our genetic makeup and exhibits features of the status quo bias. It is readily imaginable that we could increase our emotional capacities and become more complex beings. As our emotions and complexity are what separate us from nonhuman animals, increasing these capacities should be a boon to our dignity and not a burden. The religious nature of Kass's conception is unlikely to gain traction within many Christian circles and doomed to failure outside of Christian circles. His account undermines our autonomy and limits our use of tools like dating sites that can greatly improve our lives.

In the next chapter, I will shift the focus from dignity to moral status. I will argue that we should view moral status in terms of vulnerability. Before I do this, I explore the views of several thinkers who argue that radically enhanced beings will have a greater moral status than us. I then give a plausible conception of the enhanced and argue that they will experience a reduction in moral status as they are less vulnerable than we are.

## Chapter 2: Radical Enhancement

Radical enhancement—those enhancements that bring our capacities and abilities greatly outside species-typical functioning--have worried many. Nicholas Agar has argued that radically enhanced beings will have a moral status that exceeds our own (2014). Jeff McMahan has voiced a similar concern, focusing on our violability (2009), while Allen Buchanan (2009) worries the radically enhanced will have stronger interests than mere persons. I will argue that these concerns are misguided, as these novel beings will have a moral status subordinate to our own.

This chapter is broken into six sections. The first section will be spent clarifying the views of Agar, McMahan and Buchanan. In section two, I will motivate a plausible conception of the radically enhanced. Section three will be spent testing the conceptions of moral status offered by Agar, McMahan and Buchanan against my own conception—*moral status as vulnerability*. Section four will be spent arguing that cognitive enhancements are a morally desirable thing. In section five, I will argue for a narrow conception of vulnerability and its theoretical relation to moral status. The final section is reserved for objections.

### 2.1 Enhancement & Moral Status

Our abilities can be enhanced along many dimensions. Enhancing our physical abilities may include strength, stamina and vision, all of which are important for athletics and in daily life. We can mitigate muscle tremors, enhancing our ability to create art and perform surgery. We can even enhance our emotional and cognitive capacities, those things that constitute our inner life. These cognitive and emotional enhancements may take the form of intelligence and memory, or those elements that make our inner life worth having, including love, joy and empathy to name a few. It may be possible to enhance moral behavior; these *moral disposition* enhancements can make more moral behavior more likely (Douglas, 2008). We may even

enhance *moral status* directly. Moral status enhancement may arise from developing a new capacity, or perhaps augmenting capacities such as rationality and empathy may be sufficient to raise moral status. A variety of methods can be employed to make these enhancements a reality. Biochemical interventions, such as performance-enhancing drugs, are one option. Genetic interventions are becoming much more likely with the targeted approach of Crispr Cas9. Environmental enhancements are all familiar, including legal and educational institutions, as well as societal norms. While the radically enhanced will most likely be enhanced along every dimension mentioned and utilize several methods, the most pertinent to this discussion are those enhancements that constitute our inner life. In section two I will focus most closely on cognitive and moral (disposition and status) enhancement. But first, I want to get clear on several views of moral status.

Nicholas Agar takes no issue with the enhancements mentioned above, as long as they are moderate enhancements—those enhancements that strengthen our capacities and abilities within species-typical functioning. Agar is concerned that enhancing outside the species-typical range will create post-persons—beings with greater moral status than mere persons (Agar, 2014, p. 157). If this is right, then it seems we mere persons may lose many of the rights and privileges we have grown accustomed to. The radically enhanced may edge us out of cooperating in civil society, they may act paternalistically toward us, undermining our autonomy, or they may even use us as model organisms in research, in much the same way we abuse a variety of non-human animals.

Agar focuses on direct moral status enhancements. Enhancing non-human animals with capacities sufficient for personhood would be one way to directly enhance moral status. The moral difference between persons and non-human animals often lies in their differential

treatment. For Agar, a moral status enhancer “increases a being’s entitlement to certain forms of beneficial treatment and reduces it’s eligibility for certain types of harmful treatment” (Agar, 2014, p. 158-159). So moral status is:

(MS): A being’s entitlement to certain forms of beneficial treatment and reduced eligibility for certain forms of harmful treatment.

This is an intuitive notion of moral status, but it remains unclear why we should think post-persons could experience the sort of moral status boost that non-human animals have the potential to experience, albeit through radical enhancement.

Two key elements of Agar’s argument are: (1) a distinction between weak and strong thresholds, and (2) an induction from everyday observation. Strong thresholds for moral status are insensitive to the modification or addition of capacities. There will be no difference between persons and post-persons no matter the degree or type of enhancement. Weak thresholds are far more sensitive. Post-persons, given significant enough changes, will have some feature(s) that will make a positive difference to moral status (Agar, 2014, p. 162). Agar favors weak thresholds, but only speaks minimally in support of them. To aid his account I will turn to the work of Stan Husi. Husi argues against strong thresholds (and moral equality amongst mere persons<sup>3</sup>). One issue lies in our ability to transform scalar properties into binary ones. For example, rationality is clearly a scalar property that admits of degrees. We can be more and less rational within the species-typical range and there are a multitude of ways to increase or decrease rationality outside the species-typical range. Figuring out what category, or threshold, one is in

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<sup>3</sup> Husi’s issue is with the conceptual framework of egalitarian principles, primarily threshold accounts. He is very clear that prejudices of the past and present are deplorable. Even though he finds threshold accounts unjustifiable, this in no way undermines our obligations to treat others with full respect.

just becomes a matter of math. Strong thresholds impose an asymmetry on the math that Husi finds implausible. Take any property relevant to moral status  $X$ ,  $(X - n)$  makes a huge difference to moral status, removing one from a higher threshold. But adding to the relevant property  $X$ ,  $(X + n)$  makes no difference. Compelling reasons are needed to justify this asymmetry and Husi finds the asymmetry too implausible to be taken seriously (Husi, 2017, p. 391-92). Weak thresholds offer a plausible alternative to the more commonplace strong threshold view.

Agar's second move is to note the well-established gradient of moral concern that already exists. Rocks are sacrificed before non-human animals, and non-human animals are sacrificed before persons. Continuing the pattern would suggest that mere persons are sacrificed before post-persons. One thing to note is that it would be a very convenient fact that persons occupy the highest moral status category or tier. Agar's point is much stronger: He argues that if moral statuses higher than personhood exist, and we are confronted with these beings directly, we will be unable to understand and recognize why they have greater status (Agar, 2014, p. 174, 78-80). The reason we do not continue the inductive move is a limitation of our creative and intellectual powers, rather than a feature of the world. These two points do not establish that higher statuses than personhood exist, but they provide enough justification to take the idea seriously.

A second view on moral status comes from Jeff McMahan who also finds it plausible that higher statuses than personhood may exist. For McMahan, supra-persons<sup>4</sup> may enter this uncharted territory. Supra-persons are beings whose psychological capacities exceed our capacities, by more than our psychological capacities exceed those of non-human animals (McMahan, 2009, p. 600). As increasing our psychological capacities alone might not be enough

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<sup>4</sup> Post-persons, supra-persons and the radically enhanced are synonymous. I will use them interchangeably for stylistic reasons. I hope the reader won't find this terribly confusing.

to alter moral status, McMahan offers the possibility that a new emergent property may grant access to a higher moral status threshold. The difference between the thresholds for mere and post-persons is the degree to which each is inviolable. In normal circumstances, no human being can be sacrificed for the benefit of another human being. But when the numbers are large enough, it becomes permissible to sacrifice one innocent person to save the lives of the many. Inviolability is not equal across all beings as non-human animals have a lower degree of inviolability, as they are readily sacrificed for food, clothing and research (McMahan, 2009, p. 599-601). This second conception of moral status is: *moral status as inviolability* or (*MSI*). MSI states:

MSI: The degree to which one human being can be sacrificed for the benefit of another human being.

If this is right, then a single supra-person can only be sacrificed in the event that their life will save the lives of numerous mere persons. Conversely, several mere persons could be sacrificed for the benefit of a single supra-person. I challenge this in section III and argue that supra-persons could be sacrificed before mere persons, despite the numbers.

In contrast to Agar and McMahan, Allen Buchanan is highly skeptical of higher moral statuses. One reason is no positive account of the radically enhanced has been given. Without an idea of what enhancements will provide for greater moral status, the concern of beings with greater moral status can be put on hold (Buchanan, 2009, p. 354). A deeper reason is what Buchanan calls the *Moral Equality Assumption* (MEA). MEA holds that all beings who possess sufficient attributes for personhood have the same moral status (Buchanan, 2009, p. 347). Buchanan favors a strong threshold account, grounded in Kantian respect and the capacity for mutual accountability. For Buchanan, strong thresholds and the MEA better match our intuitions

about why beings with certain capacities deserve equal respect, and why increasing those capacities does not alter this base level of respect. This is contrasted with an interest-based view, which he attributes to utilitarians. Buchanan sees interest-based views as discarding moral status thresholds altogether and puts interests along a single continuum. For Buchanan, the problem with this view is that it is easy to classify different interests along a spectrum, but it is hard to draw a sharp line between interests. For example, it becomes difficult to draw a sharp line between humans and non-human animals (Buchanan, 2009, p. 360-61). As we intuitively draw this line, we should prefer strong thresholds over interest-based accounts. Further, if we treat all properties as if they were scalar properties, we might note the great variation in capacities and talents that already exist. It may be tempting to lower or raise the status of some humans and, given our history, that may be too much to accept. Unlike Agar and McMahan, Buchanan favors a strong threshold, but he still argues that the radically enhanced will take priority over their ordinary human counterparts.

