The Challenge of Enhancement & Adaptability in Healthcare: An Ethical Framework for Organizations

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THE CHALLENGE OF ENHANCEMENT & ADAPTABLE IN HEALTHCARE: AN
ETHICAL FRAMEWORK FOR ORGANIZATIONS

A Dissertation
Submitted to the McAnulty College and Graduate School of Liberal Arts

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Philosophy

By
Gary Edwards

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THE CHALLENGE OF ENHANCEMENT & ADAPTABILITY IN HEALTHCARE: AN
ETHICAL FRAMEWORK FOR ORGANIZATIONS

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ABSTRACT

THE CHALLENGE OF ENHANCEMENT & ADAPTABILITY IN HEALTHCARE: AN ETHICAL FRAMEWORK FOR ORGANIZATIONS

By

Gary Edwards

December 2017

Dissertation supervised by Professor Gerard Magill

This work defends enhancements that aim at promoting adaptability and formulates a framework for how healthcare organizations can cope with these sorts of enhancements. It begins by defending explicit approaches to defining enhancements and sketches a tripartite conception of enhancements dependent on well-being, social, and perception approaches. After assessing several major arguments for and against enhancement, it defends an adaptability justification for enhancements. In light of this justification, the remaining sections explore the adaptability argument’s implications for healthcare, justify an organizational approach for dealing with these implications, and finally formulate an organizational ethics framework for coping with the adaptability argument’s implications.
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Chapter 1) Introduction

Enhancements are an institutional phenomena and successfully coping with them requires an institutionally informed response. In this work, institutional is interpreted in two ways. First, institutional as a matter of the organizations that do or could use enhancements or have enhancements integrated into their portfolio of work. Healthcare organizations as such covers a broad range of different types of organizations from acute care hospitals to research universities. To say that enhancements are an institutional phenomena is to say that enhancements as a matter of generation, promotion, delivery, and regulation are thoroughly products of and/or tools used by some healthcare organizations and as a result enhancements can be seen as organizational in nature. To focus this inquiry on healthcare organizations is not to say that healthcare organizations operate in a vacuum, which leads to a second and related sense of institution. That is, institutional as a significant practice within a community. Examining a significant practice of a community means looking at the historical, linguistic, philosophical, sociological, economic, political aspects that affect the health organizations in question.

While technological advances aim to improve the practice of medicine and the delivery of healthcare, the rising tide of technological innovation is bringing with it a vast range of tools and avenues that are challenging the traditional aims of medicine, healthcare, and the institutional platforms that provide them. The thesis of this dissertation is that an organizational ethics framework is needed to address the challenge of enhancement and adaptability in healthcare. The aim of this work is to forge a framework for thinking about these challenges and for guiding healthcare institutions, and the people that serve within them, in how to cope with enhancements. This work defends enhancements that aim at promoting adaptability and formulates a framework of how healthcare organizations can cope with these sorts of
enhancements. Here the word ‘cope’ serves a double meaning as a matter of use on the one hand and effect on the other. That is, the central question examined here has two complementary parts: 1) how can healthcare organizations use enhancements to promote their mission, and 2) how can healthcare organizations deal with enhancements that do not promote their mission. The key to understanding these prudential questions is to deal with the normative package they come in and that requires an analysis of the conceptual grounding of the term ‘enhancements’ as an emerging technology in healthcare and an examination of the normative argument in favor and against enhancements. This results in the following question: if enhancements are justifiable, then 1) how can healthcare organizations use enhancements to promote their mission, and 2) how can healthcare organizations deal with enhancements that do not promote their mission? The particularities of answering this question will greatly depend on the specific healthcare organization that asks it. However, examining the conceptual and normative analysis about enhancements can offer the beginning of a roadmap that can help empower healthcare organizations and the communities in which they operate to answer this question for themselves and in an ethically defensible way.

The body of literature on the enhancement debate is vast and exponentially growing, yet there exists a gap in terms of integrating an organizational framework into the analysis of the challenge and the opportunity that enhancements offer. This work blends the debate about the morality of enhancements with the clinical and organizational realities of coping with their existence, further development, and impact. It aims to take the philosophical argument of the ethical permissibility and impermissibility of enhancements seriously while acknowledging and being informed by 1) current ethical theories of organizational and clinical ethics and 2) the healthcare organizations that rely on those theories to cope with such enhancement pursuits. The
literature in this area is divided into two camps. The first is primarily philosophical in nature and
deals almost exclusively with issues of the conceptual understanding of enhancements, abstract
arguments about the ethics of such pursuits, and tends to fall short of integrating substantial
clinical and organizational ethics into its arguments. The second silo—the clinical and
organizational ethics one—tends to ignore the philosophical arguments on enhancements, ignore
that enhancements are even an issue of concern, and/or import conceptual confusions about
enhancements into the arguments given. The aim of integrating these two camps is to provide a
clear and concise argument for what should be done about enhancements, who should take the
lead on this, and what can be expected from such actions. It is useful to read these two bodies of
literature next to each other as the weaknesses they face are complemented by the strengths of
the other side. There is no substantial monograph that assesses the conceptual and argumentative
state of the enhancement debate and synthesizes what the argument means for healthcare
organizations. It represents an effort to answer the yet unanswered call for what can been termed
as the need for a work to begin to empower healthcare organizations to cope with enhancements.

Consequently, the primary audience of the argument is executives, leaders, board
members, policy advisors, and politicians associated with healthcare institutions. This by no
means brackets the argument from perhaps more academic interest or implication, but is rather
an attempt to blend the two silos of philosophical reflection on enhancements and emerging
technology with the organizational and clinical realities of healthcare institutions, and healthcare
administration and policy makers in mind. Indeed, the description of healthcare ethics problems
is vital to coping with such problems. As such, this work is an effort to construct a bridge to
drive an inquiry about enhancements through the stages of developing a coherent conceptual
approach, searching for the most compelling normative judgements on the subject, and
integrating these into organizational decision making framework that stops just sort of application yet remains methodological in nature and importable for concrete application.

Without explicitly limiting the work to a cultural setting, it is important to keep in mind that in some sense, enhancement pursuits have been conceived as only being a matter of concern for developed nations especially if one thinks of enhancements as being beyond minimal healthcare and even superfluous as such. This is not to say that enhancements do not pose a challenge for developing nations and the global community. Standards of care, economic resources, consumer demand, healthcare and medical research infrastructure, political will, and economic opportunity seem to be the necessary fertilizer for enhancement pursuits. This in turn limits the number of nations for which enhancements are relevant in an immediate and direct way. However, technological advancement, the speed of information exchange across the globe, and the ease of movement between countries means that our bioethical problems are not easily compartmentalized. Not only does this apply across countries but also across different types of healthcare organizations within a given country. Large urban research medical centers and smaller rural community hospitals, if they share a common fertilizer coupled with the prioritization of technological advancement, means of communication, and means of interaction are liable to share in the same enhancement challenges, albeit to varying degrees.

The rest of this section examines the outline of the main argument of the work. Chapter 2 analyzes the literature around the concept of ‘enhancement’ and constructs a coherent conceptual approach to the enhancement debate that prioritizes healthcare organizations. As such, the chapter focuses on five approaches. The first named the Negative-Comparative Approach frames enhancements as pursuits beyond health. The second named the Grouping-Resemblance Approach frames enhancements as an umbrella term by grouping pursuits that have a loose
likeness under the concept ‘enhancement.’ Ultimately, these two approaches are rejected for their inability to accurately map the realities of enhancements and for vagueness concerns. The next grouping of approaches is preferable. A Social-Pragmatic Approach that attempts to make sense of enhancements as a matter of communities that they may serve. A Perception Approach that requires first person perspectives define what enhancements are. And finally, a Welfarist Approach that holds enhancements are primarily about well-being. These approaches all have limitations however they are minor, or at least not necessary fatal, and linking them together under the umbrella of an organizational approach forms a coherent paradigm from which to approach the concept of enhancement.

