

2016

Ability and Abnormality

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Suggested Citation

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Ability and Abnormality
by

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A thesis submitted to the Department of Philosophy and Religious Studies
Master of Arts in Practical Philosophy and Applied Ethics
University of North Florida
College of Arts and Sciences

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Abstract

This thesis addresses questions relating to perceptions of abilities and abnormalities found in everyday life. Abilities in this paper range from a total lack of ability to function in extreme disability to a level of ability expected by society to enhanced and radically enhanced abilities and their place in the realm of abnormality. We begin by establishing the differences between abilities and enhancements. Following this is a discussion regarding the ethical concerns of human enhancement. After this we turn to a discussion of abnormality and the social experience of abnormality. These discussions lead into establishing a basis for how many abilities are considered abnormal. This is then followed by a discussion that specifically addresses whether or not individuals who voluntarily undergo non-therapeutic enhancement may be subject to oppressive measures.

Ability and Abnormality

Differences in ability have led to a hierarchical perspective of how people function in the world. Historically speaking, we discuss the plight of people with disabilities as being discriminated against because they are disabled. Their discrimination and oppression is based on the abnormal quality of their ability. Proponents of enhancement argue that enhancements can help the lives of people with disabilities. I suggest that enhancement and disability discussions overlook an important aspect, the status of being abnormal. While disability advocates recognise that their discrimination and oppression is a result of their abnormal ability, we do not recognise the abnormality of enhancement. Instead, we ask whether or not to enhance, if enhancement is ethically right or wrong. We do not ask how the lives of enhanced individuals may be seen. Assuming that enhancements are an inevitable step in biotechnology, I am going to explore the aspects of abnormality as related to those with disabilities and those with enhanced abilities. Radical human enhancement is a specific type of enhancement that goes beyond enhancement that merely improves a specific ability such as increasing eyesight to see beyond the ordinarily visible spectrum, increase hearing capabilities, and potentially increase other functions such as physical speed and strength. Radical human enhancement is a practice endorsed by transhumanist philosophy. The practices include seeking ways to halt aging altogether and thus increase lifespan indefinitely, uploading of consciousness where the conscious mind is removed from the human body and uploaded to a machine, and enhancing memory and cognitive abilities. Proponents of such enhancement seek to push humanity into what some might say is the next step in evolution. The idea of human enhancement of any level carries with it many ethical issues. Nick Bostrom lists levels of objection to transhumanist objectives, of which I will focus on one, which is that "it would be too bad for society," (2013, 30). Within

this level of objection is a question concerning ability. That, is, are some abilities better than others? Should we seek to “improve” or “enhance” abilities? What happens to the people who choose not to do so? Radical human enhancement advocates seek to greatly expand human ability into something beyond human. When we explore this extension, we have a whole new set of questions to ask. Who are these people? Are they human? Do they count as persons? Individuals with enhanced abilities, radical or otherwise, have abilities that fall outside average human ability. A normal ability is what we expect ourselves to be able to do without great difficulty. Most conversations regarding the abnormality of ability fall into realm of the abnormality of disability. I seek to expand the definition of abnormal ability to include those abilities that have been enhanced. Further, I shall demonstrate that enhanced individuals have the potential to experience marginalisation and discrimination as well, based on their abnormal status.

This project aims to demonstrate how regardless of disability or enhanced ability, perceived abnormality of ability is subject to discrimination and normalisation to maintain a social standard or status quo. The existing literature in the ethics of enhancement concerns a broad view of society, by evaluating enhancement as either a utopian vision where enhancements solve the problems of humanity or as a dystopian existential destruction of humanity. The focus of much existing literature consists of arguments of why we should or should not pursue enhancement technologies rather than how we might implement them or what they might look like when they come to fruition. Enhancement technologies have been in development and use for some time now, to varying degrees of enhancement and acceptability. The interest here, then, is about the perception of enhanced individuals through the lens of abnormality. Arguably, one might say that enhancement is a normal step or development stemming from human progress. From that

perspective, denying enhancement would be unethical. On the other hand, one might argue that pursuing enhancements is abnormal. While I will argue that enhanced individuals are currently abnormal, and radical enhancement is a particular case of abnormality, enhancement in itself may not be entirely abnormal, especially on the individual level. Abnormal individuals already exist in society. Further, a wide variety of these abnormal individuals experience discrimination and oppression. Granted, not all abnormal individuals face such hardships. Particular factors, notably visibility, play a significant role in determining how likely one might be accepted as normal. It would be the case then, if enhancement causes a person to be abnormal in the right way, that enhanced individuals may face a similar experience.

In order to do this, first we will look at accounts of abilities ranging from disabilities to enhanced abilities. Our current understandings of abilities rest on a linear conception in which one either has or does not have an ability, with levels of expertise or capability within that ability. Next, I have categorically divided enhancements by their ethical acceptance. Following the discussion of ability, I will highlight several overarching themes in the current literature of the ethics of enhancements debates. The themes are centred around autonomy, equality and accessibility, and oppressive tactics such as eugenics. We leave enhancement and ability behind, briefly, to explore the concept of abnormality. Michel Foucault provides a sufficient genealogical account of how abnormality began, from a dangerous concept of the absolutely heinous criminal monster to the everyday monsters and little abnormalities found all around us. Foucault's history provides background to describe the normalisation process. The normalisation process is one arm of a discussion on discrimination and oppression. Another arm is the idea of visibility. Rosemarie Garland-Thomson's work on staring is enlightening here, as staring plays the initial action that

determines the initial normal/abnormal judgment. All of this folds into a further discussion of how enhanced individuals could face similar issues that other abnormal persons already face in our society. While I limit most of the discussion to this point to somewhat minor and more acceptable enhancement, I conclude with a chapter regarding transhumanism as a special case of enhancement. While we may disagree with transhumanism advocates, there is a certain level of longer term inevitability with enhancement. Transhumanism is considered a fringe or bizarre practice, but it is a radicalised philosophy related to enhancement technology that has significant overlaps that may illuminate a rather interesting point, especially regarding disability. But first, an outline of ability.

Chapter 1: Ability, Disability, and Enhancement

This chapter addresses relationships between disabilities and enhancements. I have divided this chapter into four subsections: disability, what is meant by enhancement, types of enhancements, and the demarcation of what is considered therapeutic and what is considered an enhancement. I use the term everyday enhancement specifically to emphasize how we readily accept certain types of enhancements as normal parts of our everyday lives. Types of enhancements do not necessarily exist in a moral hierarchy. However, we act as if some enhancements are more morally acceptable than others. In order to understand how this hierarchy developed, we must first address the difference between therapeutic measures and enhancements. This chapter serves to provide necessary background and definitions for later in the paper, where I will address specific ethical arguments related to the task at hand.

Ability and Disability

When we discuss someone's ability, we often refer to a task-specific ability, such as the ability to walk or the ability to hear. The ability to perform an action is the

undercurrent of a human behaviour. An ability, used over time, forms a pattern which we called behaviour. Behaviours adapt and change. An ability is essentially our capacity to act. These actions may be in thinking or in movement, invisible or visible. When we speak of an individual's ability to perform a task, we refer not only to their individual capacity to perform that task, but also to the tools that are available. These tools are in the body, the mind, and the environment. For this paper, we will be focusing on physical and mental abilities such as thinking and walking.

Discussions of ability naturally bring about the idea of disability. Or, what it means to have an ability that differs from what one might ordinarily expect. I'll discuss the aspects of normality in the next section, but we must clarify what is meant by disability. Two major models of disability exist. One is the medical model. The other is the social model. The medical model of disability suggests disability as a lack of ability to perform a certain task such as walking. Medical models of disability emphasize disability as an impairment of functioning. The Americans with Disabilities Act first defines disability as the following:

The term "disability" means... (A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment.

The medical model describes disability as a series of impairments or inability to function at a certain non-disabled level. This model of disability focuses on an individual not being able to do a particular task by either having the complete inability to perform such a task, like walking or speaking, or having difficulty in performing that task.

On the other hand, the social model of disability refers to disability as a failure of society to receive a person of abnormal ability to function with at least some autonomy and efficiency in the world. That is, a person who cannot hear is only disabled in so far as her

ability to communicate is not verbal - it is visual. A person who cannot see is disabled in an environment that emphasizes the primacy of sight. Social models of disability emphasize disability as a condition of the world, where physical structures and architecture are designed for able-bodied people. Think of the addition of ramps and elevators, Braille and closed captioning. People who advocate for disability rights focus on the social and environmental design as the core feature of disability. If all books were made using only Braille, a seeing person would have to read much differently. The person with sight would be disabled in such a world until they adapted to that environment. The social model critiques the medical model in that where the medical model focuses on a deficit on individual ability, the social model identifies a deficit in the developed physical and social environment. Fortunately for social theorists of disability, the World Health Organisation has recognised this critique to an extent in a comment describing disability in the following statement:

Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Disability is thus not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives. Overcoming the difficulties faced by people with disabilities requires interventions to remove environmental and social barriers. People with disabilities have the same health needs as non-disabled people – for immunization, cancer screening etc. They also may experience a narrower margin of health, both because of poverty and social

exclusion, and also because they may be vulnerable to secondary conditions, such as pressure sores or urinary tract infections. Evidence suggests that people with disabilities face barriers in accessing the health and rehabilitation services they need in many settings.

The WHO definition of disability touches a bit on the social aspect of disability by claiming that disability “reflects the interaction between a person’s body and society.” However, disability is defined, a few things are clear. Our environment does not suit each body that exists in it, regardless of what tools we develop and use to make our environment more accessible for the individual. Under the medical model of disability, we are expected to adapt our bodies to our environments. Disability advocates claim that the demand to adapt should be at least partially shouldered by society. Our abilities, wherever in the spectrum of inability to an enhanced ability they may lie, determine how we change our environment to meet our needs. Disability is not wholly determined by society or pathology. Rather, it is a function of both, the individual and the environment, social and physical.

What is Enhancement?

First of all, we must address what is meant by enhancement. The definition is rather elusive, but all the descriptions of enhancement that I have found have a theme. These definitions frequently refer to increasing or improving an ability. Enhancement changes an ability insofar as the ability is still the same ability, just faster, stronger, more efficient, and/or long-lasting. As an example, Julian Savulescu defends what he calls the Welfarist Definition of Enhancement, defined as “any change in the biology or psychology of a person which increases the chances of leading a good life in circumstances C... we can define an enhanced state as a capability” (2006, 324). Savulescu also notes other definitions of enhancement, such as a narrow definition, in which enhancement is “any change in the

biology or psychology of a person which increases species typical normal functioning above some statistically defined level" (2006, 325). As another example, Michael Sandel describes enhancement as a means "to lift themselves above the norm" (2007, 8). Sandel does not describe exactly to what is meant by "norm" but safe to say the norm likely resembles some level of being of typical or normal ability within a specific context. Yet another definition of enhancement, referring specifically to human enhancement, is from Natasha Vita-More, claiming "human enhancement means improving physical performance, increasing cognitive abilities, and radically extending human lifespan" (2013, 25). Enhancements, in essence, extend an already present ability. In some cases, however, an enhancement may involve the addition of an entirely new ability.

Types of Enhancement

For the sake of this paper, I will discuss three broad categories of enhancement: everyday enhancements, therapeutic enhancements, and radical enhancements. These are based somewhat in relation to their overall acceptance in mainstream culture. All enhancements overlap in some way, and the differences are largely dependent on the intended outcome of the enhancement and the context in which it is used. Enhancements come in a wide variety of forms. Some enhancements may be temporary, permanent, or detachable. Some are mechanical additions to the body. Others come in the shape of a pill or a syrup to ingest. Still others may be creams or lotions. Even further, some come in the form of wheelchairs or crutches - physical tools that we use for a specific mode of transporting ourselves. Some enhancements are visual, while others are internal. Still others may never be known to other people unless explicitly disclosed. The form of the enhancement may vary from organic to mechanical, or even be a combination. Each form of

enhancement can be found in any of the following categories. The categories I propose are my own, developed to highlight a social hierarchy of acceptability.

When referring to “everyday” enhancements, I mean the little enhancements that are most common and generally socially accepted. These enhancements are to “improve” the ordinary ability baseline. An important feature of these everyday enhancements is that they are not necessarily dramatic or extraordinary in some way. Another important quality is that they are unnecessary to function in the world. That is, they do not serve to correct a deficit. These enhancements are not unlike things with which we are already familiar - drinking coffee, consuming supplements like ginkgo biloba or 5-HTP to improve nominally functional cognition and mood, taking other nootropics such as modafinil or dextroamphetamine to increase alertness and cognitive capacity. These consist of the already established means of enhancement that we do not necessarily think of as an enhancement (drinking coffee). I call them everyday enhancements because oftentimes, they are things that are so ordinary in our everyday lives that we do not consider them as uniquely enhancing. Everyday enhancements are generally socially accepted, aligning with cultural norms. Oftentimes, they can be the same measures or technologies as therapeutic enhancements.