Buchanan's chief concern is not about greater moral status (since there is unlikely to be higher ones), it is about what happens if competing interests emerge, ones that confer different rights on the enhanced and unenhanced. Post-persons may become enhanced cooperators, engaging in civic life in ways mere persons are unsuited for. Post-persons may act paternalistically toward us in the same way we act paternalistically towards the severely disabled (with the intent of protecting them), or they may exclude mere persons as they lack the capacity to cooperate in a meaningful way (Buchanan, 2009, p. 373-75). Buchanan uses the analogy of a card game. It is permissible to minimize participation between Go Fish players (mere persons) and Bridge players (post-persons) since Go Fish players cannot cooperate, interact with, or make a meaningful contribution to the game of Bridge. The interests of the Bridge players supersede

that of Go Fish players. These conflicting interests may be so great that the radically enhanced enjoy a richer set of rights, guaranteeing that their interests take priority, while the unenhanced enjoy a simpler basic set of rights. As moral status is the same, a third concern is that of *conflicting interests* or (CI).

(CI): All agents share an equal moral status, but not equal interests. The enhanced will have a stronger claim (or right) to have their interests fulfilled.

Three views of moral status have just been offered. Before I introduce and motivate my own conception of moral status I will address two pressing items. First, we need a conception of what the radically enhanced will be like. In the next section, I will add to McMahan's account of supra-persons. Second, we need to know the practical impact of the theoretical principles put forward earlier. In section 2.3 I argue that the implications of MS, MSI and CI previously discussed are untenable and should be abandoned.

## 2.2 A Conception of Radical Enhancement

As mentioned previously, the radically enhanced will likely experience a wide array of enhancements utilizing an array of technologies. While super-intelligence and athletic prowess are likely features of post-persons, what is often overlooked is some ability to modulate their inner life. Mere persons do this routinely, albeit in an *indirect* fashion. Music, meditation or a serene walk are readily available tools to attenuate stress and anxiety. To engage our empathy, we may focus on people who look like us, or we may focus on events that contain small numbers of people, as it is impossible to empathize with millions at once (Bloom, 2016, p. 31-34). To deal with the stressors of war soldiers often resort to telling "cold jokes," jokes that dehumanize enemy combatants making it easier to kill and torture them (Glover, 1999, p. 36-37). This small trick is well suited to our psychology which may be geared towards imbuing *essential properties*



on others (Smith, 2011, p. 32-34, 100-101). Most of our day is spent trying to control our mental states, for better or worse. More than two thousand years ago Sextus argued for skepticism as a form of medicine that would allow one to suspend judgment and enter ataraxia (Empiricus, 1996). Buddhists took a different route and focused on meditation as the mechanism to ameliorate suffering (De-Bary & Bloom, 2000, p.435-440). In what follows I will discuss current technology that will give us greater access and control over our inner lives. I then speculate that increasing technology could give us the means to *directly control* our mental states. Direct mental state control will make the indirect tools of mere persons obsolete.

Deep brain stimulation (DBS) involves implanting electrodes in the brain to treat psychiatric and movement disorders. This technique is an improvement on earlier tissue removal surgeries as it allows for greater control (the ability to manipulate the stimulus) and is reversible, as the implants can be removed. Currently, only those patients who are resistant to traditional therapies are considered for DBS devices. DBS has shown limited success as a treatment for depression, anxiety, OCD, Tourette's syndrome, Parkinson's, anorexia, addiction, PTSD and aggressive behavior. One long term heroin patient even reported feeling decreases and increases of heroin cravings in response to different stimulation settings (Cleary et al. 2015). This technology can modulate our inner life and may one day be used outside of therapeutic contexts to enhance moods and curb unwanted behaviors such as addiction and aggression. DBS is still in its infancy, and not without substantial risks, but this technology can give insights into how the radically enhanced may one day function.

Optogenetics is similar to DBS in its invasive nature but differs mechanistically as it uses light to stimulate neurons as opposed to electricity. Opsins are light sensitive membrane proteins that are responsive to light. These proteins react to light in specific wavelengths and constitute

the first step in our visual pathway. With the aid of genetic technologies, opsins can be expressed in the brain, and in the presence of light can stimulate neurons rapidly in real time. This can allow for a more targeted approach than DBS as the optic fibers inserted in the brain can emit different wave lengths of light and only stimulate specific target cells (Aravanis et al. 2007). This technology can adjust the focus from broad adjustments (adjusting neurotransmitter level) to the fine-grained approach of targeting a circuit (Deisseroth, 2010). Optogenetics has been shown to modify both feeding and predatory behavior in mice.<sup>5</sup>

Brain-Computer Interface (BCI) began development in the late 1970's. Non-invasive methods such as EEG have been used to move mouse cursors (Wolfpaw et al. 2004, McFarland et al. 1997), while the more invasive sensor implantation has been shown effective in cursor control and manipulation of prosthetic hands and robotic arms<sup>6</sup> (Hochberg et al, 2006). The tasks being performed are still rudimentary and able-bodied persons would find the technology cumbersome. But it is readily conceivable that one day we will use this sort of technology to operate our phones and computers, and it is not a far leap from there to imagine it can be used to help modulate our inner lives.

If post-persons are to command their inner lives, DBS seems to be a poor option. It's mode of delivery is too imprecise to give the sort of control I envision. However, the research gleaned from this technology will be invaluable in our understanding of the effects of direct

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<sup>5</sup> A video of mice feeding behavior can be found at: <https://neurocomplimenter.blogspot.com/2013/09/> While a video of predatory behavior can be found at: <https://www.youtube.com/watch?v=FIGbznBmx8M>

<sup>6</sup> Videos of cursor manipulation (opening emails, drawing circles), gameplay (pong), and manipulating prosthetics are available in the supplementary information section of this paper available on Nature's website.

neural intervention.<sup>7</sup> Optogenetics is a more powerful tool, but is a long way off in humans, for practical and ethical reasons. Suppose we surpass these hurdles, why limit the use of a system like this to treat depression, OCD, or addictive behaviors?<sup>8</sup> Why not incorporate fiber optics throughout the entire brain? Doing so would give the ability to enjoy the mental benefits of a long walk, from the comfort of your couch. The brain states would be identical in each case. Modulating our inner lives would be a daunting task for most users, but most of the work will be done by a central computer that will learn a specific brain and set presets for certain behaviors. The user then will be able to increase or decrease the stimulation based on need. These states will map the ones we routinely experience. Special education teachers may bookmark a calm or patient setting, enhancing their ability to engage with, and instruct their students. Athletes may opt to feel stimulated or enlivened when training and competing, enhancing their ability to stick to their daily regimens. Our most intimate mental states, our feelings of passion, lust and love can be modulated. This technology could be used to better match our partner's emotional state or to aid in leaving a destructive relationship.<sup>9</sup>

This technology could be integrated seamlessly into our lives. Optogenetic fibers could be controlled by a small computer interface connected to a smartwatch. BCI could allow the user to manipulate this device with their mind, and in a matter of seconds, select the preset for the mood they seek. The user would then be free to make minor adjustments, increasing or decreasing the stimulus for greater comfort. This may not be appropriate in all situations, but it

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<sup>7</sup> Future research on DBS greatly outweighs that of optogenetics as measured by upcoming clinical trials. These can be viewed at <http://www.clinicaltrials.gov>

<sup>8</sup> Those that endorse the treatment enhancement distinction will offer reasons not to enhance. I set this issue aside, as it is outside the scope of this paper.

<sup>9</sup> Some have argued that modulating our love lives is a morally desirable thing. For an extensive argument on this with practical tools in mind see *Love Drugs* (Earp & Savulescu, 2020).

will be appropriate for many. The idea is to give greater control in instances where mental states do not contribute to personal growth and well-being. It is not always beneficial to be mad at a loved one for a minor infraction or to be impatient with a stranger at the supermarket. The sort of control I envision can make these negative, destructive mental states go away in a more direct fashion than some of our indirect strategies. For those who may find this unsettling, is it really that much different from consuming alcohol after a stressful day at work? Or is it far different than drinking a glass of wine on a first date? My intuition is that it is not.<sup>10,11</sup>

One last enhancement focuses on pain diminution. Since optogenetics can play an inhibitory role, it seems plausible that it could be used to inhibit pain. This would be one way to tailor and dilute our response to painful stimuli. A simpler approach would be to alter the pain nerves themselves. Voltage gated sodium channels ( $Na_v$ ) play a role in pain signaling and are the target of research for new and less addictive analgesics (Offord, 2017).  $Na_v$  1.7 has garnered particular interest, as mutations have been identified that both greatly increase and reduce pain, while a complete  $Na_v$  1.7 knockout is non-lethal in humans (Dib-hajj et al. 2010). It seems unlikely that evolution selected for an optimal level of pain tolerance and our experience of it, but rather, only selected for the right amount to aid in survival and reproduction. Given that we live in a far different environment than our ancestors, it may be appropriate to alter our nociceptors themselves. The goal would not be the elimination of pain, but to dampen it. For

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<sup>10</sup> As the ethics of enhancing are outside the scope of my argument, I will leave this point hanging. For those interested in exploring this point further see *Neuroethics* (2007) by Neil Levy. He argues for parity between traditional and technological methods of intervention

<sup>11</sup> Andy Clark has argued that we are natural born cyborgs (extended mind hypothesis), and that we are built to integrate technology into us. For numerous examples of how we naturally incorporate technology into our daily lives see *Natural Born Cyborgs* (Clark, 2003).

example, reducing Nav 1.7 expression might slightly raise our pain threshold, so that more of a painful stimulus is needed to evoke the pain response.

At this point, the difference between current technology and my account of the radically enhanced is magical. In a discussion on AI, Nick Bostrom has given several reasons to be wary of the prospects for technologies like DBS and BCI, and the timeframe they will be implemented. Several complications may occur which include infection from surgery and stimulating neural tissue outside the target zone. Additionally, there has only been limited success in therapeutic settings, and none in enhancement. It is far easier to bring someone back to baseline, than to improve their capacities. Our brains are finite machines with limited computing power. Adding chips to the brain may do little to aid our thinking, if the brain can only process information so fast (Bostrom, 2014, p. 63-67). Finally, much of the benefits these technologies afford could be done far cheaper, and without the risks associated with enhancement. Healthy skepticism is in order and warranted for the technologies I describe.