Chapter 3 assesses the state of the enhancement debate by examining a representative sampling of the major arguments against enhancement and in support of enhancements. It defends the claim that the current major arguments in the enhancement debate are lacking. This does not mean to say there is not something one can learn from them, but just that in some cases they are seriously flawed and in some cases they need to be bolstered. The following arguments are the dominant ones on the against side of the debate: 1) the argument from bad character, which contends that the very pursuit and use of enhancements is expressive of something morally corrupt and problematic, 2) the argument from human nature, which holds that enhancements drastically threaten the essential composition and identity of who we are as human beings, 3) the argument from inequality and autonomy, which highlights the threat that enhancements pose to our ability to live in societies in relationship and violate our essential right to live self-directed lives, and 4) the argument from human dignity, which proposes that enhancements are directly opposed to respect that is inherently due to a human being as a human being. In support of enhancements are 1) the argument from procreative beneficence, which
claims that general pursuits of doing good for our children and even those in our care inextricably are tied to the using enhancements to promote their good and 2) the argument from transhumanism, which holds that not only should we pursue enhancements, but that we have an obligation to continue development of the human species beyond the confines and limitations that we currently suffer from in our lives.

Chapter 4 reflects on the conceptual argument of chapter 2 and harvests the defensible residue of chapter 3 in order to formulate an argument in favor of enhancements from adaptability. That is, promoting the ability of individuals and communities to change in response to their environments is a fundamental charge that healthcare organizations ought to embrace. This is not a justification for all enhancement pursuits at any time and for whatever purpose. Rather, it aims to establish a prima facie and justifiable impulse toward pursuing enhancement. The ultimate justification for this stance requires balancing respecting autonomy and promoting beneficence, yet it takes into account both these principles from an organizational approach. The argument from adaptability is inspired by the argument from being unfit for the future, which claims that humanity’s current state of preparedness is poor for dealing with the challenges it will face in a globalized and technologically developed world. However, it distinguishes itself by being a more theoretical justification and being less focused on moral enhancements than is the current dialogue on enhancements. It is inspired by and relies on the several key arguments and ideas in the literature: the idea of global catastrophic risk, the importance of survival and promoting future survival, the notion of evolution as a heuristic supporting the banality and acceptability of change, and the evolutionary origins of freedom. The chapter concludes by defending these ideas from 1) the speculation objection: the worry that a concern about enhancements and the challenges they pose is made-up and over exaggerated hype, and 2) the
justice objection: the argument that we simply have better things to spend our money on, as individuals and as a society.

Chapter 5 highlights the unique roll and opportunity healthcare organizations do have in pursuing enhancements for the populations and individuals they serve. Chapter 5 also lays the theoretical foundation for how healthcare organizations can cope with the enhancements from an organizational ethics perspective. It expands that horizon to include some aspects that healthcare organizations ought to have in regulating enhancements. The argument of the chapter reflects on the meaning of institutional moral agency and the shifting landscape of healthcare delivery in American society, as an example. It then moves on to establish an argument for what healthcare organizations ought to do in pursuing enhancements. Forging this claim requires getting a sense of the global, national, and professional dynamics that affect healthcare organizations. It also requires getting a sense of the internal workings of healthcare organizations that help support its relationship with other organizations and to the society in which they operate.

Finally, chapter 6 builds on the organizational foundation of the previous chapter and constructs a framework for how healthcare organizations can cope with the enhancements they currently have and the enhancement pursuit they may have in the future. It begins by reflecting on current organizational structures at play in contemporary healthcare and formulates how—in light of the earlier defense of enhancements—healthcare organizations ought to develop derivative coping mechanisms from safety procedures that highlight the vulnerability of people. The conclusion of the chapter reflects on the larger arguments implications for how healthcare organizations: 1) integrate new technologies, 2) recreate themselves in times of change, 3) empower leaders, 4) relate to the larger governance initiatives, and 5) promote their members’ ethical awareness.
Chapter 2) On the Concept of Enhancement

The conceptual landscape of the enhancement debate is complex and at times confusing. The aim in this chapter is to help provide some clarity to the debate and to sketch a conceptual roadmap for organizations—and those leading those organizations—that are engaged in promoting or even downplaying enhancement pursuits. Either way, the starting assumption is that having a coherent sense of the meaning of the concept ‘enhancement’ is indispensable in particular for discussing the normative permissibility or impermissibility of enhancements and for analyzing and implementing policy and regulations for enhancements. The chapter lays out several approaches for defining enhancement. The selection of the term ‘approaches’ is deliberate and an effort to stress that each approach can generate a number of different and even sometimes competing conceptions. The five major approaches considered are the Negative-Comparative Approach, the Grouping-Resemblance Approach, the Social-Pragmatic Approach, the Perspective Approach, and the Welfarist Approach. Each approach was selected either for its prominence in the debate and/or its usefulness in constructing an approach for organizations.

Following a convention in the debate, the chapter makes a distinction between implicit approaches and explicit approaches. If an approach is identified as an implicit approach, it means that the approach never offers a clear and concrete definition of what an enhancement is. It may attempt to define an enhancement by stressing what an enhancement is not, as in the Negative-Comparative Approach; or, it may attempt to define an enhancement by loosely collecting examples of how the term is used in the debates, as the Grouping-Resemblance Approach aims to do. Categorically, implicit approaches are not helpful. The chapter defends explicit approaches in general or approaches that attempt to offer a clear and concrete conception of what an enhancement is. The Social-Pragmatic Approach, the Perspective Approach, and the
Welfarist Approach each offer criteria that help one to draw a boundary around a specific instance of enhancement pursuits. However, each approach does have its strengths and weaknesses. While no particular approach is perfect, if one can select or construct an approach that capitalizes on the strengths inherent to such approaches, while minimizing the weakness associated with them, then that approach should be preferred. The chapter uses a ladder strategy that first describes the Social-Pragmatic Approach, the Perspective Approach, the Welfarist Approach, and then subjects each approach to several critiques in an effort to tease out each positions weakness. By assembling what is left and adequately dealing with each critique, the chapter constructs an Organizational Approach to defining enhancements that represents a hybrid semantic theory. Harvesting strengths from each approach and stitching them together is difficult conceptual work, but the result, if it is compelling, is an Organizational Approach that not only sets a coherent conceptual framework for thinking about enhancements, but also shows that an Organizational Approach can provide the missing link that not only solves a major conceptual puzzle of the enhancement debate but also provides an explicit, uniform, systematic, and useful conceptual foundation for forming normative and policy analysis that is needed now and will continue to be needed in the future.

The chapter is divided into two sections. The first examines and assesses what are termed implicit approaches to defining enhancements and is organized under the headings of the Negative-Comparative Approach and the Grouping-Resemblance Approach. The second section examines and assesses what are termed explicit approaches to defining enhancements and is organized under the headings of the Social-Pragmatic Approach, the Perspective Approach, and the Welfarist Approach. The second section also constructs a hybrid theory for defining enhancements by grafting together aspects of the three explicit approaches to form an
Organizational Approach to defining enhancement. Finally, each section gives an overview of the approach in question as well as a strength/weakness assessment of the particular approach.

2.1) Critiquing Implicit Approaches to Defining Enhancements

The major challenge facing implicit approaches to defining enhancement is that such approaches never offer a clear and concrete definition of what an enhancement is. With that being said, there are several different types of implicit approaches present in the enhancement debate. The first, the Negative-Comparative Approach is by far the most popular and arguably the most dominant of the approaches in the entire debate. It comes in two varieties that are determined by the nature of the foil used to draw the central comparison of the strategy. The Grouping-Resemblance Approach is the second implicit approach examined and is arguably not always endorsed as an approach but is often used as an introductory strategy for handling what some authors feel is the obligatory conceptual introduction to the topic presented, without doing the work of articulating the details of the assumed conception.