Therapeutic enhancement are enhancements designed to correct a disability by restoring a specific loss or deficit of ability. This type of enhancement addresses deficit in ability with the goal of amelioration. Examples of therapeutic enhancements are prosthetic legs, wheelchairs for paralysed individuals, medications for any number of cognitive impairments, and so forth. Any technology that serves to replace or correct an ability that has been lost or never developed serves as a therapeutic enhancement. Overlaps exist between therapeutic and everyday enhancement by their technological mechanisms. The

difference is the baseline ability being changed. For example, we might wear glasses to improve already normal vision. Another person may wear glasses to correct poor sight. The therapeutic value of an enhancement is in the context of its application. Therapeutic enhancement is generally referred to simply as a therapy, or a treatment that has therapeutic value. These are generally accepted by society and encouraged so that a disabled individual can regain independence. Together, therapeutic and everyday enhancements differ from another set of enhancements in that they are generally more readily available and frequently seen out in the world.

The third type of enhancement I wish to address are radical enhancements. These are extreme measures taken to change human ability. Radical enhancement takes on a different level of alteration from our everyday enhancements. But when we start compounding enhancements, we reach things that no unenhanced person, regardless of how gifted or extraordinary in ability, human can do. Radical enhancement takes this step. Examples include, but certainly are not limited to the ability to breathe underwater without external equipment, altering genetics with gene therapy, uploading the human mind to a machine, using nanobots to maintain health, indefinite healthy life extension that resembles immortality, and achieving superintelligence in a human being. These changes are likely to be permanent or irreversible as they incorporate significant alterations to the human body or reject the body altogether. A major question posed by those who study radical enhancement is whether or not the radically enhanced individual is still human or something else? Does personhood remain intact? The potential of radical enhancement is that it may change the individual from being human to being posthuman, or transhuman. Radical enhancements delve into areas of science fiction and wild imagination, but scientists are already working on some of these and more.

Enhancement or Therapy?

A demarcation problem exists in enhancement discussion, between everyday enhancements and therapeutic enhancements, as briefly mentioned above. Andy Miah claims that, "one may attempt to draw the line between the alleviation of suffering (therapy) and the pursuit of happiness (happiness)" (2013, 292). "Alleviation of suffering" is typically how we would refer to therapeutic enhancements with their goal of ameliorating disability, disease, or disorder. For example, an individual who wears glasses because they have less than perfect eyesight ought to wear the sight-enhancing glasses or receive the sight-enhancing surgery. However, a person who has normal vision may also wear glasses or have surgery to see even better than they already can. This first case is therapeutic, while the second is to increase happiness. Medications also enjoy this dual usage. In particular, modafinil has gained popularity for its therapeutic qualities as awakesness agent in narcoleptics as well as its benefits for enhancing the abilities of pilots and soldiers. The subject ability here is the ability to stay awake. When we make a drug or a new treatment, it often used for more than one purpose. The drug use may be purely an enhancement to raise performance from baseline, such as a soldier who would benefit from the additional wakefulness. But if someone performs significantly below an average baseline, such as someone with chronic fatigue syndrome, this is a therapeutic enhancement as it is corrective. The individual mode of normality is not necessarily the same normal for a population. The demarcation problem between what is therapeutic and what is enhancement is largely dependent on the intent of the individual using the technology.

We see this illustrated with another medical practice as well. Botox was marketed as a cosmetic enhancement before it was known to treat muscle spasms and migraines. As a

cosmetic enhancement, the medication mostly fell under the category of morphological freedom. It bridges over to enhancement as well, if done correctly, in that it enhances one's appearance. When the medication is used in such a way to enhance appearance, one also enhances one's social status. When used for muscle spasm and migraine, one is using it as a therapeutic enhancement. It is a treatment to resolve a debilitating medical problem. Muscle spasm and migraines can be disabling conditions. The enhancement therapy ended up being useful for more than enhancement. Botox is now also a therapeutic enhancement, enhancing the lives of those individuals who are disabled by migraines. Many medical interventions serve multiple modalities of enhancement.

Another issue in enhancement practices is the role of preventative medicine. Medical technologies related to prevention such as vaccination pose an interesting question. While we are manipulating our immune systems to have an ability that we would not ordinarily have by injecting ourselves with a dead virus, are we necessarily engaging in the practice of enhancement? Miah states,

... medical science has approached healthcare by giving primacy to the principle of prevention before cure. Yet a similar principle may require to be employed in order to optimise and expand the resilience and capabilities of people; in short, to enhance them. On this basis, the distinction between therapy and enhancement becomes redundant, since preventing many illnesses will involve treating a patient before they are diagnosed with an illness and before they are considered to be suffering in a way that warrants medical intervention. (2013, 293)

In a way, we have blurred the lines between what is preventative care and what is enhancement. Genetic manipulation that prevents certain fatal or severely disabling illnesses is technically an enhancement and a preventative treatment. Some medical

technologies are being developed to bolster the immune system in other ways in order to prevent disease. Is this an enhancement or a prevention? Altering the immune system to prevent infections is an enhancement in that we are changing the human body to do more than it ordinarily would do. Immune-enhancing practices are also preventative in that they are performed as a way to treat before something happens. As an example, Wendell Wallach claims that vaccines are both preventative measures and enhancements. He states that “if vaccines were once an enhancement, they are now a birthright” (Wallach, 2014, 167). The possibility that preventative medicine is enhancement in disguise is not entirely incorrect. What would need addressing is whether or not we should be preventing illness, by way of enhancing ourselves.

Chapter 2: Ethics of Enhancement Overview

This section will address the themes in ethics of enhancement debates. The themes are wide reaching and tend to focus on the priority of individual autonomy, concerns of equality, and the potential for eugenic practices that are viewed as discriminatory towards people with disabilities. The argument from individual autonomy includes a sub-argument addressing morphological freedom. It is important to note that like most debates in bioethics, these discussions tend to be one-sided from a Western perspective with little allusion to attitudes in other parts of the world. While the purpose of this thesis is not to debate whether or not we should go forward with therapeutic and non-therapeutic enhancements, it is nonetheless prudent to outline a few arguments to provide context.

Robert Glover and Michael Sandel both discuss the use of genetic engineering to facilitate the ability to choose of deafness. Deafness is often described in terms of a

medical disability, as a lack of ability to hear. Deaf culture requires deaf people to continue. Only by having deaf children is this possible. Should parents be able to determine in advance whether or not their children can hear? Some view the use of genetic modification to determine a certain trait as enhancement. However, when choosing to have a deaf child on purpose through this technology, it looks as if we are engineering disability given that we are viewing deafness as a disability. In deaf-centric environments, deafness is not necessarily considered a disability because deafness is the status quo of that particular environment. Being able to hear in such an environment may not be a total disability if the hearing individual learns sign language. However, the hearing individual would be unusual or even abnormal in such a context. This initiates another discussion of how the social environment ought to respond to the individual who is considered disabled. This complex question addresses major components of human enhancement: autonomy, morphological freedom, and social theory of disability and normalisation. The specific case of bioengineering a deaf child highlights how the use of biomedical technologies must be viewed in context.

A major theme in enhancement debates is individual autonomy. One claim is that parents who genetically modify their children's genes before birth somehow determine their child's future by depriving them of the right to choose for themselves the type of person they will become. A common term thrown around in enhancement debates is "designer babies." These are children that have been "designed" by parents and doctors who select specific genetic traits. Robert Nozick described this process as a "genetic supermarket" wherein individuals could essentially "order" children that meet their specific preferences for genetic traits. Sandel argues against this, claiming that, "it wrongly implies that, absent a designing parent, children are free to choose their

physical characteristics for themselves...” (2007, 7-8). Children do not get a choice as to the fact that they are born, with what bodies, capabilities, and genes they might have. Sandel’s refutation is a pragmatic response to the argument from autonomy. All children, regardless of how they are formed by nature or genetic manipulation, are subject to being born. They are brought into the world without consent. Nozick’s genetic supermarket is a more conscious way of controlling the traits of the children being born. We think that we consciously make the decision to have children with certain people, but there are many biological forces beyond our control that influence our decisions. The genetic supermarket extends our conscious efforts to choose reproductive partners we desire in order to have healthy viable children. The existence of autonomy of the unborn child is debatable at best. However, parents and doctors, with their established autonomy, have some authority over the bodies of unborn children and even born children, but only up to a point. The point where parental authority over their children ends varies from one practice to another. At some point, parents must forfeit their authority over their children so their children can express their own agency in the world. The autonomy of children develops over time regardless of genetic manipulation unless autonomy is somehow engineered out of the person. That would beg the question, though, of whether or not a non-autonomous person is a person. In the case of bioengineering deaf children, the idea is that somehow deafness determines the type of individual the child will be and limits their future autonomy. By forcing deafness on the child, the parents have deprived the child from the ability to hear. While this is the case with the ability, the child could have been born deaf with or without the genetic intervention. Further, if the child wants to be able to hear, later in life he may choose to undergo a procedure for a Cochlear implant or, if possible, reverse the process that

caused the deafness in the first place. While bioengineering shapes some aspects of a child's life, it does not necessarily take away their autonomy.

In addition to addressing individual autonomy, Sandel also discusses "designer children" in the context of how the practice of genetic manipulation goes against certain aspects of what it means to be human by stating,

... the fate of human goods embodied in important social practices - norms of unconditional love and an openness to the unbidden, in the case of parenting; the celebration of natural talents and gifts in athletic and artistic endeavours; humility in the face of privilege, and a willingness to share the fruits of good fortune through institutions of social solidarity. The other involves our orientation to the world that we inhabit, and the kind of freedom to which we aspire. (Sandel, 2007, 96)

Sandel's arguments, he claims, are of a different type than the common themes of autonomy and rights. Instead, he focuses on the idea that enhancement somehow undermines what it means to be human. On the one hand, Sandel's idea of being human includes celebrating what we have and who we are, as social creatures. On the other hand, enhancement changes how we view ourselves in the world - that we must adapt to the world, rather than making the world adapt to us. He goes on to say that,

...changing our nature to fit the world, rather than the other way around, is actually the deepest form of disempowerment. It distracts us from reflecting critically on the world, and deadens the impulse to social and political improvement. Rather than employ our new genetic powers, we should do what we can to create social and political arrangements more hospitable to the gifts and limitations of imperfect human beings. (Sandel, 2007, 97)

Sandel's rejection of enhancement measures are based in embracing human nature rather than trying to change it. While to an extent, I agree that by focusing on improvement and enhancement, we may lose sight of other social goals, Sandel's argument can stand a critique. Enhancement is not necessarily about perfecting an imperfect individual.

Enhancement, from a broader perspective, is about increasing the pool of tools and abilities so that all may benefit, regardless of their limitations. The practice is inherently imperfect with imperfect results. Perfection itself is a subjective notion.

As a response to Sandel's claim that enhancement detracts from humanity by taking a perfectionist approach, we might look at enhancement another way. We can view enhancement as a response to taking that critical reflection on the world. Proponents for enhancement often argue that enhancement is not only for the sake of the individual, but for the sake of society. Those who believe enhancements will assist in human flourishing in the utopian view certainly take up this claim. From another point of view, Andy Miah states, "anti-enhancement advocates may argue that such an undertaking is troubling precisely because it implies no labour on the part of the individual - and as such is a quick fix that undermines the importance of human will and struggle in the achievement of certain goals" (2013, 296). Miah takes this approach to mean that not only do we use what we have when we are born, but all of the technologies we develop as we grow and learn may also be utilised within reasonable limits. Developing and using technology does not imply in any way that we are forgoing reflecting on our place in the world.

Unfortunately, what it means to be human has no real tangible answer, especially when we are discussing which of our abilities are ethically acceptable and which are not. I would argue that enhancement is a powerful tool not only for the individual, but also, if exercised with caution and deep consideration, a benefit for society in general. It simply is

not the case that we focus on political and social betterment by not focusing on enhancement. Society and politics will always change, for better and for worse, and with or without enhancement. Enhancement can impact social and political change, of course, as enhancement affects any social organisation. Enhancement should not be viewed as a trade off with reflection and betterment. Enhancement essentially extends abilities without necessarily rejecting the abilities already present, within a person or within a society. An enhancement builds upon abilities already present and extends the range of that ability. Just because people want to develop enhancement technologies does not mean they are seeking to undermine whatever sense it is to being human. The idea that enhancement technologies ignore some human authenticity cannot be sustained if we have no clear idea of what it is to be human. Part of human behaviour has always been development so that we may have better means of surviving. As a result, humans have an incredible lineage of technological development. Applying that technology to our bodies and our environments is a part of our means to continue going on as humans. While human nature may not be something that can be described in some essential qualitative terms, we may be right to take on the intuition that we use whatever means we can to survive and thrive as a species. Enhancements of all kinds are a part of human life. While we may not be able to say exactly what it means to be human or what is in human nature, we do ascribe a moral status to being human. To take away that moral status is to dehumanize a person.