It may be worried that the conception of the enhanced I am arguing for are more like machines than humans. The worry is that they will be simple automata that will lose much of the inner life that makes our lives so valuable. If this was the goal I would argue for developing A.I. and then the replacement of humans. I am arguing that we should be able to better regulate our emotional life, rather than repudiate it. There already exists great variation in our ability to regulate our lives and the main feature of the radically enhanced is that their ability to regulate their emotional life will be augmented far beyond the capabilities of those that already exist.

DBS, BCI and optogenetics are all key technologies that one day could be incorporated into the enhanced. Other technologies, such as modifying cellular biology, could be used to better match our biology to our environment. While these technologies are a long way off from

implementation for enhancement, they provide a guide to what the enhanced will be like. This section has been spent giving a plausible conception of how technology could be integrated to create the enhanced. There is room for caution and skepticism as the technology is still in its infancy. The point to keep in mind is that the enhanced may one day exhibit direct mental state control, and these beings should be kept in mind in the next section where I will test them against mere persons.

### 2.3 Altering Moral Status- Two Test Cases

Recall Agar's view of moral status, MS, a being's entitlement to beneficial treatment and reduced eligibility to harmful treatment. If MS is right, then we should expect post-persons to receive preferential treatment in all cases. MS will be tested in a hypothetical organ donation case.

#### Hospital:

Imagine an *ideal moral agent* in need of an organ transplant. Unfortunately, the patient is too ill to be moved and there are no viable donors in the area. Two neighboring hospitals have volunteers to donate and are able to excise the organ. Hospital A is fully modernized offering every amenity, including anesthesia and analgesics. Hospital B, while modernized and safe, doesn't believe in modern anesthetics or pain relievers. In all other respects, Hospital B is identical to Hospital A. Assuming there is *some moral reason* to donate an organ to this agent, although not a strong enough reason to force any agent to sacrifice herself, should the organ be procured from Hospital A or Hospital B?

Intuitively, Hospital A is the wiser choice. Much of the pain can be mitigated or outright eliminated, and the donor is far less likely to experience any trauma from either thinking about the upcoming surgery, or from actually undergoing the surgery while awake and alert. Hospital B can provide the same outcome as hospital A (one organ to a patient in need), but it is far riskier, more painful, and offers no additional benefit to that of hospital A. We can begin to imagine

Hospital A represents a post-person and hospital B represents a mere person. Mere persons have some limited techniques to mitigate pain and distress. During the operation they might try to regulate breathing or squeeze the hand of a close friend who has come for emotional support. Outside the procedure they may find external distractions like books, movies or music to avert their attention from the upcoming surgery. Post-persons on the other hand will have more direct control. Prior to the procedure they may directly lower their anxiety levels or imbue themselves with a general sense of peace about the surgery. During surgery, post-persons may exercise some of the inhibitory control of optogenetics and reduce their pain or outright block it from reaching conscious awareness. Assuming we have some moral reason to mitigate or prevent physical and psychological pain in others, then we have some reason to prefer the post-person in the organ donation case. Since both mere persons and post-persons have *a moral reason* to donate (for the benefit of an ideal moral agent), post-persons have an additional reason that mere persons lack (reduced physical pain and psychological distress). Since we have an additional reason to prefer post-persons, they should be preferred in this case. This provides some reason to think that we should reject Agar's claim that the enhanced will enjoy a greater status than ordinary humans.

What if we exclude hospital B from the scenario, and imagine a mere and post-person in Hospital A? In this case who has greater reason to donate an organ?<sup>12</sup> The prior reasoning suggests that there would be equal reason to donate between mere and post-persons. I think this is a mistake as mere persons are far more *vulnerable*, and so, along *many more dimensions* than post-persons. I will say more about vulnerability in what follows and greatly elaborate on it in section five.

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<sup>12</sup> Thanks to Moti Gorin for bringing this scenario to my attention.

This was a case of simple transplantation, but what happens in the event of an emergency, where it is guaranteed someone will die? McMahan worries mere persons will be more violable than post-persons (McMahan, 2009, p.601). Recall, MSI posits the enhanced will have greater inviolability than mere persons. One such real life, albeit modified, case is the sinking of the Titanic. On McMahan's proposal the enhanced would be first on the life rafts. But for reasons similar to that of *Hospital*, I think they should go last. One reason mere persons will have priority is their sheer vulnerability. Their susceptibility to the fear of drowning and the pain of the cold frigid water, are among the reasons we think it impermissible to throw someone in the water. The enhanced, although incapable of surviving long periods in the cold, may lose out on all the pain of the ice water, and experience no fear of drowning or loss of life. If *direct* mental state control is taken into account, then we have some reason to think MSI will not dictate the enhanced board first, primarily, the enhanced will miss out on the pain and torment of drowning. Further, we may think of priority in terms of fair innings, where those that haven't had the opportunity to experience a full life are given priority in life and death situations (Harris, 2001, p. 90-94). As the enhanced will have greater capacities, they will have had a better opportunity to experience a fuller range of life, in a shorter period of time. Even though they may be the same age, they have had more "innings" to play in the game of life, due to the fact that their cognitive capacities are greater than ours, by as much as ours are greater than non-human animals.<sup>13</sup> These cognitive enhancements and novel forms of mental state control will make post-persons less

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<sup>13</sup> It might be worried that post-persons will have objectively better lives. Even though they have had more experiences in the same amount of time, the future experiences they will miss out on will be worth more. I am wary of this reasoning. We generally accept the moral equality assumption. We typically don't think it appropriate to assign more value to the lives of those with greater cognitive capacities when compared to the cognitively challenged. The point of this addition is to highlight that we can begin to compound reasons to think the radically enhanced will have a lower moral status than mere persons.



vulnerable to the harms that plague our lives. I propose any account of moral status must be phrased in terms of vulnerability. As moral status is directly tied to vulnerability we get *moral status as vulnerability* or MSV:

(MSV): Moral status as vulnerability. The greater a being's susceptibility to harm (mental or physical), the greater the protections that are afforded, and hence, the greater an agent's moral status.

We need not completely abandon MSI as it does tell us that we are not items that can be readily sacrificed. The enhanced should not be harmed or, in this case, be thrown overboard on a whim, as they have a great degree of inviolability, they just have less of this inviolability conferring property than mere persons possess. One often overlooked element of what constitutes moral status is vulnerability. I will greatly expand on vulnerability in section 5. For now vulnerability can be thought of in an intuitive everyday sense. What should be apparent from the cases of hospital and titanic is the greater the vulnerability of any agent, the greater the moral concern. As moral concern grows so does an agent's moral status. With this in mind we can return to our test cases and compare MSV against the concerns of Buchanan.

As we saw Buchanan has expressed concerns about enhanced cooperators edging simple cooperators out of the dominant cooperative framework.<sup>14</sup> Recall that CI states the enhanced will have a different set of interests and a richer set of rights guaranteeing their interests take priority. One common interest between mere and post-persons will be exhibiting autonomy, contributing

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<sup>14</sup> Robert Sparrow raises a stronger concern. Enhancements may proceed so quickly that those born just a few years later will render those just a few years ahead obsolete. This means one could be forced out their career at the age of 25 or so (Sparrow, 2019). Given our psychology, it seems reasonable to worry that this will have negative effects. But, if post-persons are more psychologically immune, then we may reduce our concern for the psychological well-being of the radically enhanced.

to society and a general feeling that these contributions have a sense of purpose and meaning. Whose interest do we keep in mind, the simple or enhanced cooperator? As the enhanced have greater control over their mental states (jealousy, rage, boredom, self-worth), it seems that two things are likely to happen. First, the enhanced cooperators can enter mental states that make them amenable to cooperating at a lower level. Playing Go Fish has its upside when you are playing with children. If post-persons are smarter than mere persons, to the degree that mere persons are smarter than non-human animals, it is fair to say that mere persons will be like children in the eyes of the enhanced.<sup>15</sup> As adults we become frustrated with children over extended periods of time, but we lack the capabilities of the enhanced. The enhanced will have the capacity to be far more patient and will be able to sustain cooperation for much longer, as they can mitigate their irritation and boredom. Praise need not be a central motivation of the enhanced. We feel cheated when our accomplishments go unrecognized and are beyond indignant if our accomplishments are credited to someone else. It does not follow that features of our psychology will be predominant features of the enhanced. The enhanced may be far happier that a positive impact is made, rather than receiving credit for it, and if they aren't, they will have the tools to foster this sentiment. They will recognize that mere persons need to cooperate to grow as individuals and put their ideas on the sideline so mere persons can contribute. Second, their superior cognitive powers may give them the ability to more clearly identify errors in ethical and general reasoning. Finally, the enhancements I offered are a narrow window of what

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<sup>15</sup> Francesca Minerva Makes a similar point about cryonics. One worry is that if you freeze yourself for an extended period of time your revival will depend on the kindness of future post-persons. As these post-persons will have little interest in reviving a mere-person, the revival won't happen. One line she pursues is that if the post-persons are advanced enough they may have a relationship to us the way we have relationships with dogs. Socialization and love for one another can still occur (P. 37)

the radically enhanced may be like. They may undergo specific moral disposition enhancements. One such method that has been proposed is to “attenuate counter-moral emotions.” Such emotions might include aversion to racial groups and impulse toward violent aggression (Douglas, 2008, p. 231). If moral disposition enhancement occurs along the way, the enhanced will not experience anything like the out-group hostility that is all too routine in our society. The combination of direct mental state control, increased rationality and specific moral enhancement provide compelling reasons to think the enhanced will not believe they have superior rights and interests to our own.

The second point (enhanced cognitive abilities) needs more attention. In the next section I will argue that enhancing our cognitive abilities can serve as a moral disposition enhancer.