2.1.1) The Negative-Comparative Approach

It is useful to separate the Negative-Comparative Approach into two major camps. The first camp uses the concepts of 1) health and disease or 2) normal and abnormal in order to attempt to make the distinctions necessary to articulate what an enhancement is. Likewise, the second camp uses the ideas of ‘within medicine’s purview’ or ‘not within medicine’s purview.’ Both camps' central strategy is to offer a negative definition of what an enhancement is; that is, it attempts to define an enhancement by saying what it is not, as one might define light as the absence of darkness or near as the opposite of far. In this sense, the Negative-Comparative Approach is here characterized as an implicit approach to defining enhancements since it relies
on those who use the concept to assess the definition of enhancement by comparing it with the foils of health/disease, normal/abnormal, or medicine’s purview/not medicine’s purview. Such an approach raises a number of problems that will be assessed below.

An Overview of the First Variety of Negative-Comparative Approach: The Negative-Comparative Approach, of the first variety, attempts an implicit strategy for constructing a definition of enhancement; that is, the conceptual space of ‘what an enhancement is’ is drawn by determining what an enhancement is not. This in and of itself is sometimes a useful strategy, especially when there are clear boundaries delineating what is being compared. For example, it is useful to identify those students in a school that are in the 5th grade by delineating them from those in 4th and 6th grades. The accepted ordering of grades offers a coherence to the identification of 5th graders. Compare this with the accepted universe of the grammar school, which includes first grade through sixth grade, for the sake of the example, and thinking about 5th graders as being in between 4th and 6th graders becomes a useful conceptual scheme for understanding what it means to be a 5th grader. The more one knows about what 4th and 6th graders study, what they need to master to progress to the next level of education, what developmental stages are key to their flourishing, the more clear our conception of what it is to be a 5th grader becomes. The strength of our conception is depended on the clarity of the foils at play in the comparison; that is, how well we grasp the conception of a 5th grader is directly tied to and depends on how well we grasp the conception of what it means to be a 4th and 6th grader. In contrast, the more disagreement there is about what school is like for 4th and 6th graders in our imaginary grammar school, the less likely it is one can formulate a clear understanding of being in the 5th grade and in turn the concept of a 5th grader.
The division between these conceptions of enhancement can be grouped into two categories according to the polarities of 1) health/disease and 2) normal/abnormal. According to this type of Negative-Comparative Approach in the enhancement debate, the favored foils for this exercise are treatment, therapy, and healing; and definitions are given in a negative manner (i.e. versus treatment, beyond therapy, beyond health etc.).

Focusing on the health/disease side of the spectrum, one can generate several different conceptions of enhancement based on different interpretations of the foil chosen. For example, the concepts of health and disease are typically interpreted in the bioethics literature from the perspectives of three camps: 1) a constructive camp that holds the concepts of health and disease are determined by cultural-sociological factors that underwrite the concept, 2) a realism camp that holds the concepts of health and disease are universal and determined by biological criteria, and 3) some hybrid approach that draws on each camp. Consequently, conceptions of enhancement that are framed as ‘those activities that are beyond treatment of disease’ can include interpretations based on an assessment of the typically healthy individual according to strict biological criteria, socially agreed upon criteria, or something that takes criteria from both camps. Likewise, attempts to use treatment and/or therapy as foils can be subjected to a variety of interpretations based on differing standards of care, which may diverge across different communities, cultures, and nations.

This strategy for defining enhancements has several important proponents in the enhancement debate. Within this strategy, Daniels articulates normal functioning as a species-typical account for defining enhancement and uses ‘normal’ to defend what is referred to as the treatment-enhancement distinction. That is, Daniels attempts to separate that which is treatment—and therefore ethically permissible—from those activities that are not treatment—
and therefore enhancements that may or may not be ethically permissible. It is important to keep in mind Daniels’ end game is to figure out the best way to secure opportunity and, in turn, fairness in a just society, as his argument for prioritizing normal functioning is dependent on it.  

Likewise, The President’s Council on Bioethics also adopts this approach under the related concept of therapy. They express both an understanding of the limitation of the concept and their desire to move beyond the Negative-Comparative Approach in general. However, they seem firmly entrenched in its pull for the majority of their argument, so it is unclear how exactly they move beyond it and are best characterized as users or defenders of the Negative-Comparative Approach. It makes sense to use treatment and therapy as a foil in terms of the medical communities’ associations with enhancement pursuits. The question is whether this association contributes something useful to the discussion or is simply a historical contingency of the development of enhancement inquiry and debate. This is worth considering, although it may be difficult to establish.

Strength/Weakness Assessment of the First Variety of Negative-Comparative Approach:
The presence of all these perspectives lends the inquiry in general to the risk of equivocation problems. An equivocation problem arises when there is confusion about the meaning of a concept and when at least two different meanings of a word are being used in an argument or in an inquiry in general. Sometimes this can result in parties to an inquiry just talking past each other or, more formally, importing fallacy into their analysis. It is simply too easy to get confused about exactly what the foil concept is without an examination of what approach to the foil concept is being taken. Assuming that the foil concept does not import anything controversial into the discussion, it may be easy enough to remedy the concern. But, if the foil concept is itself open to several approaches and/or if any of those approaches contain genuinely
controversial matters of disagreement, then using the foil concept is pointless for contributing any clarity to the concept being defined. To say there is genuine controversy is just to say that reasonable and educated individuals disagree about the concept or what health is. If there is genuine controversy over the way to conceive of health (as merely the absence of disease, for example) or (as total development that includes proper functioning and also the infrastructure that makes this possible like access to clean water, nutrition, care, education, and the other factors that promote well-being), then the boundary defining tool of the foil in question become almost useless.

With no agreed upon meta-framework that solves the meaning and philosophical issues present in the enhancement debate under the Negative-Comparative Approach, it simply impedes clear communication on what it means to be an enhancement. The foundational nature of a concept like ‘health’ and ‘disease’ for medicine and healthcare delivery only magnifies this risk of equivocation. Likewise the concepts of ‘normal’ and ‘abnormal’ are approachable from similar perspectives and also offer different ways to interpret enhancement.6 'Normal' relative to your own history, culture, community, country, or species, all create different conceptions. This is also to ask of the foils in question: is it anecdotally abnormal or statistically abnormal; and is it a value concept or a descriptive one? The clarity and coherence of enhancement (much like the concept of a 5th grader) depends on the clarity and coherence of the concept of health, disease, treatment, and therapy (much like that of 4th and 6th graders). If there are genuine controversies over precisely what health entails, then the very usefulness of ‘health’ as a foil is moot. If access to what materials and information 4th and 6th graders need to master to progress to the next level of education and what developmental stages are key to their flourishing is unavailable, then it is unlikely that a clear conception of what it means to be a 5th grader is
accessible. If the grammar school example is stretched to comparing 5th graders of one school district with 5th graders from another school district, the chance for different educational models relevant to different superintendents increases the chance for different conceptual approaches to what it means to be a 5th grader, while folding in the resources available to the classes only increases the complexity of the conception in question. Map onto this supportive concepts of well-adjusted, successful, possessing a mastery of age appropriate skills and knowledge, and the concept of a 5th grader is open to much more interpretation. Likewise, if there are many different competing conceptions of ‘health,’ there are likely to be many different competing conceptions of ‘enhancement.’ Also, if there is likely to be different resources available for enhancement, there is likely to be different relevant conceptions of what is possible as a matter of enhancement.