Returning to the main aspects of the ethics of enhancement, we find the argument for morphological freedom buried within the argument for autonomy. Morphological freedom is the right to do as one pleases with one's own body. This includes a wide variety of practices ranging from how a person may cut their hair to getting plastic surgery or taking medications to improve performance capacities. Anders Sandberg describes

morphological freedom as a negative right. He claims that "it is a right to be able to do certain things, but it does not in itself imply others are morally obliged to support exercise of it" (2013, 57). Sandberg makes the claim that arguments against enhancement must denounce some level of morphological freedom, because it forces a compulsory restriction on a broadened spectrum of ability to change one's body. In a sense, morphological freedom is an extension of a libertarian or social contractarian right to one's body. As a negative right, though, it must come with some aspect of a positive right, and that would be a right to the tools and technology used to change one's body as one sees fit. We actually see this argument in transgender debates today, where we must contemplate whether or not gender reassignment surgeries and hormonal therapies are a right. With positive rights, however, comes a certain limitations of resources. Positive rights cannot be enacted without appropriate resources. So, as to how far a positive right can actually be executed is contingent on whether or not the resources are available and how critical the right is for survival.

Transhumanists and enhancement supporters claim that enhancement technologies could benefit those affected by disability by offering more functional tools and techniques to improve quality of life. On this point, Miah states that, "... the justification for limiting medical interventions to just the alleviation of suffering, becomes less meaningful, since healthcare should aspire to promoting general improvements in wellbeing, in which enhancements are a part" (2013, 292). The alleviation of suffering can take a wide stance or a narrow stance. While a significant range of medicine takes the narrow stance of curing illness that has already begun, other areas of medicine take on preventative roles. Preventative medicine can initiate a slippery slope argument. Disability theorists argue that variants of eugenics will result if enhancements that prevent certain conditions is

embraced, continuing to further devalue the lives of people with disabilities. Eugenics is defined by Merriam-Webster as “a science that tries to improve the human race by controlling which people become parents.” Frederick Osborn describes eugenics in two ways, positive and negative where positive eugenics focuses on increasing desirable traits in the human population by encouraging people with desirable traits to reproduce and negative eugenics is described as the prevention of people with undesirable traits from reproducing. A newer variant of eugenics, called modern eugenics, employs the use of genetic engineering to achieve similar goals but without denying the right to reproduce. Modern eugenics comes from an idea of “positive eugenics” that relate back to the idea of being able to choose genetic traits of children to prevent the development of disabling conditions and diseases. In this way, genetic engineering can be linked to an idea of “positive eugenics” in that no one is being denied the ability to have children and thus is not considered to be necessarily discriminatory. Rather, people with genetic conditions would be afforded the option to ensure that their children would not inherit such conditions (such as Tay-Sachs or cerebral palsy). The idea is that since it is a choice, rather than a law or enforcement, it is more allowable. However, modern eugenics still has the same problem that disability theorists address: by giving the choice we are inherently allowing the discriminatory practice to decide that some traits are bad while others are good.

Availability and access are frequently cited as a concern for enhancement debates. This comes from the idea that certain technologies will be out of reach for those who cannot afford them and will increase socioeconomic gaps. People who already experience socioeconomically difficulty would face even more marginalisation. In essence, the worry is that without appropriate access to such technologies, those who could not afford them would be left behind. Julian Savulescu points out that this is a matter of justice, and not

necessarily about an intrinsic quality of enhancement. The fairness of enhancement and access to it is largely dependent on the type of justice practiced by a particular society. This holds true as enhancement itself has no particular status of being just or unjust until it is executed in a society. We do not halt the development of technology or stop public and private education because the least of us can access it. Why would we do that with enhancement? It is possible that there is social benefit for enhancement if it is developed with respect to injustices unique to the society in which it is developed and dispersed. The prioritisation should not rely on enhancing individuals on the basis that they want it. Research and development in enhancement should be done in response to meeting needs of particular societies or groups. Unfortunately, this does become part of the larger picture of resource allocation and distribution that cannot be answered here except to say that those who have so much to be able to invest in such advancement may in fact owe it to others to use those technologies for their benefit, not the benefit of the ones who can afford it. Much like wealthy Western nations develop technologies to help with food and water supplies in world regions that are critically underserved, similar rulings are likely to apply here. Stemming from concerns regarding resource allocation is that any technological development suffers from the fact that the parts and pieces, the machinery or it all, often comes from exploited labour forces. This is a fact that may never change. It does beg the question, though, of whether or not we should accept such machinery for other uses. The technology that is being developed for enhancement does not need to be outsourced. In fact, enhancement proponents can take it upon themselves to change the bar by purposefully fabricating resources through more just means. Granted, much of this lies in business ethics and political justice which are immensely larger topics than can be addressed here.

In opposition to enhancement being unethical, some scholars, such as Julian Savulescu and John Harris, go as far as making the claim that we may actually be morally obligated to enhance ourselves and our children. In April of 2015, the Chinese experienced international backlash for genetically modifying human embryos to prevent the incidence of thalassemia. Thalassemia is not a fatal condition and can be managed with vigilant medical supervision. Gregory Stock describes several cultural differences in the acceptance of eugenic practices and genetic manipulations, through how abortion is suggested to expecting couples. Quoting a paper by Darryl Macer and colleagues, Stock notes that “up to 80% of Americans would use genetic interventions to prevent a child from inheriting a fatal disease” (2013, 306). This is despite that in the United States we have multiple means to support families with disabled individuals. On the other hand, those surveyed in the United States do not support the abortion of unborn children with known genetic defects that are survivable. Stock claims that, “the option for caring for a seriously disabled child or passing that responsibility on to the state is a modern luxury that few possess” (2013, 306). He cites a particular genetic anomaly where this is true, in which up to 92% of Chinese counsellors would advise the abortion of a foetus with the most common form of dwarfism whereas fewer than 10% of those surveyed in the United States, Australia, and most of western Europe would consider the option (2013, 307). Another survey performed by Xin Mao and Dorothy Wertz found that up to 89% of Chinese couples supported abortion of foetuses with genetic abnormalities (1997). Stock also notes that genetic counsellors also advise abortion in cases such as these in countries outside of China that include India, Russia, Greece, Cuba, Turkey, and Hungary, more frequently than northern Europe and the United States, at rates approaching 90% and 20% respectively. This suggests a cultural divergence over which types of children are allowed to exist in the world. Available

resources and social support structure greatly impacts these decisions. Engaging in enhancement technologies of this sort stands to reinforce an idea that normal bodies are desired bodies and abnormal bodies are to be rejected or altered to align with what is considered normal. A child who is abnormal in a place such as the United States is allowed to be born. The child is still abnormal or disabled, though. In other countries, that child is not born at all. Disability resources in those countries are often incredibly scarce if they are even resources available at all. Parents will often rather not have to face their only child being born and having what could amount to a tortuous life due to an extreme lack of support and resources. Views regarding disabilities in countries other than the United States vary dramatically and are often handled with far less finesse. The moral norms are different. Why bring a child into the world that is going to drain significant resources when not enough is available to begin with? What is considered a “life worth living” or a “life worth supporting” varies dramatically from culture to culture, often as a result of a number of combined factors including resource availability and cultural beliefs about disability. This invokes a sense of positive eugenics in that couples should only have “normal” children. Normal in this case implies that the child will not create such a strain on their surrounding social-familial unit that could potentially threaten the lives and wellbeing of their families. In resource-lacking areas, difficult choices must be made where incredible sacrifices that could mean life and death would be taken if severely disabled children are born. Though they are not being explicitly prohibited from having children, the rule is understood without being written.

If we return to the of potential of having a moral responsibility to enhance, it is possible that cultures with restrictive reproductive laws like China’s One Child Policy, might embrace enhancement technologies in less resource depleted areas. Gregory Stock

suggests that couples “are bound to feel strongly to have the “best” child they can” (2013, 306). His comment is contextualised in gender politics, where boys are valued more highly than girls. In this sense, genetic manipulation in order to have a boy is an enhancement for the family. Enhancement of unborn children does not necessarily stop at choosing genders. The effects may not be limited to normalising, though, if parents in certain countries actually do want to have “the best children possible.” Parents may seek out ways to enhance other aspects of their children in order to gain a competitive edge. The abilities they choose to enhance may be desirable and valued, but enhancing them to significant degrees is abnormal. This suggests another branch of positive eugenics, where eugenics operates under the guise that you can have children, even if they are disabled, but they must be altered in order to be considered normal and not disabled. Eugenics is an expression of social hygiene in order control the sorts of bodies allowed in society in various ways. While the enhancement technologies are not aimed at preventing certain people from having children, they are aimed at creating more acceptable children. It could be said that preventative enhancement technologies are a cousin to eugenics in this way.

The number of arguments about whether or not we should allow human enhancement to any level is enormous. My concern is with a social aspect of enhancement, and that is the perception of abnormality. My discussion of abnormality seems a bit adjacent to the thematic ethical arguments of enhancement. However, the social status of abnormality directly relates to the ethical arguments of how we might go about utilising enhancement technologies.

Chapter 3: Averages, Norms, and the Medicalisation of Abnormality

The discussion of abnormality and normalisation is complex. This chapter will begin with how abnormality differs from the idea of the statistical average, or “normal person”,

from Mary Beth Mader. She explains how the numerical average person is fiction. To describe someone as normal or abnormal is to make a comparative claim. Her work ties in Michel Foucault's theory of abnormality. In his lectures on abnormality, Foucault describes how society developed a medicalised everyday abnormal person. Furthermore, he explains how this abnormal individual is subjected to correction or normalisation. The theme of this chapter is the relationship of the abnormal to the norm, and the normalisation process.

In the context of ability, abnormality does not concern only deficit or impairment. Rather, abnormality refers to any quality that deviates from a perceived expectation from previous experience. Abnormality is a shaped perception that is formed by experience of differences over time. We are unaware of abnormality until we have an expectation of what is normal or we are explicitly told that something is not normal. For example, as a child, I did not know that my family was abnormal. I learned that it was abnormal when someone outside of my family told me. This new knowledge was reinforced by pointing out the normality of having two parents at home instead of one. Until then, I assumed that my family was normal because it was my normal. Learning that my family was abnormal is a comparative action when I compare my family to other families. What I knew to be normal to me was what I had come to expect. I began with the expectation that other families have one parent. When experiencing other families with two parents for the first time, I believed that family to be abnormal. As I began to meet more families that have also have two parents, I came to realise that my family is the comparatively abnormal family because mine did not fall in line with the norm of having two parents. The idea of normal develops over time from the individual perspective.

What is normal is often confused with what is average. To better understand what is meant by normal and the associated power of normalisation, we must consider Mary Beth

Mader's analysis of social measure, as it "... helps to distinguish the norm from a law and from a rule, custom, or tradition" (2007, 1). Here, Mader explains that the norm, or what is considered normal, is not like a law or a rule. People intentionally develop laws and rules. Rather, what is perceived as the norm is coincidental. The norm is derived from our own qualities, as they happen to exist. Further, the norm, as it is perceived, is a comparison. It is how we differentiate what is normal and what is abnormal. Mader states, "Foucault's insight is that it is intrinsic to this new notion of 'law,' that is, to the norm, that combine prescription and description..." (2007, 8). She is claiming that the norm functions by telling us what is and what should be at the same time, using the same measure. How we understand the norm in a descriptive capacity is through experience and observation. How we understand the norm in a prescriptive capacity is through the process of normalisation.

Anyone who deviates too far from an expected norm falls into the category of abnormal. For example, when speaking of abnormality, we often refer to disability or disorder. A mental disability is any cognitive deviance that negatively interferes with cognitive function. In the context of disability, this is the medical model of disability. The medical model of disability uses the definition of disability provided by the Americans with Disabilities Act (ADA). The ADA states that a disabled person is, "a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment" (1990, 8). A mental disorder, as defined by the American Psychological Association and National Institute of Health is defined by a certain set of behaviours that cause difficulty and impairment in everyday life. These behaviours may be normal behaviours, but the context of the behaviours is abnormal. For instance, a classic symptom of obsessive-compulsive disorder (OCD) is excessive hand washing.

Washing one's hands is normal, but repetitive and obsessive hand washing is not. This particular case describes the subject of the abnormality not the action itself but the frequency, duration, magnitude, or intensity of the action.

When we say "this person is normal", we mean that this person functions within accepted limits. These accepted limits fall within a certain number of deviations on a normal distribution curve. The "average person" is a hypothetical concept. However, the hypothetical "average person" is used to describe what is normal. Thus, it is also used to determine what is abnormal. Mader claims that, "... in order to sense fully the novelty and centrality of normalising techniques, attention must be paid to the specific nature of statistical measurement" (2007, 1). What this means is that even though the exercise of statistics may tell us what is average, and the average does not exist, it does inform us of what we determine to be normal. This comparative exercise is also a diagnostic practice. Various measurements of the body can be taken, such as heart rate, weight, growth rate, oxygen saturation, among many others. These measurements are compared to a range of values of which a subset of those values are deemed healthy and normal. When the measurement falls in that subset, this is said to be "within accepted limits" or "within normal limits". Values that fall outside of that range are abnormal. Doctors use this comparison to diagnose illness. The next step is to cure the illness. Treatment focuses on returning the measured value to normal. This is medical correction. The trouble arises at the demarcations between acute and chronic illness. This line is blurry, as doctors are constantly trying to cure any state of disease that interferes with our ability to function normally. Sickness itself is not abnormal. However, chronic illness, like Foucault's condition that will be discussed later, is viewed as abnormal. This leads directly into Michel Foucault's theory of abnormality.