#### 2.4 Cognitive Enhancement

One way to think about cognitive enhancements is in terms of raw computing power. The enhanced may become better calculators or better fact accumulators<sup>16</sup>. Cognitive abilities understood in this way are not terribly interesting, as there already exists great variation in ability, and computers perform many basic tasks for us regularly. The sorts of cognitive enhancements we should aim for are ones that increase our ability to abstract<sup>17</sup>. If the radically enhanced deserve to be called post-persons, they will more readily use abstraction in their reasoning, and quite possibly in a way that is off limits to us. If mere persons are better

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<sup>16</sup> 30 million adults in the US can't read. Twice that number have basic reading skills (Baer et al. 2009). How much different would the world be if the average level was above proficient? At minimum, the level of discourse in the public sphere would be far higher

<sup>17</sup> Persson and Savulescu (2012) argue that the cause of our problems is our thinking. For example, pollution is a symptom of climate change, but our thinking is the cause. They argue the best way to solve moral problems is to enhance our psychology.

abstractors, then they will have better insight into conflicting propositions. This will result in more coherent views, and increase the probability of solving contemporary moral problems.

To illustrate what I have in mind we can focus on wealth inequality, one contemporary problem that currently occupies the public's mind. The ten richest men in the world each have wealth in excess of fifty billion dollars. The top three have more than twice that. Some think this is perfectly appropriate, and even morally good. But what if this vast wealth was not represented by ones and zeros in complex investment mechanisms, or tied up in physical assets like luxury properties and yachts, but rather in raw goods necessary for survival?<sup>18</sup> What if billionaires were explicitly Grinchy?

*The Grinchy Billionaire:*

Imagine a wealthy billionaire shifts his investments from long term assets to physical goods that are necessary to maintain a life worth living. He invests in medicines like insulin and vaccines, while diversifying his portfolio with stores of clean water and durable food products like grains and rice. The Grinchy Billionaire decides to store these goods in the center of towns in developing countries, just out of arms reach of those people who are desperately in need. This billionaire is patient and has taken a long-term investment strategy, waiting for the goods to become scarce, or some other market mechanism to take effect so he can increase profits. Naturally, people will try to steal these goods (as it can mean the difference between life and death), so armed guards will be hired to secure the compound. Does this seem moral?

My intuition is no, but I am not concerned with the conclusion as much as the influence of abstraction on our reasoning. The enhanced will engage in this sort of reasoning automatically and they will compare this case against ten, twenty or a hundred cases to see which intuitions are being pumped,<sup>19</sup> and which intuitions are worth preserving. This sort of reasoning can help tease

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<sup>18</sup> At the time of this writing the coronavirus pandemic is in a stage of nascent growth. In the U.S. the government response may include paid sick leave, bailouts for business, cash payments to individuals and subsidized health care. All of this requires wealth redistribution. In a trenchant opinion piece Farhad Manjoo highlights how we are all socialists in a pandemic (2020).

<sup>19</sup> See Dennett (2013)

apart a mere difference from a moral difference. My own intuition is that the method of storing wealth is a mere, and not a moral difference. So, if you find the Grinchy billionaire morally impermissible, you should think the same of the regular billionaire.

The previous point was to establish the power of abstraction and how it may aid in our ethical and general reasoning. While the thought experiment purported to be about wealth inequality, it is really about enhancement. Buchanan notes the inequality already present between developed and developing countries “In fact, we already live in such a world: the world’s worst-off people are unenhanced compared with the best off. On average, people in ‘developed’ countries are taller, stronger, healthier, better able to produce and create more, better able to develop their talents, better able to promote their own values, and longer-lived than people in ‘less-developed’ countries” (Buchanan, 2009, p. 357). Buchanan is talking about the importance of a concept like human rights, and that even though those in developed countries are better off, the concept of human rights tells us we have obligations to provide basic living conditions to those that are less well off. The claim in no way makes reference to notions of superiority or inferiority. If we accept that better diets, access to health care, and education constitute enhancements, then wealthy elites, like the Grinchy Billionaire, can be thought of as post-persons,<sup>20</sup> and the impoverished can be thought of as mere persons. For those that are concerned with the enhanced edging people out of society, promoting their own interests, they should be equally concerned with the wealthy, who do that now. Naturally, those whose intuitions conflict could align them. They could either shift their concerns to include enhancements and wealth

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<sup>20</sup> The analogy could just as easily be made within affluent states. The prospects and outcome for someone with a PhD in evolutionary biology are much different than that of the local Sasquatch hunter.

inequality or abandon concerns for both. The enhanced will have the tools and capacities to not make such obvious mistakes in reasoning.

A large portion of the opposition to enhancement come from religious conservatives.<sup>21</sup> A full 61% of adults in the US think there is too much wealth inequality, but only 41% of conservatives think so. Further, 60% of conservatives think wealth inequality is driven by life choices (Horowitz et al, 2020). If I am right that wealth inequality and enhancement are far more alike than not, and conservatives oppose enhancement, but are ok with wealth inequality, then there is a mistake in reasoning happening somewhere. One candidate is in how the scenarios are framed (Thaler & Sunstein, 2008, p. 36). The ability to abstract is one tool to overcome pernicious framing effects. More worrying is that only 6% of conservatives (and 13% of liberals) think that philosophy and reason are a source of guidance on right and wrong, while 87% of conservatives think religion and common sense are sufficient guides to morality (Religion in America, 2015). This is even reflected in philosophy at the highest level. Leon Kass, a bioconservative who has served on the president's council of bioethics, has famously argued for the wisdom of disgust (Kass, 1997). The enhanced, knowing full well that they were not created by a divine artificer, will have reason to be skeptical of their primal intuitions and appreciate the role careful thinking plays in creating a moral society. The benefits conferred by increasing our cognitive capacities are unknown, but it is difficult to imagine that better thinkers will make the errors we routinely make.

It might be objected that since I think wealth inequality is impermissible, and since the enhanced are analogous to the Grinchy Billionaire, I should treat the cases equally and argue

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<sup>21</sup> Leon Kass (2017) offers a conservative, catholic objections. Francis Fukuyama (2002) offers objections in a secular, albeit conservative manner.

against enhancement. The analogy falls apart as the Grinchy Billionaire is all too human. I would be against enhancement if the goal was to create better athletes, entertainers and those that can create algorithms to better track the stock market, but these are only a small fraction of the goals of enhancement. If we enhance the things that make humans so wonderful, if we enhance the ability for careful reflection, or the ability to exercise compassion, then post-persons won't embody the Grinchy Billionaire.

### 2.5 Moral Status & Vulnerability

Our vulnerabilities may be exploited in the form of oppression (Frye, 1983), as a way to exclude from political and social life (Mill, 1869), or as way to justify differential treatment and instill obedience in women (Wollstonecraft, 1792). Vulnerability may vary by group. Not because one group is intrinsically more vulnerable than the next, but because group membership can serve as a way to identify, impose and uphold pernicious societal norms. These norms have forced women to fight for the right to govern their own bodies (Thompson, 1971). Same sex couples have to battle for equal treatment and, in the case of gay men, are often thought of as disgusting or viewed as contaminants (Nussbaum, 2004, p. 113). The disabled have to argue that their differences are mere differences, as opposed to bad differences (Barnes, 2014), and those that suggest that racism, the most visible form of discrimination is still a problem, are met with public backlash (Yancy, 2018). As important as these issues are, they fall outside of the scope of this paper. The radically enhanced will be sufficiently different than us, warranting their vulnerability to be thought of as different in kind. Martha Nussbaum captures the idea of vulnerability well.

But the idea of vulnerability is closely connected to the idea of emotion. Emotions are responses to these areas of vulnerability, responses in which we register the damages we have suffered, might suffer, or luckily have failed to suffer. To see this, let us imagine beings who are really invulnerable to suffering, totally self-sufficient... Such beings

would have no reason to fear, because nothing that could happen to them would be really bad. They would have no reasons for anger, because none of the damages other people could do to them would be a truly significant damage, touching on matters of profound importance. They would have no reasons for grief, because, being self-sufficient, they would not love anything outside themselves, at least not with the needy human type of love that gives rise to profound loss and depression. Envy and jealousy would similarly be absent from their lives (Nussbaum, 2004, p.6).

Post-persons will not be totally self-sufficient in a god-like manner, but they will be much closer than mere persons are. If we lack moral concern for gods, and the reason is their lack of vulnerability, then we have some reason to include vulnerability as a criterion for moral status. Post-persons, on my account, will be far less vulnerable, and hence, warrant less moral concern. Vulnerability is a scalar property, one that should be viewed in terms of weak thresholds, of which, adding to, and taking from, make a great difference to moral status.

As alluded to earlier, the difference in vulnerability of mere persons is incidental rather than intrinsic. We are all in the same boat, but in different seas. For example, a refugee will be highly vulnerable, as she might be in a new country, unfamiliar with the language and customs, and looked at as an out-group member. But this is an accident of nature. If the Grinchy Billionaire loses his fortune and becomes a refugee, he will be just as vulnerable as the typical refugee. He is still in the same boat, but in a different sea. Our circumstances change the degree of our vulnerability, but not our vulnerability in kind. The enhanced are much different. They will be in the same sea as us, but in a different boat. The experience of an enhanced refugee will be unlike that of the millions of refugees in desperate need of aid. To capture our intrinsic vulnerability, absent the baggage of unjust societal norms, I want to focus on our sensitivity to insult and our ability and composure to rebuff them.