Daniels’ argument and derivative versions of it—especially as a matter of species-typical normality—have received much criticism and some spirited defenses. Bess, the best and most destructive for Daniels among them, offers a conclusive critique when he argues that Daniels’ normality model and the difficulties of tethering one’s conception of enhancement to treatment comparisons is tempting, but ultimately unhelpful because it assumes health, disease, normal, etc. are static concepts that do not change over time. Looking back at the history of medicine that once recognized homosexuality, PMS, and hyperactivity as disease/dysfunctional issues illustrates this problem, and such a concern means one should be skeptical of a beyond health model. In the least, this means arguments that include premises with enhancement designators will need to be time stamped in order to stay relevant. Enhancements today may be the treatments of tomorrow, and if treatment is not specified in some temporal or spatial manner, it seems unlikely that one could assess the normativity of a proposed enhancement pursuit without
exploring the context relevant to the use of the term enhancement. It is worth considering if the abstract conceptual framework of species-typical normality can even handle the concrete contextual analysis it would seem to need in order to make comparative conceptions of enhancement functional, especially those that depend on health and normality as foils.

Assuming that one can draw clear distinctions using concepts that themselves have implications that others may see as controversial is a significant weakness of the Negative-Comparative Approach. In some cases, it could result in the need for nested arguments about conceptual limits of ‘enhancement’ before one can even frame coherently what an enhancement is, and if one is unable to table the controversy that is imbedded in the concepts one uses to build the definition of enhancement, then one is bound to find those controversies again.

While Daniels, and to some extent the President’s Commission acknowledges the difficulties of the treatment-enhancement distinction, Daniels in particular argues it is right to overlook these because of the utility the distinction has in the public debate over enhancement and that it is firmly imbedded in the conversation that members of society are having about “what we owe each other.” However, the concern here is whether or not the grooves of the conversation are restricting the moral reasoning of those embedded within the conversation. While this is impossible to prove, there is a sense in which the enhancement-treatment distinction invites those who rely on it to beg the question against those who defend enhancement. It is important to be careful about the tendency to beg the question of the normativity of enhancement pursuits (i.e. by smuggling their justification or their objectionableness into the very concepts themselves). For example, when we embrace the Negative-Comparative Approach that relies on treatment as the foil, it is easy to forget or assume the background premise ‘treatment is ethically permissible or obligatory,’ and anything that is
beyond this is ethically questionable. The point being, examining the background assumptions is part of making a compelling case either for the permissibility or impermissibly of enhancements, or for making sure one is not leading with the concepts that are used to frame the debate. That is, for Daniels and for those that adopt a Negative-Comparative Approach, the use of the treatment designation often assumes ethical justification and the proper domain of medicine, while pursuits that fall outside of the designation treatment are ethically unjustifiable or at least ethically problematic. Medical professionals are solely concerned with treatment and enhancements are not treatment, and so that argument goes, so much for the justifiability of enhancements. It is curious that the normative argument is often preloaded into the discussion without an explicit examination of it. While Daniels is explicitly not concerned with the metaphysics of the situation, he does place an undeserved priority on the enhancement-treatment embeddedness in the public conversation, for even if the prevalence of the distinction in the current debate is great that does not mean the changing context of the conversation might not render the distinction unhelpful or problematic.\textsuperscript{11} Indeed, if the grooves of the conversation are discouraging participants in the conversation from examining the normative argument and justification at hand, it seems this is a significant weakness of the approach.

\textit{An Overview of the Second Variety of Negative-Comparative Approach:} Continuing with the idea of medical professionals, the second type of Negative-Comparative approach is framed by comparing the goals and philosophy of medicine with enhancements. Brody and Pellegrino offer another source of boundary drawing with foils by championing the idea that there is an internal morality to medicine that provides a normative foundation for healthcare ethics.\textsuperscript{12} Another source of boundary drawing rests on professional ethics and codes of ethics generated from such professional organizations.\textsuperscript{13}
Strength/Weakness Assessment of the Second Variety of Negative-Comparative Approach: According to Veatch, if there is such a thing as an internal morality in medicine, it must be dependent and ultimately subordinate to an external morality that takes into account a broader scope of issues and concerns. Veatch rightly has been critical of such internal moral logic arguments objecting that the scope of healthcare ethics inquiry needs to include others besides medical doctors and needs to take into account various meanings of healing, both of which are deficient in internal logic arguments. A conceptual concern with this sort of boundary drawing strategy is the elastic nature of what is and is not in the purview of medicine, either as a matter of expanding the framework of what medicine includes to accommodate within such a pursuit (adopting a medicine is ‘what doctors say it is’ approach) or assimilating pursuits under an already established standard of care (medicalization). A crucial part of the conversation about forming the limitations of healthcare has integrated 1) the doctor’s role as serving the sick, 2) the conditional that if no malady can be diagnosed, then there is no proper medical justification for doctors to act, 3) that medical necessity is determined by sickness or malady, and 4) only what is medically necessary is what insurance companies and society need to provide. The important note here, following Veatch, is that drawing a boundary based on the concept of ‘profession’ or ‘doctor’, although at first glance coherent, is flimsy at best because medicine and healthcare are bigger, more complex, and ultimately independent from what a professional or historical role says it is. It also fails to take into account the community that medicine serves. Finally, it is also open to genuine controversy. Although healing and serving the sick are important goals of medicine, does this sort of framework place medicine above serving the needs of communities that healthcare organizations care within and for? The Negative-Comparative Approach assumes that 1) health promotion or battling disease and 2)
using enhancements are exclusive from each other, and indeed they overlap both in terms of practice and in conception. The Negative-Comparative Approach’s line drawing assumption is precisely what is at issue in enhancement conceptual inquiry, because it assumes what is at question and relies on unrealistic static factors.

Another way to approach this line of thought is from an anthropological lens. Callahan has argued that the following are the four goals of medicine: 1) maintenance of health, 2) relief of pain and suffering, 3) care of those with curable and incurable maladies, and 4) avoidance of a premature death and a peaceful death. Assessing these four goals, it seems relatively simple to align them with some of the commonly accepted categories of enhancement that will be explored more fully under the Grouping-Resemblance Approach: 1) maintenance of health: gene therapies aimed at improving performance or life extension plus genetic modification; 2) relief of pain and suffering: drugs aimed at extending life expectancy, improving athletic performance, reducing the need for sleep, improving memory, enhancing cognition, managing traumatic experience, and even to make individuals “more moral”; 3) the care of those with curable and incurable maladies: neural implants aimed at enhancing cognition, increasing memory power, and allowing individuals to control electronic devices by thought alone; 4) the avoidance of a premature death: nanotechnological devices aimed at extending life expectancy and to integrate humans with machine, enhanced prosthetics and artificial organs, plus stem cell therapies aimed at extending life expectancy. This illustrates the point that drawing distinctions using treatment as the bounds of medicine are not as clear cut as some would like. One has to be careful here not to beg the question by using these assumed categories of enhancement to define what is or is not an enhancement; however, the likelihood of one of these specific instances falling under the general category of enhancement, whatever that ends up being, seems relatively high.
It is worth noting that it is not clear that the Negative-Comparative Approach is necessarily unsalvageable, although it is unclear how the approach could be constructed so as to purge the controversial foils it depends on in the debate. It may be helpful to distinguish between two senses of the Approach. The first is the normative sense of the Approach and it represents the version examined above. The second version of the Approach is descriptive and reserves judgment about enhancements for further normative inquiry. That is, it does its job as an indicator and boundary definer first, and then takes its place in larger arguments about the permissibility and impermissibility of enhancements second. Whether this descriptive sense of the Approach is an accurate assessment of what the authors examined in this section have in mind is an open question, and it probably is not. The descriptive element is embraced in what follows and would need to consist in non-evaluative criteria as opposed to the conceptions of health and normality assumed by the authors here. There would also need to be a reassessment of negative foils used and that means it is probably better to explore this descriptive version under a separate category below highlighting that these approaches may overlap in parts.