His theory of abnormality is a genealogical account of how the concept of abnormality developed from a social perspective. Mader states, "Foucault holds that "the norm brings with it a principle of both qualification and correction," (2007, 6). Like previously mentioned, when we make the claim that something is normal, we are not only describing it but also making an intrinsic implication of what the norm should be. His account of abnormality demonstrates how the idea of abnormality developed from the realm of law and medicine. Now, abnormality is invoked in everyday life to describe those who are not necessarily ill, but display qualities that are undesirable and in need of correction.

Foucault's theory of abnormality is an historical approach to how people in the cultural West, especially throughout the Enlightenment to the Victorian age in France, developed a concept of everyday abnormal. He describes how a monster in the medical and legal system is the root for the idea that potentially dangerous and monstrous abnormality all around us. This particular theory is helpful to my project because it shows how, over time, we have labelled even the slightest of deviances in ability as abnormal. In social contexts, we use medical terminology to organise people and their behaviours into a standardised model in order to explain the perception of abnormalities. What is most relevant to this particular project is how normalisation is applied to everyday behaviours and characteristics abnormal. Foucault's concept of abnormality begins with the "monster" of the 1600s. This monster was a legalistic categorization of a psychotic criminal. In his terms, "... the abnormal individual is essentially an everyday monster, a monster that has become commonplace" (Foucault, 2003, 57). The abnormal individual develops from criminal monstrosity. As the judicial system developed, experts were called as witnesses to give testimony about the accused. More and more frequently, the criminal proceedings

would be about whether or not the person accused was the sort of person who could and would commit a monstrous act. At the same time, the science of psychopathology was developing. Courts used psychiatrist's' expert testimony to determine the guilt of an individual. This is based on pathologising the character of the individual. If evidence came down to a "he said, she said" argument, an expert would testify to whether or not the accused or the accuser had some sort of character trait that would lead them to lie or be prone to violence. Thus, Foucault claims, "as crime becomes pathologised, and the expert and judge swap roles, this form of control, assessment, and effect of power linked to the characterisation of an individual becomes increasingly active" (2003, 38). Penalties for those found guilty based on psychopathology were no longer punishment, but correction by hospitalisation. Foucault further states

with the hospitalisation order, the administration carried out by itself a de facto synthesis of danger and madness that previously had to be demonstrated theoretically by reference to monomania. The administration carries out this synthesis not only in exceptional and monstrous subjects, it carries out for everyone subject to compulsory hospitalisation. (2003, 142)

When the court orders hospitalisation for the criminal, the crime is no longer a crime, but rather a symptom of illness. Here is where we experience a coupling of illness with criminality, and thus, correction with abnormality. Much of these procedures are practiced today with being able to plead insanity or mental defect in a court of law.

In the conceptual development of abnormality, Foucault traces how we implicate a particular behaviour as the cause of illness or irregularity. In doing so, certain actions deemed immoral are equated with abnormality, or causing further abnormality. We must ask, how did this normalisation become a process in both the medical and social realms?

Foucault explains how masturbation “becomes the cause, the universal causality of every illness” (2003, 241). There is quite some irony in this, because masturbation is so universal but historically it has been given the reputation for causing illness. Foucault describes the development of masturbation as a medical issue and turned into a social issue. First, parents were told to observe their children, to bind them to their bedding, to report to the doctor, should they observe them engaging in masturbation. The act of masturbating was a symptom, and observation, restraint, and informing authorities was the cure. Then, when not in parental care, this fell to other caretakers. The individual sexual practice becomes the object of surveillance in the social structure, not just the medicalised familial structure. The problem falls to nurses, to nannies, to friends or extended family. It is no longer limited to the child, the parents, and the doctor. This process was thought to be necessary to prevent a condition of abnormality from forming. The masturbator is described as weak, pale, and exhausted from indulgent exertion. When we imagine an ill person, we see in our minds an individual who is weak, pale, and oftentimes, exhausted. Or as Foucault describes, “all the signs are superimposed in the masturbator’s emaciated and ravaged body” (2003, 238). Not only that, “we also find the idea that the time it takes to produce its effects is absolutely random: An illness of old age may well be due to childhood masturbation” (Foucault, 2003, 241). Here we find how the moral judgment of a fairly normal activity is made into the cause of any conceivable illness. The child becomes the cause of his own condition. The concepts of syndromes and conditions lays the groundwork for the justification of a therapeutic process of normalisation.

The following analysis describes this syndrome and condition framework and demonstrates how ordinary behaviours have become medicalised. Once medicalised, a behaviour can be subjected to normalisation. These behaviours are grouped together as

syndromes and conditions. Anything can be a syndrome, if it falls out of line with whatever the “norm” is determined to be. Foucault says “I want to emphasize that, as you can see, there is nothing here that is the symptom of an illness: It is a syndrome, that is to say, a partial and stable configuration referring to a general condition of abnormality” (2003, 311). The conceptual development of a particular syndrome can be any collection of less-than-desirable behaviours that are consequentially pathologised, regardless of how arbitrary the symptoms seem. Foucault gives the example of “antivivisection” syndrome, where people’s desires to protect animal rights are medicalised into a syndrome. This is done “when deviation and automatism increase... there is illness that must be precisely defined in terms of this increasing deviation and automatism” (Foucault, 2003, 159). Any set of abnormal behaviours can be grouped together to form a syndrome.

As to Foucault’s idea of conditions, these are said to be unconscious background operations that give rise to any number of abnormal behaviours

What is a condition? As a privileged psychiatric object, a condition is not exactly an illness with a starting point, causes, and processes; indeed, it is not an illness at all.

The condition is a sort of permanent causal background on the basis of which illness may develop in a number of processes and episodes. In other words, the condition is the abnormal basis upon which illnesses become possible. (Foucault, 2003, 311-312)

The condition itself cannot be cured, but it can be managed or contained. In current medical literature, a condition would be like the American Psychological Association’s personality disorder axis. These disorders operate as abnormal backdrops to explain an individual’s particular abnormal pattern of behaviour. Personality disorders may give rise to any host of symptomatic psychological disorders. For example, obsessive-compulsive

personality disorder is heavily associated with the development of anorexia nervosa. According to Foucault, "a condition is not a more or less pronounced characteristic. The condition is a real, radical discriminant. The individual who suffers from a condition, who has a condition, is not a normal individual. However, the peculiarity of this condition that is typical of so-called abnormal individuals is that it has an absolute, total etiological value" (Foucault, 2003, 312). Once someone is described as "having a condition", they can thus be "fixed" or normalised. Further, he notes that, "consequently, this notion of condition has a formidable capacity for integration: It refers to nonhealth, but it can also bring into its field any conduct whatsoever as soon as it is physiologically, psychologically, sociologically, morally, and even legally deviant" (Foucault, 2003, 312-313). With the fluidity and flexibility of the classification systems used to identify various psychological disorders, any behaviour may be called into question. Any set of behaviours can be formed into a syndrome that is an expression of an underlying condition. Further, the cause of the condition can be traced back to a previous behaviour, like Foucault's description of masturbation. This link back to a condition is how we determine an individual to be abnormal.

Now we must consider how all of this relates to ability. The abnormal status of an individual's ability is how we justify subjecting disabled persons to normalisation. Foucault says,

The difference between disability and monstrosity is revealed at the meeting point, the point of friction, between a breach of the natural law table and a breach of the law instituted by God or by society, at the point where these two breaches of law come together. Disability may well be something that upsets the natural order, but disability is not monstrosity because it has a place in civil or canon law. The disabled

person may not conform to nature, but the law in some way provides for him.

Monstrosity, however, is the kind of natural irregularity that calls law into question and disables it. Law must either question its own foundations, or its practice, or fall silent, or abdicate, or appeal to another reference system, or again invent a casuistry. (Foucault, 2003, 64)

Here, Foucault is separating disability from monstrosity. They differ in their legal statuses. Being disabled is not a crime. The disabled individual is seen as “upsetting the natural order,” much like monstrous individual, but not by enacting harm on other people. However, monstrosity and disability both fall into the realm of abnormality. The difference is their perceived offense: the monster breaks the laws of society as the disabled individual supposedly breaks the laws of nature. One might make the argument that all who exist are perfectly natural, and thus normal, in their existence. But in being disabled, from a societal level, the disabled person is abnormal even if the disability is in itself a natural occurrence or deviation. Naturalness need not be associated with normality, and unnaturalness with abnormality. In being abnormal, the individual in question will be subject to the social pressure of normalisation. Foucault does not make this claim directly, but his discussion on masturbation addresses how the abnormal quality of the action is not inherent. Rather, abnormality is determined by social norms.

Any person deemed abnormal by experiencing a disabling condition is likely to experience “correction” or normalisation. We are told that if we are abnormal, we must become normal. Normalisation is expressed as correction such as therapy, medication, or surgery, as mocking or ridiculing, as marginalisation, and as structural discrimination and oppression. Anyone who is deemed to not fit quite right into the structure of society, who has a syndrome or condition, is declared to be in need of “fixing” or pushed towards the

standard model of normal. Foucault's theory of abnormality links nicely to the social model of disability in that both abnormality and disability are largely determined by society, not by an essential quality of the individual. While abnormality and disability are not the same thing, they are often treated similarly in social context.

For the norm to be relevant, normalisation needs justification. Foucault describes this justification as, "this continuum with its therapeutic and judicial poles, this institutional mixture, is actually a response to danger" (2003, 34). We justify our normalisation as a way to prevent danger from occurring. If, as Foucault says, "a condition can produce absolutely anything, at any time, and in any order" (2003, 312), then conditions provide a vague and ambiguous justification for some future undesirable behaviour. We have seen the development of how we go from the criminal monster to the individual with a condition. The individual with a condition is wholly unpredictable. As Mader notes

the crucial component of this homogenisation is the social technology of the norm. For it is the notion of a norm and its deviations, rather than a law and its infraction, that permits the calibration, correction, gauging, and management that is central to biopower. The notion of the norm is what permits power to assume a therapeutic guise" (Mader, 2007, 7).

The norm is the desired outcome for normalisation. It is the measurement by which people are compared to determine who needs correction and who does not. The "therapeutic guise" of the norm shrouds oppressive measures of normalisation by saying that this is for our own good. In this way, those who enforce the norm say to the abnormal, "here, we can help you, be like us" rather than embrace variance in behaviour. Many of these abnormal individuals are only abnormal in a subjective and arbitrary manner, such as those who

have the anti-vivisection syndrome mentioned above. Granted, some abnormal individuals do exhibit actual dangerous behavioural patterns. The normalisation process occurs in an effort to shield ourselves from the dangers of the abnormal individual with a condition or a syndrome. Normalisation does not recognise the difference between someone who might be an actual threat to society and someone who just is not quite normal. So long as the individual is determined to be abnormal, to have these unpredictable qualities, that is enough for normalisation practices to be justified in these views. Actions associated with normalisation, such as discrimination and marginalisation, serve to enforce the power and dominance of the norm but are actually harmful to individuals in society.

We make efforts to not marginalise or discriminate, yet we still submit to pressures of normalisation by rejecting those perceived as abnormal. By clinging to a specific standard of how to be, we make any substantial deviation from that standard a precarious place to be. The more we view disability and abnormality as dangerous, the more we engage normalisation tactics. The more we engage in normalisation, the more dangerous it is to be considered abnormal. As it becomes more dangerous to be abnormal, the more people fear becoming abnormal and fear the abnormal. Normalisation feeds itself in a vicious cycle. Abnormality is a subjective and relative qualifier, applied to anyone who deviates from a socially determined norm. After all, because we judge abnormality to be dangerous, we simultaneously create the idea that being abnormal is a dangerous thing to be. This creates the cycle in which we call the abnormal dangerous, we subject the abnormal to normalisation and oppression, and create the fear that if we are found to be abnormal that we too will be harmed.

The normalisation process is pervasive in the social fabric of the world. Foucault describes this process as the familial monitoring of the child masturbator as previously

mentioned. This monitoring serves to gather evidence for potential harms and crimes.

Furthermore, he claims that

an obvious implication of this is that the connection between crime and madness becomes a regular phenomenon for psychiatry rather than the extreme case. Little crimes, of course, and little mental illnesses; tiny delinquencies and almost imperceptible abnormalities of behaviour essentially constitute the organisational and fundamental field of psychiatry" (Foucault, 2003, 163).

Through the individualised familial lens, more and more behaviours are interpreted as potential for wrongdoing or sickness. Every action may be suspicious. In turn, we have pulled away from just the dramatic deranged individual who is committing actual crimes. Instead we have condemned even the slightest of unusual behaviours as evidence of disorder, of abnormality, in need of being normalised.

Chapter 4: Abnormality in Society

Visibility is one of the first factors that render a person abnormal. This chapter begins with a discussion on staring, as staring is an action associated with visibility. Staring is often a first interaction between two individuals. Viewing abnormality through the act of staring, we can see how abnormality is subject to normalisation and oppression. The second section address specifically how those with abnormal abilities face oppression. A third section engages a specific question regarding whether or not enhanced individuals can ever be considered disabled. The purpose of this chapter is to illustrate the idea that enhancements, despite seemingly beneficial, might be grounds for discrimination and oppression.