Southern white men grow up in cultures of honor where they are expected to defend themselves reflexively against insult. Social status is called into questions for those men who



aren't "men" and don't exhibit *lex talionis*—the law of retribution. This behavior is found on and off the farm, as one study found differences in responses to insult among Southern and Northern college students. In this study, participants were bumped into and then insulted (called an asshole) by a researcher. Southern students' levels of cortisol and testosterone increased more so than their Northern counterparts after the bump and insult. Southerners felt that others perceived them as having less social status, and when given an opportunity to demonstrate their toughness by being administered electrical shocks, they opted for higher levels than their Northern counterparts. They were even more likely to exhibit aggressive behavior towards others after the bump and insult (Cohen et al, 1996). White republican men, with a high school education who live in rural areas are most likely to be gun owners and cite protection as the number one reason for ownership<sup>22</sup> (The Demographics of Gun Ownership, 2017). Data from twin studies suggest there is a genetic component to political beliefs (Funk Et al, 2013), and fMRI has been used to predict political party affiliation by mere exposure to non-political images (Ahn et al, 2014). While honor culture and conservative attitudes certainly have a cultural component, they may have a genetic component as well. Are these white men more vulnerable than their northern counterparts? If so, do they deserve more moral status?

The answer to the first question is both yes and no. They have emotional responses to insults, that others may readily brush off. They may even be disposed to view mild insults as damaging and elicit an emotional response. Defending your territory and manhood all day is both taxing and dangerous. But this isn't drastically different than our general vulnerability in

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<sup>22</sup> Women are the least likely to own weapons. This is odd in that women are far more likely to be victims of sexual assault and domestic violence. Given that women are in some instances more vulnerable to physical abuses, you would expect them to own the most guns if gun ownership is really about protection. While gun ownership among white men may be related to protection, I speculate that honor culture and protecting "manhood" play a pivotal role.

different contexts. For example, if a northern undergraduate is told her idea is risible in front of the class, she may have similar physiological and emotional responses to those in honor cultures. In the U.S., FERPA laws are in place to ensure education records are kept private, sparing students from the pain and embarrassment of sharing a poor performance. For college students, good grades may serve as a mark of social status, and those that struggle may perceive that others think they have a lower social status. So the vulnerability is different in degree and type, but not in kind. The cultural and genetic lottery will shape what bothers us, and how it does, but we are all still in the same boat, only the context of the seas change. We can now answer the second question. Those that are more vulnerable through the combination of the cultural and genetic lottery do not deserve more moral status, as a change in a moral status threshold requires a change in vulnerability along many dimensions to an extent that it changes vulnerability in kind.

The enhanced will be far less vulnerable along several dimensions, enough to lower their moral status. Insults will not readily bother them (as they do not bother many mere persons), and when they do, they will have the capacity to reduce the severity of the blow. They will not be ashamed of poor performance in athletics or academics, because it will be obvious that those that excel in certain areas will have different enhancements. It will be readily apparent that their talents are not entirely their own. It will become far more obvious the degree to which our genetic and technological enhancements supplement character and drive our performances. Post-persons will be less manipulatable. Mere persons love rewards, even for the most trivial of accomplishments, such as the badges and awards ubiquitous in mobile applications. They will have control over their dopamine driven reward pathway, allowing them to recoup their time, and focus on things that really matter.

Finally, decreasing vulnerability will make post-persons more moral. Direct mental state control will allow them to exhibit the virtue of courage or allow them to curb the desire to deceive. Following moral rules like “never lie” will become the rule, and not the exception. They will abandon *lax-talionis*, and focus on ways to improve the quality of life for people in great need, as opposed to creating more pain.<sup>23</sup> They will be more generous, as they will have the capacity to feel the same excitement towards a traditional lottery ticket, as one whose grand prize is millions of dollars to charity. For the radically enhanced both a single and a million deaths will be a tragedy.

### 2.6 Objections:

Many will still be worried that the enhanced will not be nearly as altruistic as I have argued for. I will concede that nothing necessitates the enhanced to be benevolent beings. But necessity is too high of a bar to set. We set the bar far lower for the sorts of interventions we already employ. Imagine if we thought it necessary for educational interventions to guarantee smarter and more moral citizens before we implemented them. Instead, we hope that these sorts of interventions make an *on average* contribution to the quality of children’s lives. *On average*, we hope they are better able to cope with the demands of contemporary society. The same should be thought of for the radically enhanced. They will be in a far better position to realize errors in

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<sup>23</sup> Katrien Devolder has argued that prisoners have the right to die. She focuses on the case of Frank Van Den Bleeken, a serial rapist and murder. He admits to his crimes and feels he is beyond recovery. And yet, is destined to a life of imprisonment (2016). For a brief period of time the court ruled he could be euthanized. One victim’s sister remarked “For us this is incomprehensible. He should rot in his cell” (Bletchly & Allen, 2014). The court later overturned their ruling, ensuring Bleeken will live. There is a real question as to what sorts of punishments are appropriate, and for how long they should be meted out. If it was up to family members of victims, I fear that the punishment would be indefinite. The Christian concept of Hell is an apt reminder of how much we cherish and enjoy punishing others.

reasoning and have the tools to better curb unwanted desires and impulses. But this will be no utopia. As with all populations, there will be variation, and there will still be those we need protection from. It will take an enormous effort to figure out the science of improving humanity, but it strains credulity to think this is unachievable or unlikely through enhancement. If you are worried that the enhanced will be worse in some ways than us, consider de-enhancements, the interventions that make us less intelligent and less physically and cognitively capable. Would we be better off? Hesitation in response may be due to a status quo bias (Bostrom & Ord, 2006), or an imagined hope that we are the pinnacle of perfection. However, I find it hard to imagine that if we stumbled across human-like beings whose capacities were greater than ours by a mere 5%, that we should encourage them to reduce their capacities to match our own.

What does MSV mean for animals? Surely, they are more vulnerable than us. Do they deserve more moral status? Maybe, but this is an empirical question we are unable to answer at the moment. We have reasons to think animals experience pain like we do. They have similar anatomy and physiology, and their behavior indicates they are capable of pain. But their inner life is *probably* drastically different. I hesitate to speculate what it is like, but I am comfortable saying that like the enhanced, animals are in a different boat, but this time in the opposite direction. Their inner lives are most likely not anywhere near as rich as ours, and they probably are incapable of feeling some of the deepest senses of sadness and loss that we are. Again, this is an empirical question, and if it turned out they had rich inner lives and are far more susceptible to emotional pains, would it be so bad if we elevated their moral status? It would certainly be weird and uncomfortable to view a dairy cow the same as a human, but that would seem far more preferable than treating them the way we currently do. I think we have little to worry on this front, but time will tell.

It is often argued that emotional and physical pain are good things. It helps us grow into mature individuals and prevents us from injuring ourselves to the point of no return. But it is not necessary as evidenced by Jo Cameron, a 71-year-old woman who experiences little anxiety and described childbirth as a tickle (Murphy, 2019). I am not suggesting a complete removal of pain, but with the help of technology such as optogenetics we may alter our relationship to it, freeing us from the bondage it keeps us in. There is no reason giving birth needs to be extremely painful, just like there is no reason to fear public speaking. How much pain we do and don't need is an empirical question. If we start enhancing, we can answer this along the way. My optimism may need some bridling, but the alternative is to trust that natural selection got it right. I find this as implausible as the hypothesis we were created by an all knowing, all kind, all powerful deity.

Finally, this is a speculative account and should be treated as such. My aim is not to describe how the enhanced will actually be, rather, it is to give a plausible conception of the enhanced and establish that they could have a lower moral status than humans, despite increased capacities and abilities. On this front I think I succeeded.

### 2.7 Conclusion

I have argued that it is likely humans will seek out enhancements that allow for greater mental state control. It is readily assumed that enhancement will have the effect of raising moral status or, at minimum, confer some additional rights the unenhanced will lack. As greater mental state control can reduce one's vulnerability, and vulnerability is a criterion for moral status, the enhanced will experience a moral status reduction when compared to their ordinary human counterparts. If I am right about the enhanced it is not their attitudes towards us we should be most afraid of, it is our attitudes toward them.

### Chapter 3: On the Reasons to Enhance

The radically enhanced will not become a reality for many decades—if not longer. Why, given the fact that they don't exist, should we invest resources into creating them? Agar has argued that we have no obligation to create radically enhanced beings, and as there is risk associated with this process, we shouldn't create the enhanced. This chapter will be spent addressing this question. I disagree with Agar's analysis and argue we do have an obligation to create the radically enhanced. The first part of this chapter will be spent getting clear on Agar's view. Next, I will outline the non-identity problem and a variation on the psychological continuity view of personal identity, both provided by Derek Parfit. I will then introduce what I call the *competing known identity problem* and I will argue that in solving this problem we will have sufficient reasons to create the enhanced. The aim of this chapter will not be to provide a decisive refutation of Agar's claim, rather it will be to outline one possible solution. Much of this chapter will rely on controversial claims. I will provide a groundwork for further dismantling Agar's views, and future work will be aimed at the more difficult task of providing defeaters.

#### 3.1 Agar & The Absence of Reasons to Create the Radically Enhanced

Chapter 2 was spent arguing against Agar's claim that the enhanced will have a greater status than us, hence removing one obstacle to creating the radically enhanced. Agar gives five reasons why we should not create the enhanced outside of moral status. They are: 1. Transformative change. 2. Internal goods and the anthropocentric ideal. 3. The process of enhancing is entirely different than that of the normal stages of aging. 4. The ability to procure external goods through other means. 5. Humans cannot survive the enhancement process. I will expand more on all points except point three (enhancing and aging are sufficiently different), which I reserve for the penultimate section.

Agar's first point is about transformative change. The radically enhanced will be sufficiently different from us. So much so that we will have to reevaluate our experiences, beliefs and attitudes (Agar, 2014, p.6). Agar invites us to imagine that we undergo an experience analogous to that of the 1956 film *Invasion of the Body Snatchers*. A biological agent makes its way to earth, where it is capable of making exact replicas of every human being. These Replicas, or pod people (as they are created in organic pods) then kill their ordinary human counterparts. While the pod people look human, they have a radically different psychology shedding human proclivities—such as their deep emotional lives. Agar assumes that identity will be preserved between the pod-people and their original human counterparts (I will say more about identity in a later section) but finds the transformation process troubling. For Agar, the pod-people undergo a similar process as those that would undergo radical enhancement. As we have reservations about the pod-people, we should have reservations about radically enhancing. In essence the radically enhanced will be nothing like us, as they will have undergone too drastic a change.