One way to summarize these critiques of the Negative-Comparative Approach is to think of them as problematic insofar as at their core they attempt to offer an implicit conception of enhancement, and one that requires that the heavy lifting be done by other supportive concepts (therapy, treatment, and within the purview of medicine proper). The issue becomes a matter of forming agreement around these supportive concepts in order to facilitate agreement around what is or is not an enhancement, but burying conceptual confusion at one level does not mean that it is not going to arise at another. This becomes especially problematic if there is a genuine controversy about any of the foils in question, and as has been examined here, controversies around what these basic foil concepts of health, diseases, therapy, and treatment is fairly
common. Assuming that a clear definition is given from the fuzzy boundary of supportive concepts is the point of the implicit problem described here and, as such, is a conclusive reason for setting aside the Negative-Comparative Approach to enhancements.

2.1.2) The Grouping-Resemblance Approach

An Overview of the Grouping-Resemblance Approach: The Grouping-Resemblance Approach attempts to define, loosely, what enhancement is by presenting a list of activities or pursuits that “qualify” as enhancement. To say qualify here is simply to say that authors use this grouping approach in such a way that assumes a definition for enhancement without explicitly stating one. The very appearance of such an example on the list makes it qualify as an enhancement. For example, Naam begins his argument in More than Human with such a strategy and offers a virtual tour of several research labs around the country and how their current research has enhancements implications. Likewise, Agar’s argument in Humanity’s End takes a similar grouping structure as a matter of organizing the argument of the text by exploring themes around particular means of pursuing enhancements; namely, of bioengineering, human machine interface, consciousness uploading, life extension, and immortality. One can also view the table of contents of the President’s Commission report on Beyond Therapy as another example, especially as each chapter is organized around a selection of ends that enhancements aim at (better children, superior performance, happy souls, etc.).

This type of strategy can serve many purposes. While the specific intent of each of these authors is unknown, it is reasonable to speculate the function of the grouping approach for each of their arguments. The President’s Commission goes on to consider conceptual issues surrounding the term enhancement as an introductory note, and it does not put too much
emphasis on the conceptual boundary of enhancement as a means of identifying particular aims. Naam seems to be simply setting the stage for his argument as a way of providing a quick orientation to the landscape of the enhancement debate, and Agar has committed other works to the conceptual issues involved in the enhancement debate, so he seems to be focusing *Humanity’s End* on a thematic examination of the enhancement debate. It is unclear if any of the authors would endorse a grouping approach, yet it is probably unlikely. The point is that the approach does appear in the debate and it does lend a conceptual framework for thinking about enhancements.

Below are a sampling of other such uses formulated from wider cross section of the enhancements literature. First are instances of coupling the idea of sport performance with enhancement including examples of performance enhancement through hypoxic air machines, cheating and competition, the ethos of sports, etc. Arguments about enhancements and the philosophy of sport have ranged across several different avenues of enhancement with the two most prevalent probably being the immediate concern about doping and drug use and a more speculative concern about the implications of genetic manipulation for sport performance. Concerns range from which theoretical foundations best help us analyze the permissibility of performance enhancement in sport (principilism, continental philosophy, transhumanism, liberalism) to more practical concerns like what is the best mode, if there is one, for regulating enhancements.\(^{22}\) Central here are questions about the meaning and purpose of sport and what new technologies for increasing an athlete's performance mean for such competition. For example, McNamee is concerned about the affects of transhumanism inquiry and the drive to modify athletes for enhancements and, more specifically, whether sports medicine has the ethical foundations in place to deal with this type of problem.\(^{23}\)
Common in the debate are issues of whether enhancement violates common conceptions of fairness, and exploring these within an ever expanding horizon of new biomedical applications to sports, advancements in genetic medicine, and pharmaceuticals has led to vast body of nuanced literature. Parker points out that there is a bias toward thinking that success in sport is solely a matter of an individual’s effort when social factors that are external to the individual have an impact on the outcomes of sporting events. Genetic enhancement brings under our control something that was once out of it and brings aspects that were solely a matter of individual effort under the fold of effortless manipulation. For Parker, this suggests that the real value of sports and the common perception of sports as the celebration of an individual’s effort is probably more a matter of the sport’s entertainment value. Lenk argues that use of enhancements are a direct violation of the implicit norms of sports that require the Rawlsian conception “equality of opportunity” for those involved in the competition and that successfully regulating even some use of enhancements would require a cumbersome and unattractive regulatory apparatus. Carr is generally skeptical of fairness arguments aimed at banning performance enhancement in sports, as fairness arguments often fail to deliver any non-circular foundation for justifying these limitations and to this point have failed to take account of several distinctions related to the process of competition (competition itself, preparation for the competition, and equipment used for both) that are key to assessing the normativity of regulating enhancements. Finally, Savulescu argues that we should consider the use of enhancements as a way to pursue a better life, and in this regard, sports enhancements are something that can potentially help to balance the inequality created by natural discrepancies in talent that are a result of what has been referred to as the genetic lottery. In a sense, enhancements in sport can be seen as another way to level the playing field; however Savulescu sees clear reasons for
setting limits on enhancements especially around the idea of protecting athletes from harm. However, some like Morgan, are concerned that protecting the ethos of sport requires a more nuanced regulation than just prevention of direct harm. That is, in order to promote the pursuit of excellence in sports, enhancements should be regulated insofar as they might interfere with creating competitive environments that help to stimulate the development of those involved by matching equals as much as possible in competition. Of particular note are concerns of emerging technologies and new training regimes aimed at performance enhancement in sports. For example, Spriggs examines the role of hypoxic air machines that generate a nitrogen rich environment for athletes in order to boost the production of red blood cells and consequently increase oxygen carrying capacity. The practice is compared to banned substances with a similar aim and raises questions as to the morally relevant boundary of the practice as compared to commonly accepted physical training.

Some argument has been made about the status of cosmetic surgery as an enhancement pursuit. Sometimes framed as a matter of the just allocation of resources, the questions here are often a matter of entitlement and whether such procedures fall in the standard field of healthcare practice or not. Little has argued that assessing these sorts of procedures require understanding the social norms that accompany the motivations for pursuing them, and cosmetic surgery, as far as it acts in opposition to harmful societal power structures, can be ethically justified, perhaps even regardless of how the enhancement and therapy line divides the issue.

The use of mood altering drugs has also been examined under the heading of cosmetic pharmacology, and the discussion also tends to hover over the enhancement-therapy line depending on what is deemed to be proper use of the drug in question, Prozac for example.
Pharmaceuticals in general frame one of the major avenues in the enhancement debate. In particular, the use of pharmaceuticals to improve performance of intellectual pursuits—deemed as enhancement pursuits by some—has received an increasing amount of attention in the literature. A survey conducted indicates that up to 16% of American college students deemed to be healthy have used cognitive enhancing drugs to boost their academic performance sets the stage for Lamkin’s analysis that it is time to look at the cultural dynamics that spur such pursuits. Also, it is worth noting that this is not just an American phenomena. Pharmaceuticals are not the only avenue of pursuit for cognitive enhancement as the possibility of genetic enhancement for improved cognitive performance has entered into the dialogue as well.