Staring and Normalisation

When we encounter abnormality in the social context, our immediate reaction begins the process of how we decide, consciously or subconsciously, to interact with this abnormal person. Rosemarie Garland-Thomson's discussion on staring begins the conversation of how we begin to interact with abnormal seeming individuals. Staring is a common first interaction between two people. We do not immediately stare at ordinary objects or people unless there is something unusual about them. Garland-Thomson describes staring as a means to express dominance, assert control, and assign stigma (2009, 40-46). Dominance, control, and stigma are all integral elements of normalisation and, consequently, oppression. Garland-Thomson describes some cases of staring as a power struggle. The starrer starts staring as dominating the staree. The relationship may change, but our first impressions of individuals are given a certain level of primacy for how we are to continue to engage with this person. Looking through the act of staring, we focus on the visible quality of abnormality. Visible abnormality oftentimes determines how one may further interact with another person. When confronted with someone who appears unusual or unexpected, we stare. Garland-Thomson claims "the surprise that motivates staring produces... an expedition in search of information" (2009, 19). When we look at people, we take in visual information and process it in order to figure out how to further interact. Staring initiates the judgment process that leads to normalising courses of action if we determine the individual to be abnormal.

Social interactions surrounding beauty can illustrate how staring leads to actions associated with normalisation. In the context of attraction and beauty, Garland-Thomson claims that, "expectation states theory suggests then that attractiveness is not so much a collection of positive bodily attributes, but rather it is the successful presentation of a

normative standard" (2009, 37). We are apt to stare at someone who is beautiful or someone who is particularly unattractive. Practices of beautification, in which people wear certain clothing and apply makeup or even get surgical procedures, are all means to conform to a certain standard to be considered attractive or beautiful. Despite widespread social efforts to embrace individuality and diversity, there are ever-present subconscious forces that push individuals to conform to a normalised ideal of appearance. As Garland-Thomson states, "at the root of our craving for novelty is an anxious drive to be rid of it so that we can sink into a calmer world where nothing startles or demands our visual attention, (2009, 19). Many people in a wide variety of cultures go as far as plastic surgery to enhance beauty. As a result of this, these individuals create a specific, normalised standard of beauty. According to the Asian Plastic Surgery Guide, South Korea has the highest rate of plastic surgery procedures in the world. In a 2013 South Korean national beauty pageant, criticism was garnered of participants of the contest for looking too much alike. Plastic surgery itself is a beautification and normalisation procedure by which surgeons are trained in the same or similar techniques that lead to results that are strikingly similar from person to person. Though, this incidence was blamed on the publication of Photoshopped images of the contestants. However, we may consider the act of using Photoshop to publicise these participant's images as resulting in the same effect - that regardless of the technique used, we have an ideal standardised norm for beauty. Of course, plastic surgery is practiced outside of South Korea. In the US, individuals go through plastic surgery with a wider variety of results, possibly due to a more diverse population base. Though perhaps performed more covertly, we also value sameness and being normal despite outward slogans to embrace diversity.

The intent of beautification is to increase the beauty of the individual. There are limits to the benefits associated with this increase. Extraordinary beauty is a case of abnormality. Beautification can only be allowed to go so far before we say, too much, too beautiful, no longer acceptable, and begin to undermine the one who has too much beauty. Garland-Thomson's idea that "we are obliged to act, feel, look, and be normal - at almost any cost" (2009, 31) highlights this limitation. The subconscious social current towards normalisation is powerful enough that "people who deviate from the formal, functional, or behavioural norms lose the advantages of being normal. In this way, the label abnormal reduces people's economic and social status and relegates them to the outer edges of the human community" (Garland-Thomson, 2009, 31). We marginalise people when they fall outside of the bounds of what we accept as appropriately beautiful or attractive. Typically, this is thought of as the plight of the ugly. Daniel Hamermesh describes in his book *Beauty Pays: Why Attractive People Are More Successful* how abnormal appearance, perceived beauty or ugliness, has an effect on wage earning. Beautiful people make more money than average looking people. People who are considered unattractive make less money than average looking people. Less considered are the normalising effects from the other end of the spectrum. In a review study, researchers find that attractiveness can undermine job-seeking efforts, especially in jobs associated with specific gender roles (Johnson, Podratz, Dipboye, and Gibbens, 2010, 301). The plight of the overly beautiful or attractive is overlooked because we value beauty in such a way that there is an assumption that being beautiful is always good. Often assumed is that what is good could be made even better if there were more of the good thing. Unfortunately, it is not always the case. What is beneficial in some scenarios is not beneficial in all scenarios. Beauty can work against a person in many situations. It is not the norm to be considered to be generally beautiful by

various cultural standards. Excess beauty is also an abnormality. In terms of appearance, being beautiful in and of itself is not exactly normal. Applying the term beautiful to an individual differentiates that person from people of average or below average (ugly) appearances. While we have expanded beauty to come in various shapes, forms, sizes, saying that everyone is beautiful makes the norm change from a standardised model of beauty and attraction to one in which all people are beautiful. In doing so, we change the meaning of beauty to no longer mean someone different, but that beauty itself becomes a set of variances rather than standardisations. In the end, being too beautiful or too unattractive results in being treated as someone who just is not quite normal enough. Abnormality may be fetishized or perceived as exotic. While certain rules of beauty may apply, even the fetishized or exotic must adhere to some normalised standard to be considered attractive and to maintain a successful functional status in society. These observations demonstrate how an abnormal appearance, regardless of its perceived benefit or deficit, pushes people to experience themselves as socially abnormal as well as visually abnormal. Being abnormal disrupts the patterns of social norms of acceptance leading to rejection. "The sight of an unexpected body - that is to say, a body that does not conform to our expectations for an ordinary body - is compelling because it disorders expectations" (Garland-Thomson, 2009, 37). An abnormal appearance disrupts our expectations leading us to uncertainty. Normality is predictable. Abnormality is unpredictable. While it may only be a split second in our first reactions, it is still the fact that we do not treat abnormally appearing individuals the same way we treat normal looking individuals. We do not express curiosity in the appearance of the normal in the way that we do when someone looks different.

When evaluating reactions to abnormal appearance, we can see how this holds true in the case of abnormal abilities. We do not easily accept or embrace those with abnormal ability because it is too demanding or confusing for our attention. We have to take the time to figure out how the ability is different. If the ability is lacking in a particular way, now we must ourselves figure out how to accommodate for that deficit or work with the other person to figure out how to meet goals using other means. To have a typical quality of ability and be around someone who is disabled or naturally inclined to a particular task, mentally or physically, changes interpersonal dynamic until familiarity is achieved. Simply put, it is easier to work with someone you immediately recognise to be have an average or normal range of ability.

A particular case of how we might react to seeing abnormality is the case of assistive mobile devices. We can look at how we view readily visible machinery such as wheelchairs, walkers, and canes for the cases of disability: "Seeing disability reminds us of what Bryan S. Turner calls 'ontological contingency,' the truth of our body's vulnerability to the randomness of fate" (Garland-Thomson, 2009, 19). When we see disability, we might express disgust due to the fear that this may soon happen to us. Though, perhaps we would have less fear if we did not reject and oppress disabled people? When we see visible assistive measures such as wheelchairs or prosthetic limbs, we think of how difficult it must be to lose an ability we are accustomed to having, such as mobility. We do not think about these things when we cannot see that another person is using alternative means to assist in personal mobility. On the other end of the spectrum are using similar devices with the intent of enhancing one's already existing ability. Exoskeletons are being developed now to replace wheelchairs for individuals coping with paralysis. However, these exoskeletons are also being developed for non-therapeutic purposes. What happens when

exoskeletons make walking a possibility for those who cannot ordinarily walk? Further, how do we view an exoskeleton that is not meant as assistance, but as an enhancement for someone who wants to move faster or more deftly beyond their baseline ability? Would seeing exoskeletons in use more frequently make them seem more normal? Perhaps. So far most of these things have only shown up in fiction and fantasy. But, we look to those who can do more, who are enhanced, to do more. In our fictitious worlds, X-Men and Heroes both demonstrate how we may react to individuals who have these abnormal but supposedly beneficially enhanced abilities. The abnormally abled individuals are expected to live in the fringes of society and save the world that rejects them at the same time. Our imagined accounts warn us of how we can go wrong. They stand as lessons as to why we should not marginalise people who are different. What will we do should such abilities become reality? We already fetishize individuals with extreme natural abilities. Half of our television programming is dedicated to gawking over the amazingness of someone who has a particular superior ability. Off camera, however, these individuals live radically different lives that do not fall into the socially expected and accepted norms, even though we approve of their abnormal abilities. When we do this, we are approving the ability without approving of the person with the ability. Biographical accounts of Olympians and concert musicians demonstrate how the lives of people with extraordinary abilities are abnormal. Because of their extraordinary ability and passion, such individuals do not fit into the normalised social fabric of everyday life. This is not limited to people who have attained a higher social status because of their ability. Consider a lifelong professional gymnast. In the community of gymnasts, this person is normal. In the broader social world, this person discloses their status as a gymnast. Curiosity and judgment of this person follow. Assumptions are made, followed by personal questions, requests for demonstration, and

otherwise potentially dehumanising social interaction. This is not limited to well-known professionals in their fields. The ordinary musician is often treated as a music box rather than a person who plays music. Because someone does something considered special, they are frequently subject to objectification and commodification. Exchanges become less about forming a relationship between people and more about forming a relationship between spectator and spectacle, or consumer and product. The moment of disclosing the abnormality becomes a pivotal point in interaction. Some do not get a choice in disclosure, if their abnormalities are worn on the outside. They are subjected to a dehumanising process just by being in public. If viewed as too abnormal, an enhanced individual, regardless of therapeutic value of the enhancement, is unlikely to be treated as a normal person but rather as something else, something other, something abnormal. While these examples are demonstrative of day-to-day examples of exploitation, we can look at how such exploitation can become systematised when we look at how institutionalised enhancement already is becoming in the professional athletic world. The fact that such rigour is required to prevent enhancement technologies from being used in athletic competition is evidence enough to show how enhancement itself becomes an exploitative component. Athletes are faced with the choice of submitting to enhancement technologies or lessening their odds of winning and maintaining their contracts. If they submit to enhancement, they may be subjected to any number of exploitative measures to keep them in line based solely on the fact that they have engaged in enhancement technologies.

The visibility component is largely how we see discrimination and oppression in real-life tangible action. New visible technology is at a precarious state of whether or not it will become a norm. Bluetooth headsets became a norm. We do not ordinarily equate such a device as an enhancement, just as a tool that we use to extend an ability or activity.

However, many enhancements are just that – tools that we use to extend certain abilities. We do not immediately differentiate the role of an enhancement, whether it has a therapeutic value or non-therapeutic value. Other visible technologies that augment our abilities did not catch onto society, though, like Google Glass. If one immediately appears too abnormal, it does not matter what role the abnormality plays. The abnormality provokes curiosity and attention. What we see at first is a visible anomaly in the form of a disabled person using an enhancement to achieve a normal expected range of function or a typically able person using a non-therapeutic enhancement to increase the range of function. As it stands, more people engage in therapeutic enhancements in the social visual field than they engage in significant visible non-therapeutic enhancements. We see wheelchairs more often than we see exoskeletons or Google Glass or some other external enhancement. Those using therapeutic enhancements are often doing so to correct for a disability and to increase their ability to function in less than accessible environments. In effect, they are enacting normalisation. Despite their efforts, though, these disabled individuals, with their abnormalities worn on the outside, are subjected to discrimination and oppression, sometimes with immediate first encounters. Though, if a disabled person can “pass” for an able person, they may face with more covert forms of discriminatory actions. Rather than direct violence, a person who hides their disability or enhancement may be judged untrustworthy. Those who try to normalise are discriminated against and oppressed despite their efforts, even if the larger society deems their efforts acceptable or normal for their situation or disability. It is expected that disabled individuals try to be as normal as possible. In this way, a therapeutic enhancement may be more acceptable by social norms than non-therapeutic enhancements as it reinforces a normal ability model.

It is easier, simpler, and more efficient to engage those whose abilities we can safely assume to be normal or, at the very least, similar to our own. Of course, visibility of abnormality is not the only way by which we determine someone to be abnormal. Oftentimes abnormality is not made apparent until engaging in further interaction. Regardless of how abnormality is determined by the individual, there is hesitancy in continued engagement with that person. This hesitancy, that leads to treating someone differently, is what begins the initial first actions that lead to actions of discrimination and oppression toward abnormal individuals.