The radically enhanced will most likely have a better objective picture of the world, and for them the transformation will be a good thing. But each will have a notion of what comprises a good life, and what is a good life for a human does not mean it will be a good life for the enhanced and vice versa. What must be accounted for is if that agent will think the transformative change will be good for them (Agar, 2014, p.11). While the future or enhanced person will still survive, the changes will be seen through a different lens, one that they will be happy with, but the former agent would not find valuable. Take for instance the case of the pod people who lacked emotion. They have radically different evaluative frameworks, and for Agar we should occupy the viewpoint of each agent respectively and through the lens of what is important to them (Agar, 2014, p. 13).

The second point is an extension of the first. There are goods that are internal, that is, they have intrinsic value. And there are goods that are external and provide instrumental value. External goods are brought about by technology and do things for us. They make our lives easier and more fluid and can increase our health and productivity. Internal goods are those that give meaning to our life, what Agar calls the anthropocentric ideal<sup>24</sup> (Agar, 2014, p. 28). As the radically enhanced will have a different viewpoint, they will have different internal goods. For us, we marvel at the achievements of our fellow humans because their accomplishments make sense in a framework tailored to our abilities. Even though most of us will never manage to run a 2-hour marathon, we can identify with those that do. The reason for this is because of simulation theory, where “we predict and explain the actions of others by simulating the mental processes behind them” (Agar, 2014, p. 37). Since we are sufficiently similar to other humans we can engage with others in a semi-veridical manner, imagining we are them, or could be in their shoes, making their accomplishments meaningful to us. At some range of enhancement, we will no longer be able to simulate the victories of the enhanced (perhaps running a 30-minute marathon, or doing differential equations while composing a symphony), so those accomplishments will lose value to us. This does not mean we shouldn’t enhance; it just means there is some range where we will place value on and can identify with others and appreciate their accomplishments (Agar, 2014, p. 42).

The enhanced will undoubtedly have better access and means of acquiring external, objective goods than us, but we can also pursue them through external means as enhancing technology (point three) (Agar, 2014, p. 46). Since we can have the benefits of external goods and preserve the internal goods to us, Agar argues we should choose to limit the prospects to

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<sup>24</sup> Agar uses Alasdair MacIntyre’s analysis here.



moderate enhancement, as we procure all the benefits and don't lose out on the internal goods the radically enhanced do.

The fourth point is about human survival; Agar thinks humans will not survive this sort of transformation (Agar, 2014, p. 56). He assumes psychological connectedness is sufficient for personal identity. If you are sufficiently psychologically similar to your former self, then you have survived. Sameness over time generally relies on a chain of memory; Agar's focus is on autobiographical memory and he argues the radically enhanced will lose their autobiographical memories. We tend to remember things that have a significant value to us. As our cognitive powers increase, many of our accomplishments will be seen as less significant. Combine this with longer life spans, and the need or want to remember some of our human accomplishments disappears (Agar, 2014, p.64). Why would it be important to someone their struggles with fractions, if they are busy struggling with defining a theory of everything? Or why would memories of learning to hit a tee ball stay intact when one is training for the home run derby. We will become progressive forgetters and as psychological continuity is the criterion for survival over time, we will forget who we are and won't survive.

I will talk about the final point how aging and enhancement are different in section 3.5. We will return to the other concerns in section 3.5 as they will serve to objections of my own view. The next section will be spent getting clear on the non-identity problem. I will follow with a discussion on personal and identity and then use what I call the competing known identity problem to argue that we do in fact have reasons to enhance.

### 3.2 The Nonidentity Problem

As of now, the radically enhanced don't exist. This may one day change if our policies are aimed at enhancement. Mere and Post-persons will live together. Some have argued these

mere persons will be worse off if we allow enhancement to proceed. There may be risks to their psychological well-being, as well as their ability to contribute and find meaning in ordinary life (Sparrow, 2019). But, had we not enhanced, those people would never have existed. It raises the question—How are they worse off? This is the non-identity problem. It will be explored in much greater detail in what follows.

We are all lucky enough to be conceived when we were. Had our parents met different partners, or had they conceived at a later date, different people would have been born. Hairs can be split about how close to the time of conception is important for identity conserving properties to remain intact, but we know our genes (which contribute to who we are) are derived from the combination of a sperm and ovum. Female reproductive cells are present at birth and have a short life cycle (30 days) once they reach maturity and are capable of being fertilized. We can imagine that at maximum any fertilization outside of 30 days (roughly) will result in a different child<sup>25</sup> (Parfit, 1987, p. 352). Call this the time dependence claim. If we choose policies that allow for enhancement the world will be a different place than it otherwise would have been. By the time we are capable of radical enhancement these policies will have had far and reaching effects. Different jobs will be available and the people that will be born will have different interests, suggesting that people will meet different partners, in different places and conceive at different times. We can see the nonidentity problem in action with a couple of imagined, albeit everyday cases.

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<sup>25</sup> This is overly cautious. Millions of sperm race to fertilize the ovum and only one is successful. Any changes to the initial conditions of the race are likely to have profound consequences. For example, if ejaculation occurs at a later time, or in a different position in the vagina, the “edge” each sperm will have will be different. And, as sperms are more or less clones, it is likely a different sperm will make its way to the egg, if any make it at all.

Parfitt invites us to imagine the case of a young, 15-year-old girl, who wants to have a child. At her age she is ill equipped to provide any prospective child with the opportunity a more established parent could provide. She could wait, and the child that is born will have a better start in life. But this will result in a different child being born. Assuming the child who is born when the girl is 15 has a life worth living, how can we say he is worse off, if the alternative is to wait, and that alternative means non-existence (Parfit, 1987, p. 358-59)? Does any harm occur to the child if the young girl does not wait? If so, it is difficult to say why.

This problem is not just about conception of individuals, but also the policies that alter our environment. Imagine we choose between two economic policies. We can either deplete or conserve our resources. Depletion will increase the well-being for those individuals that currently exist, while lowering the well-being of those that live in the distant future. Conservation will have a minimal effect on those that are currently alive, while greatly increasing the well-being of those in the far future (Parfit, 1987, p. 361-3). But, as we have seen, different policies will create different persons. Different jobs will be available in different towns, different people will meet, and different people will be born. Assuming both policies create persons with lives worth living, do we harm any individual person if the alternative means nonexistence? Intuitively we want to say polluting the environment, or having a child early in life causes harm, but the non-identity problem shows that it is difficult to explain why.

This section has been spent getting clear on the nonidentity problem. The problem is that it intuitively feels wrong to bring a person into existence if they are worse off in some way. However, they cannot be worse off, if they live a life worth living, and the alternative is nonexistence. I will attempt to provide a reason as to why any individual is worse off despite the

alternative being nonexistence in section 3.4. The heart of section 3.4 is an argument for creating the radically enhanced. For this to be clear I will first need to say more about personal identity.

### 3.3 Personal Identity

There is no dearth of views on what constitutes personal identity. In this section, I want to focus and motivate just one. Parfit argues for psychological continuity with any cause. While there is much controversy over this version of the view, Agar and Parfit generally agree. Since Agar adopts a version of the psychological continuity view, this will be the only view I explore as my proximate aim is to respond to Agar's objections. Other, less controversial views of personal identity seem well suited to achieve my ultimate aim, which is to argue that we should allow beings to grow into the sorts of beings they would want to become i.e. the radically enhanced. For those who adopt other views, I hope you are able to see much overlap between the account I provide, and your own account. I will argue that we have reasons to create the radically enhanced in section 3.4, for now we can turn our attention to Derek Parfit's view of personal identity.

We can begin with a simple thought experiment. You are transported from earth to Mars in an instant. This teleportation involves the scanning of the precise atomic configuration of your body and rearranges new atoms on the planet Mars just moments later. Your earth-bound body is destroyed in the process. Do you successfully teleport and survive? It seems like you may, and in fact you may use this transporting device many times over the coming years. But what happens if the earth-bound body is never destroyed? When you look face to face with your clone on Mars, which one will be the real you (Parfit, 1987, p. 199-200)? For Parfit there is no difference between these cases. Replication is just as good as ordinary survival. I agree, and I will motivate this more in what follows.

What is preserved in these cases is not our bodies, or our souls, it is our memories. The original body is destroyed, and the new body is composed of different atoms. Our memories need not be identical over time, as a sufficient overlap of memory is enough to confer identity. I don't remember everything of my former self, but I do remember enough to still be the same person. Parfit argues that *psychological continuity*—is just the holding of these overlapping chains of connectedness and that this is all that matters for survival. It is often thought that these chains of connectedness, or continuity, as it is often referred to, has to have the right kind of cause, which is a normal cause (Parfit, 1987, p. 207). Parfit has argued for what he calls Relation R, which allows for memory conservation through any cause (Parfit, 1987, 215). For Parfit (and Agar), a pod-person will survive as a continuation of her former earth self. Most of us would find this distressing as it is intuitive that once we modify the teletransportation case it seems like we die. It is much more apparent, and the intuition far stronger that we fail to survive in the case of the pod-people. Parfit finds these thoughts distressing as well, but he accepts that personal identity isn't what matters for survival. What matters is the continuation of memories. He reaches this conclusion because our bodies, brains and minds are different throughout our entire lives. While survival through pod-people isn't all that good, ordinary survival doesn't fare much better. What this means is that there is no central "I", there is just successive experiences being had by some overlapping set of memories. Split brain patients may provide some insight into why this is the case.

Split-brain surgeries have been around since the 1940's and often used as a treatment for epilepsy. This surgery requires the separation of the corpus callosum, a network of fibers that connects the two hemispheres of the brain. Those that undergo this procedure still feel as if they are a unified self, but under experimental conditions they find that many cognitive processes are

running independent of each other. One experiment focuses on showing an image in only one visual field. When an image is shown in the right visual field (it moves to the left hemisphere), the patient can tell the experimenter in words what the image was. When the image is presented to the left visual field, the patient cannot identify it verbally, but can draw it out (Wolman, 2012). The hemispheres are acting independently, and if they can work independently on small problems, why not act independently for much larger problems?