The use of implanted stimulators to reduce tremors for patients suffering from neurological diseases and deep brain stimulation (DPS) for mood enhancement form another category of enhancement inquiry. Some DPS patients have reported feeling more relaxed and at ease and others have reported euphoria leading to the question “can a person be too happy?” or “are there limits to feeling a little better than usual?” Schermer argues that there are limits to what doctors should do as a matter of comparing the promotion of meaningful happiness with artificially induced happiness, especially if the latter does not objectively relieve the patient’s underlying disease or ailment. She argues that although the goals of medicine may overlap with and include enhancement pursuits, the underlying disease state should serve as an anchor that restrains doctors from using DPS as enhancement for enhancement's sake.

A related area of inquiry explores identity concerns of such brain-machine interfaces and potentially as a matter of determining the moral status of beings resulting for such brain-machine interface. Retinal implants and cochlear implants are perhaps some of the most common
examples of brain-machine interface in this inquiry; however, as mentioned above, implants that help reduce or relieve tremors for Parkinson’s patients, stimulators for depression, neuromuscular stimulation for spinal cord injury patients, and linking the brains of locked in patients with computers in order to facilitate interaction are just some of the new applications of brain-machine interface technologies. The inquiry has explored the identity implications of brain-machine interface under the label of cyborgs. This has raised concerns about how societies can and should adjust to this. Similarly, Lucas has explored the issue from a developmental perspective for children who are not fully developed cognitively.

The prevalence of exoskeletons have been getting increased attention in the enhancement debate and have appeared under several different categories spanning civilian and military use. Perhaps one of the most spectacular and public displays of the power of exoskeletons to serve people who are paralyzed occurred when a paralyzed teenager kicked a soccer ball at the World Cup. Arguably nothing else has done more to highlight the potential use of exoskeletons in the public eye. The technology began by using a fine wire interface with the aim of moving to a noninvasive helmet that can detect and read brain waves. There has also been research on the military’s use of such technologies as a matter of enhancing soldiers. The potential opportunity for exoskeletons to serve soldiers seems endless, especially in terms of augmenting strength and endurance. Published reports on performance augments have shown that exoskeletons are capable of increasing a soldiers’ strength by sixteen fold meaning that lifting four hundred pounds feels like lifting twenty five pounds. In the business sector, companies like ReWalk Robotics are developing exoskeletons that help patients who have spinal cord injuries walk with the assistance of external structures with a noninvasive interface. There is also a market developing for the application of exoskeletons for rehabilitation that aim at harnessing the
assistance of exoskeletons to bolster someone’s recovery. While the rehabilitation aspect of these exoskeleton projects by some argument might not belong in the enhancement debate proper, the augmentation aspects of military and paralysis application are center stage.

Aside from exoskeletons, there is inquiry over increasing endurance and vigilance through pharmaceuticals for members of the military and the ethical implications over such enhancement pursuits. Among these pursuits are an interest in compensating for sleep deprivation for combat troops and vigilance drugs for combat pilots flying mission that require prolonged time in the air. In particular, Wolfendale has argued that enhancements for combat performance need to be closely regulated if not outlawed as a matter of promoting the moral responsibility of soldiers and preserving the role of natural emotional responses in the self-regulation and well-being of soldiers.

Discussions of such enhancement pursuits have also been extended to other professionals. Surgeons in particular could benefit from such pharmaceuticals as bromocriptine, which has been shown to improve visual-spatial working memory. Modafinil has also been included in this list as potentially beneficial for surgeons, like combat pilots, for its alertness attributes and because it lacks the downside effects of tremors commonly associated with coffee. While there has been some extension to include all medical professionals in general, some attention is being paid to the implication of enhancements for academics and even musicians. The issue of cognitive enhancers for academics is interesting in that the competitive nature of the discipline plus the importance of intellectual output in the form of publications creates an environment of non-athletic competition distinct from enhancement analysis in sports yet highly reliant on cognitive aspects of performance.
On a more speculative note, perhaps, enhancements have been grouped and analyzed around the idea of living longer and what this might mean for human identity, societies, relationships, economic systems, etc. There is a wide range of academic and non-academic writers engaged in longevity studies (from fiction writers, futurists, biomedical scientists, philosophers, and theologians) that, if they have anything in common, share a focus on the role enhancements play in prolonging life. In particular, Temkin offers an interesting and wide ranged reflection on the prospects of living indefinitely and the effects of tedium on our evaluative judgments. Temkin explores enhancements as both a cause of longevity and as a potential remedy for the discontent it may cause. Partridge et al. constructed a qualitative study that categorized Australian interviewees thoughts around longevity and its ethical implications that cited a mix of endorsement (promoting well-being is a direct outcome, preventing harm by not letting people die that could be saved, benefiting others) and concerns (being unethically selfish, living longer but without good health, unnatural, against religious law). Doyle explores the implication of artificial intelligence and information by assessing the fact and fiction of thinking of humanity and life as information and life extension pursuits as simply the transfer of information under the concept of wetware. Deech and Smajdor investigate the implication of reproductive technology and its potential to be harnessed for pursuits across the spectrum, from longevity to designer children. Juengst et al. focus their contribution on the status of biogerontology as a discipline that flirts with the boundary of promoting longevity as 1) a medical field of pursuit that seeks to combat aging as a disease on the one hand but can be cast as 2) a pursuit that seeks to enhance an individual beyond the limitations of natural aging. Hildt too explores the implications of autonomy on the slowing of aging and concludes that autonomy
does not offer a conclusive grounding for potential enhancement uses of longevity promotion techniques.\textsuperscript{57}

The concept of enhancement has also been a part of genetic engineering in general, as leading to enhancement uses of such technologies and the possibility of creating designer babies in particular. Steinbeck’s assessment of the designer baby debate rests on the difficulty in framing any meaningful distinctions between selecting for certain characteristics of a child through genetic means—enhancing children beyond their natural state—and attempting to influence children through education, training, and discipline common to contemporary child rearing.\textsuperscript{58} McGee explores a range of pursuits that he argues falls under the category of enhancement including selection of gender and selecting sperm donors based on exceptional traits like high intelligence or the world-class athletic performance of the donor. He also explores the limits of the concept of enhancement with the common role of parenting and the goal of improving our children.\textsuperscript{59} Similarly, Delaney offers an argument based on forming a morally relevant distinction between genetic planning (selecting for eye color, height, skin complexion, etc.) and genetic engineering that would constitute increasing beyond average (height of 6’9” for example) in terms of the person being effected having a grounds of complaint based on the change they were subjected to by the enhancement.\textsuperscript{60}

Even cloning has been sheltered under the enhancement umbrella. Shapsay discusses the nature of the cloning debate and synthesizes the dispute on the limits of procreative liberty as enhancement under a Kantian framework that requires treating embryos as an end in themselves and not as a means and therefore avoids turning embryos into mere commodities.\textsuperscript{61} Likewise, Baylis traces how enhancement inquiry is relevant for the cloning debate by examining the implications of genetic modifications that aim at creating propensities or probabilities for certain
advantages in offspring. She also argues that one needs to take into account the micro-level implications as well as the macro-level implications of cloning pursuits; that is, there is the concern of how this enhancement intervention will affect the individual in question and the species in general. The span of implications stretches to the investigation of “environmental species enhancement” and helps us determine answers to the question of whether nature and/or nurture effects human behavior and developmental outcomes. Finally, Pence examines the implications of cloning for healthcare and medicine in particular and draws several comparisons with the enhancement debate in particular around the issues of motivations for pursuing genetic enhancements and enhancing non-human animals.