Oppression and Abnormality

After an initial encounter, we set a course for how we interact with each other. Our interactions range from rejection and acceptance, from oppression to cooperation. Marion Iris Young states that “all oppressed people suffer some inhibition of their ability to develop and exercise their capacities and express their needs, thoughts, and feelings” (2014, 4). Oppressive actions violate individual liberty, personal rights, and limit the ability to act autonomously. The combination effect of violating all of these creates the injustice found in oppression. Recall Chapter Two, the arguments concerning whether or not we should enhance. The arguments rarely involve justice in society until we turn towards resource allocation and management of technology. When we look at how society pressures the abnormal to normalize, we see the violation of personal liberties that effect social levels of injustice. Here we can take justice to mean those actions by which we treat all others with the utmost humane respect and dignity. We may invoke Martha Nussbaum’s capabilities approach, which requires a tall order as to what is just. The capabilities approach makes the claim that individuals must be afforded the resources necessary to flourish. In failing to do so, injustice may occur. Where injustice occurs, oppressive

measures thrive in the place of beneficial fulfillment. In the framework of abnormality, we have an overwhelming pressure to be as normal as possible. The irony of normalization in our current society is that we do not necessarily provide the means to normalize. One might say that this is an injustice if we decide that normalizing the abnormal ought to be the priority that we take. However, if we are seeking to disrupt the norm, providing the means to normalize becomes itself an injustice if that is the intended purpose. In plainer terms, providing therapeutic enhancement then becomes unjust. Of course this is an exceptionally counterintuitive outcome. The example highlights how normalization cannot function in a properly just society. However, if we are providing the means to upset the norm, partially by way of technological enhancement, we must take it on the approach for all enhancements in order for it to be considered just. This would contribute to a destabilization of the norm and a weakening of the oppressive power of normalization if done in an appropriate manner. While oppression serves to maintain aspects of dominance, it also serves to enforce a status quo. One major function of oppression is to maintain the specific norms of society. It has a dehumanising effect on those who are oppressed. Oppression also reinforces power structures and maintains control over people and Others. Oppression alienates those who are deemed unworthy of belonging. Oppression results in great injustice for those who are unaccepted. A certain power is associated with maintaining a normal appearance, and that is one of being able to live without being oppressed. Oppression results from how society copes with abnormality. By forcing individuals into a predictable model of normality, we tell these individuals to either conform or be subject to oppression.

Being abnormal comes with significant challenge on the part of the individual. This is especially true if the abnormality is readily visible. This unacceptability occurs regardless

of whether the perceived abnormality is traditionally thought of as a deficit or a benefit. A long history of oppression has already been established regarding disabled individuals. Disabled individuals face all types of oppression as a direct result of their abilities being perceived as explicitly abnormal. When disabled people are not afforded the means to fulfil their needs, they experience oppression. They often lack access to resources or must rely on others to help them meet their needs to survive. Society does not ordinarily see why the burden for accessibility should be on the shoulders of the abled. After all, it is the so-called normal people who are not disabled. But, as we do not live in the world without each other, people with disabilities and differing needs have just as much of a right to be able to fulfil their needs and live meaningful lives. Garland-Thomson focuses on the bodies of disabled individuals to demonstrate the cultural nuances and norms of staring. We are in fact quite often startled to encounter an individual who is missing a limb. The more dramatic the visual disturbance, the more we are likely to stare in order to interpret what exactly it is we are seeing. In staring, we must take the time to consider our next actions towards another individual. The affective responses resulting from our initial interactions, curiosity and disgust, lead into how we go from passing by a person to developing some sort of relationship with that person. We make judgments in split seconds, to discern who is safe and who is dangerous. The discriminatory practice is laden with repercussions for how much we allow another person to play a role in our lives. Staring plays a role in oppression as it signals the abnormality of someone else.

One of the main components of this paper is to question whether or not enhanced individuals can face discrimination or oppression as a result of their enhanced ability. The ability to conform to a norm is one that many people do not have. Therapeutic enhancements are made to bring a disabled person up to a normal level of function. As

such, therapeutic enhancement reinforces our traditional conceptions of ability. Non-therapeutic measures are taken to move away from that normal level of function. Non-therapeutically enhanced individuals are making a conscious decision to be abnormal. The latter type of enhancement is often desired to increase the ability to compete more effectively in our society. An enhancement of this sort extends the capability of an already present ability. In doing so, an enhancement of this sort also reinforces the norm but coming from the opposite direction as therapeutic enhancements. These enhancements are often made in socially valued and accepted abilities, such as cognitive performance and emotion regulation. While we may wish to personally benefit from our choice to engage in non-therapeutically enhance ourselves, we are not doing so with the idea that we will be rejected for improving ourselves. Non-therapeutic enhancements are made to extend socially accepted normal abilities, to compete in an already unequal arena. When making the choice to have an abnormal level of ability, we do not agree to being subject to discriminatory or oppressive actions. We often view an enhancement as a beneficial change in someone's ability rather than something that can be a target for discrimination.

Oppression comes in a variety of forms, to a wide array of degrees. Young describes five particular modalities of oppression: exploitation, marginalisation, powerlessness, cultural domination, and violence. In order to properly describe how individuals with various enhancements and their supporters might experience oppression overall, we must take each oppressive measure in turn. We ought to note that Young claims that there is "a consensus emerging that many different groups must be said to be oppressed in our society, and that no single form of oppression can be assigned causal or moral primacy" (Young, 2014, 6). This is to say that oppression may be experienced by any social group. This is also to say that no form of oppression is more morally wrong than another, though

Young does make the point that marginalisation has particularly devastating effects in everyday life.

Oppression is and can be experienced by therapeutically and non-therapeutically enhanced individuals. Exploitation may be most relevant to those seeking abnormal ability status, such as those who practice non-therapeutic enhancement. Young describes exploitation “through a steady process of the transfer of the results of the labour of one social group to benefit another” (2014, 14). Labour is a product of ability. Exploitation is an unethical means of taking what one person does to benefit another person. Exploitation is often achieved by lying, stealing, lack of transparency, and abuse in order to essentially cheat someone out of what they have earned. This occurs without consent. An implicit component of exploitation is the objectification of the individual being exploited. Enhanced individuals may be subject to exploitation if they do not have the means to protect themselves from predatory individuals. Enhanced individuals may be exploited particularly based on the fact that a particular valued ability is the one they have enhanced. A non-therapeutically enhanced ability is exploitable in specific contexts, often taken outside of the individual’s intention for enhancing that ability. One example would be enhancing the ability to form memories. This enhancement could be performed for both therapeutic and nontherapeutic purposes. In the therapeutic context, a neural implant could be used to correct for dementia or amnesia. Alternatively, someone may wish to be able to remember everything that they have ever experienced and be able to share those memories with others. This enhancement can be exploited in such a way that others could gain control of it and use it for malicious purposes without the consent of the individual with the enhancement. Some individuals wish to enhance certain abilities so that they can use them to better their own performances in their desired fields of career or recreational activities.

Any ability that has a commodifiable value can be exploited. In particular, exploitation of enhanced individuals for entertainment purposes can be established through entertainment if we follow the lineage of circuses, side shows, and freak shows. Historically speaking, naturally endowed individuals were involuntarily put on display as a result of their abnormality. Individuals with exceptional strength or flexibility have been exploited and put on display as spectacles so long as anyone is curious to see them. This form of entertainment is still practiced today with extraordinary abilities sold as spectacle to an all-too-eager-to-consume-the-oddity public. An individual who takes a medication or alters their genetic makeup to enhance a certain ability may also face exploitation even if they wanted that particular enhancement in order to perform as that type of entertainer. Because they have that ability, they are potential targets of exploitation for entertainment value even though they chose to undergo an enhancement for the purpose of performing as an entertainer. Having a greater ability to perform creates a more desirable target for entertainment exploitation. In enhancing their ability, they are not consenting to being taken advantage of, lied to, or cheated out of just business practices. By enhancing a particular ability, such as flexibility, the individual is not agreeing to shady business practices. If their enhancement is illegal for participating in an event, such as doping in cycling, and someone discovers it, that individual could be subjected to blackmail rather than answering to authorities for repercussions. In the case of entertainment, increasing flexibility through enhancement technology and not just training is not consent for being subjected to exploitation. In the case of sport, exploitation is rampant without enhancements. College athletes are exploited for their abilities in order to make profits. They are not paid, though they may receive scholarships for their sport-related endeavours. Scholarships come with requirements that must be upheld. They also come

with certain unspoken expectations, in particular success. Athletes who enter into these scholarship contracts do not always have the best guidance upon agreeing to them. If an athlete is injured, they may be subjected to losing their funding. Performing arts scholarships are also subject to potentially ill advisement and overly demanding additional work. Their contracts often leave them in precarious situations. Why would this be different for enhanced individuals who participate in entertainment or sport? Enhanced athletics is currently condemned by sanctioned sporting organisations. This relegates enhanced individuals to competing in unsanctioned events where there exists immense potential for exploitation. However, the city of Zurich will be host to the world's first "cyborg Olympics," dubbed the Cybathlon, where therapeutic enhancements are encouraged. The event is currently limited to participation for those individuals who utilise therapeutic enhancements. While currently enhancements of non-disabled individuals are not allowed in sanctioned sporting events, sport has the potential to go the way of beauty pageantry where contests are split up between "natural" and "enhanced" versions of the same competition. While this may remedy the situation of mixing enhanced and unenhanced individuals for particular events, it does not address issues associated with sports - exploitation.

A second form of oppression faced by enhanced individuals is marginalisation. Marginalisation can be experienced by both therapeutically and non-therapeutically enhanced individuals. Supporters of radical enhancements may face some marginalisation, but support for other enhancements is generally accepted. Young associates material deprivation with marginalisation. Deprivation occurs with social outcasting and lack of support (Young, 2014, 18). While we frequently disapprove of non-therapeutically enhanced individuals by declaring their enhancements to be morally wrong or violations

against nature, we do not deny them access to their regular needs. Non-therapeutically enhanced individuals may not be allowed to participate in certain areas of life, such as competitions, but this is not infringing on their ability to meet their needs to live a reasonably fulfilling life. This disallowance extends to therapeutically enhanced individuals as well. Therapeutically enhanced individuals are not necessarily marginalised for their enhancements. They are most likely marginalised for their perceived disability, even though they are trying to obtain normal function. Outside of competition, non-therapeutically enhanced individuals and supporters of such enhancements are subject to moral disgust.

Violence is another modality of oppression enhanced individuals face, especially if their enhancements are immediately visible or noticeable. For violence to count as a matter of oppression, it must be systematic. Violence against disabled persons with therapeutic enhancements is well documented in the literature and media. We do not have any solid statistics regarding violence against non-therapeutically enhanced individuals. A specific case of violence against an enhanced individual has been reported, by Steve Mann. He reported in 2012 of being attacked at a McDonald's in France on the basis of his wearable technology. He developed what he calls EyeTap. The device fits over the eye and records what you see. You "see through" the lens on the EyeTap in that it displays a computerised version through the camera with the display fitted and calibrated over the organic eye. In fact, it is somewhat similar to Google Glass in that it also can encode data and augment what the wearer sees. Steve Mann does not use this technology to make up for a disability. The device is worn to see things in the world that we ordinarily would not see and also to be able to recall more of what we have seen than we ordinarily would be able to remember without assistance. Use of devices such as EyeTap and Google Glass are subject to

considerable controversy as their use records other people without their permission. This broaches sensitive questions in surveillance performed by private individuals. One element of this attack is the violation of privacy or the expectation to not be recorded by private individuals whilst attending to everyday affairs out in the world. But this is secondary to the fact that the device was so visible. Had the device not been visible, thus available to provoke curiosity and questioning, the other people in the restaurant would not have known that they were being recorded by a machine that was not owned or operated by the business or the government. Had Mann been wearing a contact lens that had the same capabilities as his EyeTap device, he likely would not have been attacked unless he somehow made known to others that he was observing them through enhanced means. If one is enhanced, yet the enhancement is covert or the individual visibly passes for normal, it is more likely that person will be judged as normal and acceptable.

Another kind of violence can occur in enhancement cases. Certain enhancements are mechanical or have wireless capabilities. As such, they are subject to all the harms relevant to any other electronic device. Hacking wireless enabled electronics that are integrated into bodies is a serious threat that can be managed to a degree. Other issues regarding mechanical specifics would apply, though, including tampering with electronics, batteries, parts, electromagnetic pulses, x-rays, and so forth. Special precautions are taken by those who have such devices, but they are not without threat of technological violence.