Parfit imagines what it would be like for the two hemispheres to work completely independent of each other.<sup>26</sup> Imagine taking a physics exam where you encounter a difficult question. Two strategies become apparent to you, and you are unsure which one has a greater chance of success. As you have a split-brain, you can assign each hemisphere one strategy and let each go to work. You are aware of one solution that is being worked on but notice your other hand moving independently, enthusiastically working on the other. You have no insight, or awareness into the progress the other hemisphere has made. Time is nearly up, and the two hemispheres reunite (Parfit, 1987, p. 246-7). What are we to think of this thought experiment? Are two new people working on the problem? Are both of them you? In each case they will have the same memories as you had before and be capable of the same functioning. Survival with a single hemisphere is possible (Lew, 2014) and we think that the persons that have damaged an entire hemisphere have survived as the same person. We should feel the same way about two cerebral hemispheres that can operate independently of each other. We can abandon the notion of a normal cause and replace it with any cause. We “survive” the teletransportation, the splitting of a brain and the complete removal of a single hemisphere. What matters for survival isn’t a coherent, unified self. It is just the continuation of certain mental states and memories.

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<sup>26</sup> This isn’t that fantastical as persons can survive with a single hemisphere.

### 3.4 The Competing Known Identity problem.

Recall the nonidentity problem. It is difficult to say how we make someone worse off, if all alternative interventions would result in nonexistence. Suppose what matters for identity over time is psychological continuity with any cause. In normal cases, we think of the benefits to separate persons. That is, will policy A or B result in better opportunities for the different people that will exist? But what if we don't think about separate persons, but we think about a different policy intra-personally. This section will explore what I call the competing known identity problem. The problem is to figure out which version of yourself should survive when competing against other versions. Some preliminary remarks are in order, before I attempt to make this clearer.

The first thing to note is that a part of our identities is genetic. This was alluded to in section 3.2 when Parfit argued for the time dependence claim and that those born a mere 30 days in the future will be different persons than those born 30 days earlier. This is intuitive for those who have a modern understanding of genetics and heredity. How much of our identities is up to debate, but some evidence shows that identical twins are more alike than siblings (Funk et al, 2013) and biological siblings are more alike than adoptive ones (Pinker, 2002, p. 65). However genetics cannot be the whole story as cultural influences can change who we are. Neil Levy views the debate not in terms of nature or nurture alone, but how much each element contributes to who we become (2004, p. 129). What should be clear from Parfit's time dependence claim, and the fact that we see greater similarity among individuals that have greater genetic similarities is that some portion of our identity is biological.

One last thought experiment from Parfit can help elucidate what I mean. Imagine you have a twin and the both of you are in an accident. Your body is damaged beyond repair, while

your twins' body is in perfect working order, his brain is completely destroyed. You are given a brain transplant and successfully wake up in your twin's body (1987, p. 253). We could further imagine that only my twins' brain was damaged in the accident. My brain is split into two, one hemisphere is placed in each body. "I" survive, or at least my mental states do. It seems that each hemisphere would feel more at home in a body that was "my own", as opposed to being placed in a new and foreign body. This is me in every relevant meaning of the term as my memories and genetic constitution are still intact. But why stop at two? If what matters for survival is psychological continuity with any cause, what would happen if we made thousands of copies of "myself" each waking up thinking they were the original me? What if we altered their physical and mental capacities all the while conserving their memories? Would some identities feel cheated? Would some opt to not survive? Would some prefer the survival of others? I will explore these questions further with the case of Sarah. But first here is some preliminary remarks on the natural aging process.

Our identities are shaped and molded as we age. We begin as infants, reach childhood, progress to adolescence and then sail into maturity. Many of us will have a regressive phase where our memories fail, and we begin to lose a grip on reality.<sup>27</sup> We tend to privilege the views of some of these stages more than others. The views of adulthood are given greater weight than those of adolescence and given more weight than those entering senility. One possibility is that we could have an extra stage of development, one that surpasses adulthood and if so, should we privilege that stage of development more so than the other stages found naturally in life? The answer is yes, and this will become clear with the introduction of Sarah.

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<sup>27</sup> Alzheimer's and Dementia are prime examples.



Sarah, a young woman, has agreed to have thousands of copies of herself made. She is a hardworking professional woman in her early thirties, she is in the prime of her life. As part of the replication process she is informed that each replica will have all her memories and her general constitution but will be altered in some way. Some replicas will be blind, deaf, or otherwise disabled, such as the loss of motor movements. Others will experience reductions in IQ, as if they had a traumatic brain injury. Others will experience boosts in performance such as a slightly higher IQ and greater motivational sets. Some will even be radically enhanced. They will more closely resemble Agar's pod-people. We will return to radically enhanced versions of Sarah later in this section, for now we will focus on versions of Sarah that are modified within the species-typical range. Although there will be multiple versions of Sarah, these changes won't be significant enough to change her into a new person. If we made any of the changes to Sarah absent any copies being made, we would normally think this to be the same Sarah. Some of these changes we routinely make. Antidepressants can alter mood and motivation, stimulants can improve cognition, and a myriad of accidents can contribute to disability. Some replicas at the lower end of the scale will not be so lucky, their alterations will approach deviations from normal. They may be bipolar, have PTSD, anxiety and panic attacks, or be borderline suicidal. The experiment is to run for one year, at which time all but two "Sarah's" will survive, the rest are destined to be destroyed. This leaves room for each individual Sarah to select for her bodies survival, and for the selection of a second version who she thinks should survive. How will these competing versions of Sarah decide? I call this the problem of competing known identities. How do we decide who survives amongst competing versions of ourselves? Which version of ourselves we choose for survival will determine what persons live. The memories and experiences of someone with higher cognitive functions, who enjoys math will be different than

someone who enjoys the solitude and comfort of life on the farm. As time passes for Sarah from the initial replication date, different versions will become different people. The only difference between the competing known identity problem and the nonidentity problem is if the policy interventions make changes inter, rather than intra-personally.

There are three logical possibilities that govern Sarah's choice. I will refer to the original Sarah as Sarah' (Sarah prime) and the replicas as Sarah\*. Sarah\* can refer to a single replica, or an entire group of replicas. First, there could be no agreement on what constitutes a good life, and what Sarah should have the priority in survival. Conversely, there may be unanimous agreement, where each version of Sarah votes for one ideal copy to survive. Finally there may be mixed agreement among each competing version. I will explore each of these consequences in fuller detail

The first scenario seems unlikely. Imagine for a moment we are not talking about physical capacities, but rather disposition to believe. As there is some evidence that political views and dispositions have a genetic basis, small nonidentity altering changes could be made to Sarah\*. Sarah' may be a lawyer who works tirelessly to help refugees enter the U.S. Sarah\* may have had an alteration that makes her hostile to out group members. She may become a white nationalist and work to create a pure ethnostate. Or Sarah' may be highly religious and over the course of the next year Sarah\* develops into a militant atheist. These dramatic changes are somewhat routine, and we would never say that Sarah wouldn't survive these changes. They each have what matters for Sarah's survival, but have developed into diametrically opposed persons.<sup>28</sup> The same may hold for illness. Imagine Sarah' is a well to do scientist who has great

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<sup>28</sup> These are dramatic changes but are they really that much different than someone who transforms after joining a cult. We may use language to say that we want the "real Sarah" back,

impulse control and is constantly in high spirits. Sarah\* may lack impulse control, be riddled with anxiety, and experience constant mood shifts. Sarah\* may find herself roaming the streets, looking for handouts, and providing basic services to others in exchange for cash when her mood allows her to. She may even find herself in jail. If competing versions of Sarah are to hold diametrically opposing views, then there would be no agreement. But in the case where Sarah\* has an illness or cognitive limitations that prevent her from completing her goals, she is likely to agree that Sarah' is better option for survival, than a nearby Sarah\*.

The case of perfect agreement is equally as unlikely. There will be much variation amongst the competing versions of Sarah. Not all disabilities are damaging, and not all disabilities reduce the overall quality of life. Sarah\* may have lost the use of her legs but will undoubtedly feel she can accomplish all the important things Sarah' can. Sarah\* may choose herself and a nearby Sarah\* to survive the experiment, as she views this change to have deep and profound meaning. It is an empirical question how Sarah\* will decide, but everyday experience tells us that people are generally happy with their lives, despite numerous limitations. For many, more capable doesn't translate to better. For this reason, unanimous agreement is unlikely.

The mid-range and most likely case is one with some agreement between Sarah' and Sarah\*. We can begin to group Sarah\* into sets. Each set will comprise individuals of similar ability. It is likely that many of the sets will vote for someone in the same cohort, a nearby Sarah\*. Some will vote for cohorts above (in the case of severe mental illness), and some may opt to move down (maybe the pressure of life is too much, and they want to slow down). What is important is that Sarah\* will have some reason to choose another Sarah for survival. Nearby

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but we would treat her as the real Sarah. If she were to collect an inheritance, or publish a book, it would all be done as if she was the same person—because she is.

Sarah\*'s will have similar constitutions and have similar reasons for their selection. More distant Sarah\*'s will likely make a separate choice but will most likely engage in a similar reasoning process. Next, we will include radical enhancement in our analysis. I will argue that there is an upward trend to select better versions of ourselves.