The concept of enhancement and the ethical implications of its pursuit has been compared to the common use of caffeine (coffee) and vaccinations (vaccination against addictions). Although we tend not to consider coffee as a biomedical enhancement, the basis of why we make this distinction and whether or not it is justified is a topic of interest. Kirkwood examines the use of caffeine as a socially acceptable enhancement and contrasts such use with more problematic uses of the drug, especially as a matter of doping for sports competitions. Likewise the study of tobacco as an addictive substance has been compared to the use of cognitive enhancements as a foil for determining methods of regulation for smart drugs, specifically on a taxation disincentive basis. Tobacco also appears in the enhancement debate in terms of promoting resistance to nicotine addiction through vaccinations. Lev’s argument is that there is little normative basis for objecting to vaccinating our children to such a destructive habit as smoking, although there may be reason to be attentive about its widespread use as a public health initiative.
Enhancements have been discussed under the goal of serving the social good as a matter of bettering eyewitness testimony in courts. The use of current and future neurotechnologies, for example deep brain stimulation and transcranial magnetic stimulation, that can help people better recall the memory of facts of a case could have a benefit that spans beyond the individual and effects the larger society as a whole, and in turn promotes the common good. While there are a number of epistemological and ethical issues to explore such as respecting autonomy and privacy issues, there is a clear example of the transfer of an enhancement pursuit beyond a mere selfish promotion of self-betterment.67

Enhancements have been analyzed as a matter of bettering animals and the ethical implications of hybrid animals. The applications here are far reaching and extend from enhancing cows to produce more milk, to increasing horses’ strength and endurance, to enhancing the senses of military and search/rescue dogs. Some have approached the justification of such a pursuit for its own sake, as a matter of promoting animal well-being or as a matter of enhancing animals to simply help those animals function better. There is also the line of argument that stresses that testing enhancements on animals is the way to develop protocols and a body of knowledge for human application, much like is done for non-enhancement types of procedures or medication testing. All of which rests on further argument about whether animals have rights and interests worth protecting and promoting.68

Finally, Sparrow provides a useful overview of the nine categories of pursuit typically part of the enhancement debate: 1) GT: “Gene therapies to improve athletic performance and extend life expectancy;” 2) GS: “Genetic selection of embryos with 'above species-typical' traits using preimplantation genetic diagnosis;” 3) GM: “Genetic modification of human beings;” 4) NI: “Neural implants to enhance cognition, increase memory, and to allow individuals to control
electronic devices by thought alone;” 5) ST: “Stem cell therapies to extend life expectancy beyond species-typical range;” 6) TMS: “Transcranial magnetic stimulation to enhance creativity and insight;” 7) PAO: “Enhanced prosthetics and artificial organs, which improve upon the function of body parts they replace;” 8) NT: “Nano-technological devices to extend life expectancy and to integrate humans and machine;” and 9) D: “Drugs to extend life expectancy, improve athletic performance, reduce the need for sleep, improve memory, enhance cognition, manage traumatic experience, and even to make individuals 'more moral.'”

Strength/Weakness Assessment of the Grouping-Resemblance Approach: With such a large and diverse number of phenomena grouped under the umbrella that is the Grouping-Resemblance Approach to defining enhancements, it is difficult to get a grasp of where the borders of the concept end and what actually counts as an enhancement. The implicit strategy in this approach lends itself to conflating key distinctions that will be needed to analyze the normative import of enhancements for those that must deal with the challenges they give rise to. It is important to note that not everyone examined in this section defends this sort of strategy. Many, in the arguments made here, do not address the conceptual issues at play in the debate and this is not necessarily a fault in the argument they propose. Even using the survey assessment as a conceptual strategy as this chapter has is in some sense guilty of the very conception problem under scrutiny. As a descriptive exercise, perhaps the very strength of the Grouping-Resemblance Approach, the strategy can form a useful exercise in quickly getting a sense of the landscape of the debate.

A number of participants in the dialogue on enhancements have identified certain pursuits as enhancements without actually defining what enhancements actually are, or at least have taken for granted the pursuit in questions status as such. For some this is simply a matter of the
initial parameter of the work such as a response to size restrictions or the use of the broad overview of the enhancement literature as a manner of orientation, like in this piece. The central problem with this approach is that it never really offers a definition of what an enhancement is; rather, it assumes a definition and while it may be a useful exercise for surveying the landscape of the enhancement debate, it does not lend itself to facilitating a clear and concise analysis of enhancement arguments. This is not to say that such exercises are not helpful or even useful, indeed it serves an orientation purpose in this chapter itself. It is to say that precise definitions help to contribute to sharp arguments and in turn clearer debates and discussions. As such, a categorical framework can serve as a useful orientation as long as its limitations as a definition are acknowledged and dealt with as a matter of pushing the concept to maturity. However, as an implicit definition it is unhelpful. It is probably best to just acknowledge the survey nature of such an approach, while turning to formulate an explicit approach that sharpens the boundary of the debate.

2.2) Defending Explicit Approaches to Defining Enhancements: Constructing a Hybrid Theory

Explicit approaches that attempt to offer a clear and concrete conception of what an enhancement is are preferable; however, that does not mean explicit approaches are without challenges. Determining this requires assessing the strength and weakness of the particular approach in question and that means that the details of the approach are what matter. The section examines the following three major explicit conceptual approaches in the enhancement debate: the Social-Pragmatic Approach, the Perspective Approach, and the Welfarist Approach. Highlighting the strengths of each position while downplaying the weaknesses, the section
constructs a hybrid approach to defining enhancements that relies on an Organizational Approach to the enhancement debate.

2.2.1) A Sociological-Pragmatic Approach

An Overview of the Sociological-Pragmatic Approach: According to the Sociological-Pragmatic Approach, enhancements are defined by the cultures, societies, and practices that give rise to and use the concept within a specific context; as such, the concept is relative to the given sociological or problem-based parameters that bound its usage. Parens formulates a meta-theory for examining the notion of enhancement as he attempts to frame a discussion about the concept of enhancement that hinges on pro and con assessments associated with specific uses of the term. He lays out a summary of the ways the term is used in the communities that are concerned with enhancements, in particular as those in the inquiry are concerned about enhancements in relation to the goals of medicine and the goals of society. This sociological framework provides a relativistic approach to defining ‘enhancement.’ It is possible that there is or could be agreement across societies or communities, but the operative framework, at least in terms of how Parens lays out his argument, is that uses of the term ‘enhancement’ seem to fall into two camps (goals of medicine vs. goals of society). While not a Jamesian pragmatic account of the meaning of enhancement as a matter of what it pays if one holds a specific meaning of enhancement, Parens seems to adopt a problem generating account—as a pragmatic approach—to order his inquiry. That is, his inquiry is ordered around what problems those community members face and how those concerns influence the approaches they each take toward defining ‘enhancement.’ It is not clear that Parens is making any sort of normative judgment about
enhancements that could be considered relativistic. Rather, his approach to the debate is framed as a sociological survey that assess the uses of the term in the enhancements debate.

In a similar strategy, Wolpe argues that ‘enhancement’ is dependent on its constitutive concepts of health, disease, normal, and abnormal that are relative, and because ‘enhancement’ is derivative from these relative concepts, ‘enhancement’ too is a relative concept. In this case the meaning of enhancement is determined by the concepts—like health, disease, etc.—on which the concept of ‘enhancement’ depends. Wolpe frames these underlying concepts as relative and argues that building on these relative concepts will result in a relative structure.

Likewise, Canton argues that ‘enhancement’ is about performance and performance is determined by the culturally relative standards that dictate what it means to excel or fail within a context. So, the standards of performance around say how fast one can run a mile determines the context that give meaning to the term enhancement. When one relativizes that criteria to those community members in one’s school or place of employment, one’s town, one’s state or nation, or the world, then each level of contextualization creates a different boundary for understanding the concept of ‘enhancement.’ Exceling at the local level may mean running a nine minute mile, while excelling at the Olympic Games might require a four minute mile. Exceling in performance as measured by the fastest mile ever run to date means doing better than a four minute mile. It is this sort of color on the concept or the nuance necessary for the Sociological-Pragmatic Approach that makes it an explicit approach and more useful for our purpose.