Cultural dominance is the overarching principle of the oppressive modalities. Our current culture condemns certain forms of enhancement technologies, while embracing others. Recall the previously mentioned studies regarding using genetic enhancement to prevent disability anomalies. Up to 80% of Americans approved of using genetic manipulation to prevent a deadly genetic abnormality. But what about a survivable genetic

abnormality that results in disability? It seems that the American population is split according to a Pew Research poll conducted in August, 2014. As for non-health related genetic manipulation, the same poll found that up to 83% of Americans considered using genetic manipulation to increase intelligence was “taking medical enhancements too far.” Surveys performed Hart Research Associates in May 2015 showed that opinions regarding editing human DNA were mixed at best. These results are similar to polls from another survey, conducted in 2014, by performed by YouGov that reflected up to 72% of Americans either strongly or somewhat disapproving of genetically modifications for increasing intelligence or other “special traits” and 72% worried that scientists are “playing God” with such technologies. Enhancement technologies fascinate us from a fictional perspective, as demonstrated by the overwhelming science fiction and fantasy genres. However, we do not embrace the use of many of the enhancements illustrated in our imagined worlds. We support therapeutic enhancements that bring disabled individuals in line with the “normal” part of society (normalisation), but reject more dramatic, non-therapeutic enhancements (abnormalisation). This creates a gap in what we view as acceptable and unacceptable. Making oneself purposefully abnormal is frowned upon. The blurriness between therapeutic enhancement, preventative medicine, and non-therapeutic enhancement remains, mostly demarcated by a sense of some enhancements go too far in changing the human body. Early opinions on vaccines and some contemporary opinions on vaccines challenge the use of preventative measures, frequently citing safety concerns and less frequently “playing God” concerns. While we may embrace some preventative measures, in the case of preventing deadly genetic conditions, we do not embrace preventing all illnesses. As just noted, the US is split on the prevention of non-lethal congenital abnormalities. We may take many steps in our lives to prevent illnesses that we

encountered on a daily basis, such as flu, food poisoning, allergies, and the like, but only a small percentage of the population takes extreme steps to attempt to prevent every illness. Some argue that preventing illness is unnatural, and will even go out of their way to induce certain illnesses under the idea that contracting a particular illness will fortify the immune system. While the human body is capable of fighting off many illnesses without medical intervention, many diseases come with potential long-term effects. So, we must ask what the prevention priority really is. For one, we try to prevent the diseases that threaten human existence the most. Then we try to prevent severely disabling diseases. The tricky part is where the line is drawn in preventing disabling conditions. As resources develop and norms shift, fewer disabling conditions may be on the slate for prevention. Down's syndrome was once grounds for abortion. Now, legislation is being passed to prevent the abortion of children with Down's syndrome. While our overarching culture is neither for nor against prevention, it seems opposed to enhancement. The opposition to enhancement follows a similar pattern in how we might accept it. The more radical the enhancement, the more likely it is to be opposed. A more radical enhancement in this case could possibly be the ability to fly using wings or some external physiological addition to the body. The more convenient, relevant, and covert the enhancement, the more likely it might be accepted. Such an enhancement could be fairly dramatic for the individual, perhaps maybe the ability to be immune to all illnesses. As a whole, the practice of enhancement in general is not subject to cultural dominance though some extreme forms of enhancement might be.

Non-therapeutic enhancement that extends an already present or valued ability threatens the norm of an average ability. In that way, enhancement is a clear threat to disabled individuals as they are continuously subjected to normalisation. However, other enhancements that add different abilities increase the pool of abilities. This effectively

dilutes the strength of a norm. The use of cognitive enhancing medication by students is rising. Universities have difficulty with admissions due to heavy competition of more and more students who have perfect or near perfect scores. While universities have always had admission criteria, the criteria have been raised over the years as more and more students are performing at top levels. Use of cognitive enhancements turns this into an even tighter competition. Overall, it leaves out lower performing students altogether. In a society where a degree is practically necessary to survive, this means we can do a few things. We can limit the use of cognitive enhancements to those who perform poorly. This would be subjecting those students to normalisation, however, and violating their personal freedoms. We could ban the use of cognitive enhancements from academic settings and subject students to drug testing as we do athletes. Such a ban would be tricky to enforce and likely face backlash and accusations of privacy rights violations. Given that education up through a certain age is required, such drug testing would be implicitly required and incite additional surveillance. Another route we could take is to shift cultural values so that the value of a student is not determined by the prestige of university admission. This route would take away the incentive for enhancement for competitive means, but leave developing enhancement for the sake of enhancement. Trying to do something like this is essentially impossible, though we could make small moves over time to discourage the use of unnecessary enhancements. Yet another possibility is to separate those enhanced students from those who are not enhanced. We already separate those who cannot participate in a classroom of typically able students. We also separate out those students who outperform others with gifted and honours classes. This is based on the idea that such a separation assists in the ability to address the variety of needs of different students. In a class of 20, with one teacher, and each student having a radically different set of abilities ranging from enhancements to

severe disability, the quality of education possible is virtually non-existent. If four teachers are present, the class may be split up into groups of sizes that have students of the most similar types and levels of ability. And here we have separation to meet specific needs. We already take this approach to education in most cases, even with enhancement being brought into the picture. If enhancement is brought into the classroom, the only thing that would really need to change is the addition of a new classroom and a new teacher to meet the additional needs of a new group of students. There was no norm in the original class except for a norm of impossibility. Now, there are four separate classes with four separate norms. They could be compared – maybe. But maybe they should not be compared. While we all have similar capabilities, our overall ability to do a wide variety of activities varies from person to person. Those enhanced students have different needs than those who are not enhanced. The problem is that after education, the enhanced individuals might be found to be more desirable for “better” jobs. And herein lies the biggest problem. How we value vocation and wealth ultimately determines the means by which norms will be shifted. So long as a society continues a fierce competition for vast amounts of wealth or being first or the best, the norms will never favour anyone who does not participate. So, ideally, this route, along with the impossible one preceding it, would likely be the best ways to address the norm shifting issues that non-therapeutic enhancements bring to the table.

This analysis demonstrates how enhanced individuals can face oppression due to their enhanced abilities, particularly if the enhanced ability utilises a noticeable bodily addition. As a result, we can say that people face a variety of forms of oppression due to abnormal ability, regardless of whether or not that ability is thought to be a deficit or a benefit. Total oppression, however, may be reserved for those with disabilities and not necessarily those with enhanced abilities.

Disability and Enhanced Abilities

An interesting question that comes from discussing enhancements and disabilities is whether or not enhanced individuals may become disabled. Enhanced individuals who are not utilising enhancement technologies to correct a disability certainly remain disabled in some way. First of all, abilities are not necessarily dependent on each other despite interacting and influencing each other. Second, enhancement is not necessarily a global quality. Neither is disability. Global in this sense is that the entire person is not enhanced or disabled. We tend to designate people as “disabled” or “enhanced” if their abilities differ in only one particular capacity. Abilities must be viewed both separately and together. As an example, just because a person has an enhanced memory, does not mean that person is also able to walk. The enhanced memory, regardless of whether it is brought about by taking a medication or a neural implant, does not change the fact that the individual may or may not have legs and simultaneously not have therapeutic measures to aid in mobility. This means that the individual is both, enhanced and disabled at the same time.

More to the point is whether or not the enhanced ability itself can be disabling. In the sense that any range of abilities is subject to deficit or a lack of environmental affordances in which to express that ability, an enhanced ability can certainly be disabled from its usual mode of operating. An enhanced ability can be returned to a baseline state and lose its enhanced quality. This may not make the individual globally disabled in a medical or social sense. Alternatively, the ability may be lost altogether. If a neural implant that enhances memory stops working, it is effectively disabled. Further, if it stops working and the individual loses all memory, the ability to remember is gone entirely and disability of memory occurs. Alternatively, an enhanced ability can take on a quality of disability in that it could be rendered useless, thus being viewed through the social perspective

disability. If the environment does not afford the use of an ability, the ability is rendered useless. If that person has come to depend on having that particular ability, it then becomes a disability.

Chapter 5: Transhumanism

After a lengthy discussion of disabilities and abnormality, let us return to the idea of radical human enhancement. Radical human enhancement changes certain features of what we often associate with what it means to be human. Nick Bostrom uses the term posthuman, whereas others such as Max More and Natasha Vita-More use the term transhuman. The term is essentially interchangeable in the present context.

Transhumanism is a distinct form of enhancement, but it is a special case in that transhumanists are seeking to alter their human form in order to become something that is not human but retains some human-like attributes. This translates into a being that is no longer human per se, but transhuman. The focus then will be that transhumanists will likely face forms of oppression rather than acceptance because they are so different from the human species norm. The transhuman extends the concept of personhood to include a potentially radically untraditional human form.

In the practice of radical enhancement, transhumanists move beyond our concepts of acceptable everyday enhancement. Even by enhancement norms, transhumanists are on the farthest edge of the spectrum in their desires and development. They also may face a unique set of problems related to concepts found in the social theory of disability as well. Radical human enhancement will not necessarily face the same fate as disability, but the discussions from disability theory can inform some of what life might be like if such extreme enhancement is enacted.

According to the Transhumanist FAQ, transhumanism is defined as:

The intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities.

Some proponents of transhumanism view the philosophy as seeking the next step in evolution for humankind. In the context of ability, transhumanism aims to enhance human ability beyond what our species can already do, to a point that we might question whether the resulting person is human or something else. This enhancement is thought to potentially break the species-typical boundary of human ability resulting in someone who is transhuman. That is, while this person may share with humans the same DNA or physical form, they are distinctly something different from a human who has not undergone such procedures. However, this radically enhanced person may retain specific qualities of personhood correlated to being human. Max More separates transhumanism from humanism stating that "humanism tends to rely exclusively on educational and cultural refinement to improve human nature whereas transhumanists want to apply technology to overcome limits imposed by our biological and genetic heritage" (2013, 4). I disagree with this statement, as we engage in cultural activities for a multitude of reasons, not merely improvement. We also use technology in ways to overcome our limits all the time. For instance, we developed cars and airplanes to travel distances much more quickly than thought possible. Humanists also engage in using technology to improve our lives. The line of demarcation is that humanists do not necessarily seek to transcend human biology.

A result of transhumanist ideals are radical human enhancements. I've mentioned several in previous chapters but would like to focus again on the most thematic in the literature. These include the eradication of aging (immortality), the integration of

mechanical enhancements into the human body (cyborgs), and uploading of consciousness to machine technology (uploading). At face value, none of these enhancements necessarily meet a criterion for being visually abnormal if they are performed in such a way that the person still looks like a species-typical human. The abnormality would lie in the unseen ability. In fact, many of the current technological developments are subtler or covert. The technology often proposed for enhancing certain abilities are nanobots or neural implants. Essentially, devices that are integrated into the human body. Developing technology in this way is not only for the sake of convenience or efficiency for the ability, but also because developers do understand that looking too strange can result in any number of undesired social responses.

Someone who is enhanced in such a way would be practically undetectable unless by using scanning technology, the individual tells you, or, the machinery enhances the individual's behaviour in some readily noticeable way. Say, for instance, a neural implant allows you to remember everything you've ever experienced in your entire life. This is an ability that is currently beyond the range of humans. It works by recording every single perception and allowing for specific recall of any given moment in which you have existed. The British television show *Black Mirror*, in the episode entitled "The Entire History of You," uses this sort of technology as a major feature in the plot. In it, the device is referred to as a 'grain'. You can call up memories and display them on the wall for others to see. You can fast forward, rewind, zoom, and change volume. This enhancement is far beyond what an ordinary human can do. And it is entirely abnormal. But, unless someone knows that we have this implant, we can still blend in with everyone else and avoid discrimination from species-typical humans. The technology could be used against you. In this same imagined universe of *Black Mirror*, another episode entitled "White Christmas" imagines how police

and judicial systems would be able to prevent an individual from lying, even to himself. The enhanced memory ability can be exploited so that an individual is never able to forget.

Anti-aging medications are being developed in order to increase both lifespan and healthspan. Someone who engages in taking such a medication could easily be exploited for purposes of research in other capacities. For instance, it is not unreasonable that such a person could be taken against their will and experimented on for the gain of other countries who may not have developed such a technology. Stealing technology that comes in non-human form is far from unheard of. It is not far-fetched to think that some countries would do the same to technologically enhanced humans. Anyone with a radical enhancement can have various rights violated or their own enhanced ability used against them, just like anyone else. Particular enhancements do not necessarily come with a way to protect yourself from people who would take advantage of it.

We already do not accept the ideas of transhumanists. Transhumanists make up a small percentage of enhancement supporters. Oftentimes, they are regarded as too radical for mainstream cultural norms. In this case, we can see the experience of marginalisation where radical futurists are shunned or mocked for their ideas and practices, especially within related fields. Marginalisation could be experienced more acutely by transhumanists than by more ordinary enhanced individuals if, once they have become transhuman, they have broken the species-typical aspect of being a human. We associate personhood with being human. If someone who has been consciously uploaded, or has indefinite life and health span, or has a body that is part cybernetic and part organic, they may no longer be considered human. In fact, their proposed nomenclature already separates transhumans and posthumans from humans. They may also not receive the same legal status as a human based on the fact they are distinctly no longer only human. Narratives have been

considered about the personhood of differently conscious sentient beings, mostly concerning highly functional animal species such as apes and chimpanzees. This unfortunately ventures into a long discussion of personhood that is beyond the scope of this paper.

The other point I wish to address was whether or not radically enhanced individuals could be disabled. In short, yes, they can be disabled. The way we designate people as disabled involves the interaction between both the medical and social models of disability. From the medical model, we see a deficit in ability on part of the individual that hinders everyday living as a disability. Also, Julian Savulescu claims that “certain biological or psychological states can be capabilities or disabilities depending on the social or natural environment” (2006, 333). An actual transhuman is likely to be subject to disability just as any being with ability can be susceptible to disability. While the transhumans currently do not exist, we can at least look at how this could happen based on the suggestions and models proposed by transhumanists for developing transhuman technology. Let’s look at the case of conscious uploading as an example. Consciousness needs a place to reside, likely in some mechanical or hybrid biomechanical structure. This structure may or may not be mobile. If it is, this person (consciousness and mechanical structure) will have certain abilities. These could be strength, speed, ability to withstand extreme weather related events, but maybe not lightning. Lightning would certainly injure and disable this person. Most accounts I have read about transhumanism do not involve an option to return to the form of a human as we know them. Once you are transhuman, you cannot go back. You are now faced with a different set of needs than whatever was required by your previous embodiment. Anything that goes wrong with the transhuman form can be disabling

because you will not necessarily have the means to regain abilities that have been hindered that are critical for functioning.