Sarah' is the healthy, well to do, cognitively normal adult. Previously, I assumed that each Sarah\* had an equal input on who would survive, that is, all votes counted the same. But, this isn't for any decision made in ordinary life. Children and the cognitively disabled don't have the same rights and powers as cognitively normal adults. Those versions of Sarah' with IQ's in the range of 70 will have less to say, their vote will count for less as to who is to survive. We can begin to think the same thing for Sarah' when compared to a radically enhanced version of herself. It would be tempting to set a threshold at the level of Sarah', but as we saw in chapter 2, threshold setting is a matter of math. In order to have an asymmetry you need a non-arbitrary way of setting a threshold and need to explain why subtracting from a property makes a great difference, while adding to makes no difference. I will repeat the same analysis in what follows, but this time include a radically enhanced Sarah\*

We can again think about the three positions—no, some and unanimous agreement. In the case of no agreement, this becomes far less plausible. While there may be many benefits to be a developing child, I imagine most adults wouldn't want to spend their entire life at that stage. Each adult would vote for a version of herself that had made it to adulthood. Further, many children can't wait for the opportunity to grow up. As adults, many of us try our hardest to strengthen out cognitive capacities through education. If we naturally had a fourth stage of life, one where our cognitive and physical capacities were greatly elevated, we would readily

welcome this new, more refined stage of life. Amongst ourselves, we would agree not to be in a more limited state (the state of Sarah').

Unanimous agreement seems just as unlikely. Some will certainly view normal adulthood as the final stage they need to enter as argued by Agar with his focus on moderate enhancement. There may be many reasons for this, one of which is fear and concerns that they will become too different of a person. If they know radical enhancement is likely to make them read, engage in civic life, and abandon some of their more basic instincts, they may eschew it, saying they prefer to have limited capacities. If they know they could keep their deeply held beliefs, then perhaps they would be more amenable to voting for another version to survive. There may even be disagreement between the radically enhanced and the radically enhanced. They may excel and pursue different fields given the varied alterations (Gray and Gorin, 2019). They will have preferences suited to their interests. Some contributions may be objectively better, as they increase overall well-being, but others may have equal importance as it is important to grow, flourish and explore your own interests.

Some agreement again seems most likely. A radically enhanced Sarah\* will most likely wish that the surviving replica to be in the radically enhanced state, she will select a nearby Sarah\*, in the same way any adult would select for a version of herself that was capable of reaching adulthood. Some mere persons will want to enter this new state (I would vote this way), while some will want to stay where they are at (many readers will feel this way). What is not at all likely is that any group member will want to see or experience a dramatic reduction in their capacities. For example, a normal adult who works as a CEO probably isn't looking to reduce her cognitive capacities to those of someone who has difficulty staying organized, paying bills on time and succeeding at the simpler tasks in society, such as a fast food worker. The fast food

worker may very well be very happy with her life. She may accomplish the goals she sets for herself, and she may even feel bad for the CEO, as the CEO lives a life of stress and focuses on growing wealth, as opposed to more important things like raising a family. But what is unlikely to happen with the fast food worker is that she will select a competing version of herself that is far more limited in capacity, a version that needs an executor to manage her affairs. Again, how each Sarah\* will choose is an empirical question. But we can glimpse into real observed behaviors. With the exceptions of addicts, most of us don't take substances that limit our cognitive and physical abilities. When we do, we do so in moderation so we can excel and challenge ourselves to be better. Even if Sarah\* chooses a nearby version of herself for survival, the trend will move upward. If I am right that some stages of life are more privileged than others, that is, their vote would count for more, than it seems that the radically enhanced Sarah\*'s will have the weightiest votes, and most likely won't vote for versions that are mere persons.

I would like to focus on one final thought before I turn to objections. As mentioned earlier, personal identity is not what matters for survival. What matters is psychological continuity over time. I think there are two components to psychological identity that should be treated separately. The first, memory, I have focused on at length. The second is dispositions towards certain mental states and beliefs. While there is much variation in these dispositions there is much overlap. For two distinct individuals with highly similar dispositional mental states they may have more in common with each other than more distant versions of Sarah' and Sarah\*. This might be analogous to problems with identifying race. Two members within a racial class can be more genetically diverse than two members from different racial groups. If this is right, and the voting system I imagined in the case of Sarah has any merit towards selecting who gets to come into existence, then it might be the case that we can vote in ways, and for future people

that are distinct, but similar enough to share some sort of “identity” conserving property. If so, the nonidentity problem may have greater overlap than initially thought. I won’t say anymore beyond this, as it would take another work of this length to make a compelling case for this claim. I mostly hope to leave the reader with an interesting thought before I turn to objections.

To recapitulate, I have argued that what matters for survival over time is the continuation of certain mental states. We should have control over the direction of our lives. This can be best accomplished by actually living life as the same person, but in modified ways. We can then ask competing versions of ourselves about who should survive. If we allow each version of our self two votes, one vote for the survival of their specific body, and a second vote for the survival of a separate body with modified capacities, whose memories remain intact. There will either be no agreement, unanimous agreement, or some agreement. Some agreement is most likely, and the agreement will tend to favor those with the highest capacities. The harm that befalls the individual is in not allowing them to become who they would in fact want to be. This can be viewed in the same way as if any individual stopped developing in adolescence. It would be a travesty to not develop to your full potential. This was the competing known identity problem. A similar problem, the nonidentity problem, has many parallels but is forward looking in nature. The nonidentity problem aims to ensure future persons who are brought into existence have a life worth living. The competing known identity problem is backward looking. When deciding who lives, and who is brought into existence we defer to the best versions of ourselves. As their will be an upward trend to select for the most capable, and those with the greatest capacities will have the most weight in this decision-making process, the version of ourselves that we will select for will be some version with radical enhancements. The harm that will result from not enhancing will be to not let one become who they want to be. I have given compelling reasons to radically

enhance, without making any claims as to what specific enhancements would, or should, be selected for.

### 3.5 Objections from Agar

Recall Agar's first concern is that of transformative change and the pod-people. For each individual, they will have different evaluative frameworks for what constitutes the good life. On my view, the transformative change would be in relation to Sarah' and a radically enhanced Sarah\*. Conservatives about enhancement often use examples of stunted capacities and motivations that are all together alien to a unique individual. The pod-people have lost most of what makes them human, and the joys of human life. On my view these pod-people would not be selected for amongst other competing versions. The pod-people are one version among many that could produced through various technological changes. It is hard to see how they would qualify as having enhancements.<sup>29</sup> More likely scenarios of enhancement will retain much of what makes our lives worth living—love, joy and laughter. If, for some reason, the pod-people were selected to survive, this choice would be brought about by a committee of highly versions of ourselves. In which case a pod-persons survival would seem appropriate. In real life we won't have the power to vote against different versions of ourselves, but we will have the power to vote for different versions of nonexistent future persons. For the time being there is no reason to suppose that we will enhance in the direction of pod-people. We have far greater reasons to think large parts of humanity will be conserved.

Agar's second point was about internal goods and the anthropocentric ideal. Goods have intrinsic value as long as they satisfy a human curiosity. The objection is that we should pursue

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<sup>29</sup> If you watch the film this will become more obvious. The pod-people are dull, uninteresting and murderous.



goods that are valuable to us and avoid goods that are intrinsically valueless. But there is no uniform set of intrinsic goods across the many stages of life we enter. Try explaining calculus to a child (or for that matter an adult), and we can find that no curiosity will be satisfied. The joys of calculus come with time, and for some it will be perennially outside of their reach. But this is no reason not to create beings who are capable of manipulating math. We share what we can with those that have learning difficulties, and the insights we have can make their lives more interesting and inspired. Having adults with greater cognitive capacities is a pleasant thing for us, and it should be just as pleasant as the gap grows between mere and post-persons.

Third, Agar argues the natural stages of growing up are different than enhancement. In the normal course of events we grow through effortful and demanding training. Our achievements stand in a special relationship to us, they come from within. The achievements from enhancement come from outside and skip much of the effort that was required of natural humans. This is bad in that we lose a sense of ourselves. I think two things can be said about this. First, take any math class and it will be clear that some need to work far harder than others to understand the most basic of concepts, let alone mathematics at the highest level. The difference between any two individuals could be marked and we have little reason to think that one experience is more valuable than the other. The natural lottery of life largely determines how much we need to struggle with any task. Second, the enhanced may breeze through milestones we as mere persons struggle to achieve, but they will have their own milestones to tackle and surpass. One thing we have learned is that the more we discover, the less we know. The enhanced will feel the same way. They will have better access and capabilities to manipulate and store information, but they will have much more to learn and explore. They will have just as

meaningful lives and will have to exert effort, and make sacrifice, they will just do it at a higher level.

Fourth, Agar argues that we can secure external goods (better health care) through other means than enhancement. This may be true in the near future, but using multiple means to pursue the same goods seems a better strategy than pursuing any one alone. If we think about progress in aggregate, enhancement will be another method that can compound the benefits from external technologies. When taken as a whole, the sum of progress will be far greater over time if we include enhancement. When we are talking about improving the quality of billions of lives, we need every advantage we can get, and that may include creating workers who have greater drive and capacities to solve problems.

The final point is that humans cannot survive the enhancement process. We will tend to give up on our autobiographical memories and hence not survive. I am weary of this claim. First, we could readily imagine we enhance so as to preserve memory. This may make it impossible for us to not survive. But imagine we do lose all our memories of our former self and become a new person, is that really so bad? Is that any worse than ordinary death? It seems not, and the benefit is that this form of death will take place over time, instead of a single instant. For the new you that survives, it will have felt like a seamless transition, an experience not to fear but welcome.

### 3.6 Conclusion

This work has argued for the many benefits of enhancement. If we abandon outdated concepts like dignity, we can begin to focus on what truly matters, that is, moral status. Post-persons will experience a reduction in moral status and will be better equipped to address the needs of mere persons, than mere persons themselves. Even though the enhanced don't yet exist,

we have reasons to push for their creation. If we give up on the notion of a central “I” we can focus on what matters for survival, the continuation of certain psychological states. We can survive the process of radical enhancement. If we take a backward-looking view, we will most likely find the radically enhanced will want to exist with heightened capacities. Less capable counterparts will most likely agree. All this suggests that we have reason to enhance and to do so well outside the species-typical range.

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