Transhumanists have the privilege of foresight to determine that they will need certain things and likely have the ability to prepare for living in such a form. So, while transhumanists may start with certain privileges that come with enhancement, they will still be subject to some forms of oppression that come with being perceived as abnormal. And, in fact, if they fail to foresee all possible future scenarios, there is a likeliness that the transhuman individual will become disabled or no longer exist altogether as the social and physical environment may lack appropriate features to afford their survival. A particular caveat to this is the idea that through radical enhancement, the transhumanist, upon transforming into this posthuman form, will develop or acquire some extremely enhanced sense of knowledge or wisdom that would equate to the psychic foresight necessary in order to eliminate this problem. I would concede to that, but also keep in mind that no one has any way of predicting future events to concretely claim that would or would not happen.

The fact of transhumanism right now is that most of its goals are currently beyond our ability to achieve them. The only people with whom we can interact are not themselves enhanced. Despite their lack of radical enhancement, we call them transhumanists because they live the philosophy of transhumanism. In general, we relegate transhumanists to the fringes of the scientific world, saying that their ideas cannot possibly be real, that they are trying to be gods among humans, that they are seeking something completely unnatural and inhuman. What is often thought to be so wrong with transhumanism is not so much that superhumans could take over the world. Rather, it is the fear that humanity will no longer be necessary or we will be of a lesser moral personhood status.

Conclusion

In summary, I would like to say that this paper addresses several key points that are overlooked by disability theorists and enhancement supporters. Rather than being in total opposition, disabled and enhanced individuals share the common feature of being viewed as abnormal. Enhancement technologies should continue to be developed with caution and good oversight. More to the point of this paper, I have tried to demonstrate the abnormality of both the disabled and the enhanced through the medicalisation and normalisation processes described by Michel Foucault, the normalising trends described by Mary Beth Mader, and the social interaction that leads to discrimination and oppression by Rosemarie-Garland Thomson and Iris Marion Young. While enhanced individuals may not face oppression to the degree that disabled persons do, they may face some significant hardships because of their enhancements. The status of being abnormal in the social context is precarious regardless of how it is manifested. The oppressive measures faced by abnormal individuals may be different, ranging from a lack of respect, to objectification, fetishization, commodification, and exploitation, to violence and eradication. By including enhancements in the topic of ability and disability, each part plays an informative role in how we perceive and analyse the others.

The larger issue is how might we continue to work on the issues of social oppression in the face of developing technologies that can enrich and enhance our lives. We might do this by teaching values of acceptance of abnormal individuals rather than mere tolerance. Acceptance ranges from tolerance to beneficial cooperation. Mere tolerance is not enough to combat normalising oppression. However, it need not be the case that every person engages in a beneficial cooperation through friendships and close relationships either. Our cultural norms can be allowed to shift. The issue here is that there is still an intrinsic

hierarchy despite the broader categories of normal and abnormal. We still view abilities in the context of being able, not being able, or being incredibly able. The mode of enhancement that extends our already present abilities reinforces this categorisation. Transhumanist-type enhancement, on the other hand, reconceptualises the ability spectrum in a way that removes some abilities and grants others by seeking to change the embodiment of capability in such a way that it is distinctly something other than human whilst still resembling something descendent of human. The transhumanist ability becomes an extra-ability, or one that creates another axis of ability that disrupts the linear scale of our current understanding of abilities. We place a high value on those who can produce more as we have commodified individual ability. Perhaps if we viewed life as more of an overall experience rather than how much we can achieve or produce, we may shift towards a less stringent hierarchy of ability.

One hope of enhancement supporters is that by increasing not only the incidence of encountering abnormal individuals, but also the variance of how abnormal individuals appear, abnormal appearances are more readily accepted in the social environment. A higher incidence of variance weakens what could be considered average or normal. It forces our expectations to change. If we continue to view disability as a deficit and enhancement as a benefit, then of course we will we look at this as if the norm is being moved farther and out of reach from those below the norm. However, if we view both as abnormal, where we aren't viewing disability as a deficit and enhancement as a benefit, an increase in the visibility of one may benefit the other. As enhancers have the choice to enhance and to wear their enhancements visibly, they are in the better position to do this. Given that they have the choice, enhancers also have a certain privilege of being able to

return to normality if they so desire. Disabled individuals do not get this option - they must depend on society to change the view of what is normal.

An objection to enhancement on the grounds that enhanced abilities are abnormal is that non-therapeutic (and many therapeutic) enhancements are a choice. Recalling the idea of morphological freedom, we must ask whether we are willingly entering into an oppressive state by making this choice. If we are aware of the risks, then this may be true. But in other cases of wilfully changing appearance to something socially considered abnormal, are the abnormal individuals asking for it? In everyday situations, people dye their hair unnatural colours knowing that they could potentially be a target of harassment and marginalisation. This does not have to happen, though. Making the claim that someone ought to forfeit their enhanced ability or not to enhance their ability at all violates their sense of autonomy. Many enhancements are temporary or reversible. One can certainly give up an enhancement to avoid oppression related to that particular ability. Exploitation entails a certain loss of autonomy. Giving up that ability to escape exploitation amounts to self-sabotage, even if it is an autonomous act. In exploitation, the person being exploited can take actions self-sabotage and no longer be useful to the person doing the exploiting. When the person no longer has that ability, she is now useless to the exploiter. Those who are exploited, if they ruin their reason for being exploited, may be subjected to punishment, violence, being thrown out, killed, or taken to be exploited in another way. Exploitation operates outside of fairness. A person who is exploited, who can no longer produce, is likely to suffer severe consequences. Giving up the enhancement while being oppressed violates a certain sense of autonomy.

We may also be tempted to say that the person should have been aware of the potential for exploitation or violence. The foresight necessary to predict exploitation as it is

occurring in real time is not exactly a proper objection. For this, I invoke the idea of psychic foresight, a sort of foresight that entails an attitude of “you should have known better” when obviously no one can predict what might happen to them in the future. It is one thing to be aware of the risk of exploitation. It is quite another to see it before it happens to you. We are in an awkward place where we are trying to navigate a social terrain in which no one wants to be forced to change. Unfortunately, if one does not change, one may be left behind especially if the surrounding social environment is unresponsive to the needs of the individual. We do not operate in this world alone. Social responsibility must be taken up as well as individual responsibility. Yes, we may make alternative means for accessibility for a variety of types of ability, but the responsibility of increasing function and ability is on the shoulders of both the individual and society. We have a tendency to demand the individual be normal, for the disabled to rise up so we do not have to wait for them and for those who outperform to slow down so the rest of society can keep up. But we could change what the norm is to be more inclusive of the varieties.

A significant objection from disability theorists is that more enhancement will raise the overall norm of ability. It is thought that enhancement will further exacerbate issues associated with disabled individuals. Disabled individuals are frequently viewed as incapable of working, incapable of making life choices, stupid, slow, unproductive, lazy, attention seeking, leaching, and unworthy of living. Many are blamed for their disabilities, especially when no accommodations are enacted. They are subjected to oppressive measures such as discrimination, harassment, marginalisation, violence, and powerlessness. In many cases, people with disabilities are subjected to eugenics protocols ranging from forced sterilisation to blatant extermination. The gaps associated with comparative differences in ability rest in how much we value that ability. If our value of a

particular ability is that it is expected, then yes, gaps will be created and exacerbated by increasing the number of people who have increased abilities. Raising the norm to an ever higher standard is likely unavoidable if we pursue enhancing only abilities that enjoy a high status in our society. If we focus our enhancement developments towards increasing variance of abilities, we will be forced to look at our environments in other creative ways. Increasing the variance of ability of people in the world weakens the power of what can be conceived of as normal. It forces our hand to create spaces that function for broader varieties of people. Taking an approach from non-therapeutic additive enhancements, we look at those who have the flexibility to not need suffer immediate consequences if their environment is lacking in affordances for them. They are still capable, but at the same time, it affords the opportunities for development without the tension of critical need even though those who need the change the most will ultimately benefit. We ought to be re-evaluating our relationship to social norms while we are taking progressive steps in developing technology that can benefit all people. When we develop enhancement technologies, we should be looking at the broader impact they will have for the whole of society. Perhaps we ought to be looking at enhancements for our environment as well as for individuals.

The transhumanist wants to shift the norm of being human to something that is posthuman, but still a person. This calls for a radical restructuring of how we see ourselves in relation to each other. One of the goals is to eradicate the incidence of disability. While such a goal is admirable in a sense, disability will always exist so long as ability exists if we continue to view ability as a dichotomy. Transhumanism may change the content of abilities for transhumans, but they will still be subject to disability themselves as all things are subject to imperfection and abnormality. So far, enhancement proponents (not

necessarily transhumanists), have been focusing on how to enhance the individual body. They could look beyond enhancing the individual and look more into how enhancements can be made to our social environments. Enhancements can be made to make our environments work for us rather than against us such as creating work spaces that encourage creativity and human connection, rather than isolated workspaces in a hive-like office space. Other enhancements in the social environment could include means of accessing knowledge that one ordinarily would not have but would not need any special device to obtain, such as the lighted traffic signs being implemented on roadways. The idea of providing accessible information could be spread to include digital signs with audible announcements at bus stops and metros. Some of these things already exist in the world, but ought to be extended to other areas where people frequently need information such as stores, parks, recreational facilities, and so forth. Innovation for these sorts of enhancements are boundless. This has the potential to change the content of our norm of individual ability into a collective ability where individuals relate to the structural environment more effectively regardless of their medical degree of ability. Norms shift and change over time. While technological progress is speeding up in a lot of ways, it is also showing signs of slowing. We have had a significant increase in innovation but we have not yet figured out all the permutations of applying those innovations. Creating newer and newer technology is not necessarily what shifts the norm. The shift occurs as the new technology spreads through the social fabric and becomes integrated into daily life. This is where we must pay close attention to how technology is dispersed throughout society. Is it sold? Is it designed for individual use? Is it designed for many people to use in a public space? The content of the norm is subject to change. Many of the newer technologies are being made with increased accessibility in mind. Making enhancements to raise disability

to a normal expected ability serves to reinforce the norm. Making enhancement available to those who have normal abilities serves to shift the norm. The way we look at enhancements of both therapeutic and nontherapeutic varieties right now is how they are applied to individuals. This creates an aggregate of enhanced individuals, some who are normalised, some who are expanding abnormal ability, and some who are both. We should also be considering how enhancements can be used in broader terms, such as enhancing an environment to meet the needs of the individuals engaged in that environment. We could look more into enhancements that can be applied to the social environment, where they could increase accessibility and functionality for a more varied group of individuals. As a biological species, we are constantly trying to find new ways to survive. As a social species, we will likely always have hierarchies. So long as we value sameness, a norm will always hold power. Enhancement can shift a norm, but it can also cause more abnormality if the enhancement is not extending already present abilities. As a social species, we are responsive to the needs of others. We do not develop a technology and purposefully keep it out of reach. It takes time, but if accommodations for accessibility are needed, they will be brought about. It would be wrong to categorically reject enhancement out of fear when so much benefit can be gained and so much change can be initiated in how we can come to accept naturally occurring variances and abnormalities brought about by any means.

Looking through the lens of abnormality, we can take this instead as a further call in social change and development to embrace and accept that which is abnormal rather than constantly trying to fix or standardise it. It is possible that we could see a different effect in which a wider range of abilities are accommodated for in the social environment. It is likely that what is considered a normal ability will change given newer technologies. For example, we consider driving a car to be normal in our society. Of course everyone is not

able to drive. Many people do not have the financial resources, but others are not physically able of operating a motor vehicle. We have changed the norm of self-transport and mobility to be much faster and more efficient by using technological means. In doing so, we changed the world around us and now clear flat pathways are available for all means of transport. Did this impact the lives of disabled individuals in a particularly harmful way? That is difficult to say. Many disabled individuals make use of roads and vehicles just as people without disabilities do. Enhancement could change that, changing personal transport to one that is not based on the ground. Roads would become obsolete. But then it would be the responsibility of an entire society to maintain the tools for all to flourish. As we develop technologies to enhance our lives, we change those technologies as we see fit so that they may be accessible to as many people as we wish. In this case of transportation, self-driving cars can be assistive to people who would not, under current conditions, ordinarily be able to drive. In enhancing the abilities of people, we have made it the norm to be immune from a number of devastating illnesses. By reducing the incidence of polio, did people who are paralysed experience more or less discrimination and oppression in their lives? That is an impossible question to answer. Abnormal people will always be striving for acceptance. What is at hand is how we continue to enforce the idea that we should be normal.

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