While there is a long standing argument over whether or not concepts like health are socially constructed or not, there is also a substantial body of literature about the relativity of these concepts and as matters of epistemology, metaethics, and philosophy of language.
Strictly from a use point of view, it may be helpful to interpret what these authors are doing to make sense of the term enhancement from a language games understanding of language. The idea of a language game was constructed and defended by Wittgenstein. His basic idea was that language and the meaning of words are determined by the rules and conventions that give structure to conversation. This is much like actions in a game like baseball are made meaningful by understanding the rules that make swinging a bat at a ball a meaningful activity in the game. In this sense, language and meaning are determined by contexts that give rise to situations or problems that language helps its users to describe, talk about with others, and perhaps even cope with and/or solve the problem in question. The meaning of words is therefore largely if not entirely a matter of how they are used in inquiries and are therefore like games. Just like the meaning of actions in a game can change over time, so can the meaning of words. There also may be a number of meanings attached to a word given the specific problems that users of the language face. The classic example here is to refer to Eskimos as having a language game around the meaning of snow that requires several different nuanced conception of snow (wet, light, fluffy, etc.) in order to help facilitate surviving and thriving in such snowy environments (building igloos, crossing plains, hunting in the snow, etc.). In this case the context of the conversation gives a structure to the meanings in the dialogue. Determining the meaning of enhancement through such an approach would mean paying close attention to the situations and problems users of the concept face and accepting the structure of the context informs the meaning of the words in use.

The difference between the Sociological-Pragmatic Approach and the Negative-Comparative Approach lies in the explicit formulation of the former as a necessary strategy for defining ‘enhancement.’ That is, the Sociological-Pragmatic Approach does not rely on
negatively formulated foils like the Negative-Comparative Approach. There is a certain logic in moving beyond conceptual issues in order to formulate and spend more time assessing arguments for a given normative position. Although potentially difficult yet related concepts like health, normal, disease, and treatment can and do appear in both approaches, the question of the priority and importance of contextualizing their conception in terms of the sociological and pragmatic dynamics that are at the heart of the inquiry is what separates these two approaches. The Sociological-Pragmatic Approach is generally more concerned with the details of the concrete and descriptive boundaries of the discussion and less concerned about what is beyond the boundary of the inquiry like the Negative-Comparative Approach tends to be.

The Sociological-Pragmatic Approach and the Grouping-Resemblance Approach both define a context that is user dependent in terms of those involved in the inquiry who are determining the moral permissibility or impermissibility of something. The Grouping-Resemblance Approach context is a descriptive assessment of uses of the term in the literature in general, yet it remains an implicit approach insofar as it fails to shape the conception of enhancement in terms of a sociological or pragmatic boundary. The distinction between these two approaches can easily be blurred in that they may overlap, but the detail of the explicit contextualization within the community in question or the problem being dealt with narrows the approach. It may be possible to define the Grouping-Resemblance Approach in terms of sociological or pragmatic criteria, but then one has added a level of detail that pushes the approach, by this assumed framework, into an explicit one.

**Strength Assessment:** The Sociological-Pragmatic Approach attempts to formulate an explicit approach. Although the boundaries of the approach may at times be difficult to assess, there is a tendency to contextualize the conception of enhancement in the social dynamic that
generated the need for the enhancement intervention. The approach also usefully lends itself to historical or genealogical analysis. The concept of enhancement can be analyzed from the problems that it is designed to respond to and the culture that produced the need for such a response. For example, consider military enhancements as conceived against the backdrop of the conditions pilots face when conducting a 24 hour mission, which requires heighten attention over a longer period than usual.

**Weakness Assessment:** The Social-Pragmatic Approach has several weaknesses framed here as a matter of concerns along these four lines: equivocations concerns, criticism concerns, evaluative assumption concerns, and generalization concerns.

**Equivocation Concerns:** Although social and pragmatic dynamics are important influences on the analysis of what enhancement means, the threat of equivocating during arguments and discussions about enhancement is a cost for accepting a Social-Pragmatic Approach to defining enhancement. That is, it may turn out that there are many language games that frame the way we think about enhancements, not just one language game. If one accepts the language game approach, the potential of several different and potentially competing frameworks for thinking about an enhancement could be unavoidable. The question is how to best hedge that cost.

**Criticism Concerns:** There is also the potential issue that the relativity of such concepts will cost us the ability to level moral critiques of opposing positions. If conflicting moral judgements are moral claims limited by ‘for me,’ ‘for Americans,’ or ‘for Chinese,’ etc., introductory phrases, then presumably if one does not belong to those communities there is not a foundation for rendering criticism. The limits of language’s reach in this regard, if accepted,
could greatly hinder our ability to genuinely dialogue about moral differences based on the concept of enhancement.

**Evaluative Assumption Concerns:** One of the difficulties of embracing the Negative-Comparative approach is the potential of importing a value framework into the conceptual analysis that would lead us to assumed judgments about the issues at hand. There may not be anything to do about this beyond being mindful of the possibility of getting caught into the grooves of the conversation. For the Social-Pragmatic Approach, it does raise the concern that particular pursuits will get selected as enhancements, because there is a common norm that these pursuits are unethical and therefore impermissible. In that case, the normative argument has already been loaded into the analysis; that is, the enhancements are impermissible. Likewise, there is a concern that a pursuit will be selected as the enhancements because it is something that one wants to see as permissible in society. The question being: does our concept of enhancement help us to make moral judgments and arguments about the ethical permissibility of enhancements or do we construct our conception to suit our favored responses to the pursuit in question.

**Generalization Concerns:** There is the chance that a socially constructed framework will not be fine grained enough to account for particular instances of enhancements identified or morally relevant to a subset of the population that does not have a significant voice in the larger group. In this case, the concern would be that our conception of enhancement is biased by the larger dynamics of the society that define the concept.

**Toward Constructing a Hybrid Theory:** Embracing this approach, if it contains controversy, means importing that controversy into your inquiry. If you can avoid it, then you should. The idea of forming the conceptual boundary of ‘enhancement’ by using subordinate
terms that too have fuzzy boundaries or that have embedded conceptual controversies is not helpful. The point of formulating a hybrid approach is to attempt to blend the strengths with another approach that helps to offset the weaknesses of the given approach. The idea being to graft this approach onto other explicit approaches. Before moving on, it is worth noting that although the approach has objections, a hybrid definition of enhancement that allows a social approach to be balanced by Perception and Welfarist Approaches would be helpful and is at least worth exploring.

2.2.2) A Perception Approach

An Overview of the Perception Approach: Menuz, et al. have defined a perception approach to enhancements that highlights the importance of first person perspectives on the use and ultimately the identification of enhancements as such by what is determined as attractive according to the person to be enhanced. For Menuz et al. the operative concept for this Perception Approach is the subject’s “personal optimal state” pursued along the avenues of and indeed the resulting convergence of nanotechnology, biotechnology, information technology, and cognitive science (NBIC). The foundational contribution of this approach is to highlight the need for a reference point that allows those involved in the inquiry to assess the nature of the pursuit. In this case, the Perception Approach as conceived by Menuz et al. needs to be contextualized in terms of three foundational categories that track 1) the psychobiological facts of the individual in question, 2) the sociological and historical setting of the individual, and 3) “norms, rules, values, environment, passive coercion, unconscious goals, statistics and personal considerations.” For simplicities’ sake, these will be referred to as the PSN criteria. The personal optimal state then needs to be sandwiched between disability and disease states on the one hand and overcapacity states on the other. This means that what is defined as an
enhancement is viewed primarily as a matter of what the subject identifies based on the PSN criteria and can be located within the boundary of the disease disability conceptual category or the overcapacity category. For example, if someone has knee replacement surgery and assesses according to their PSN criteria that such surgery is a good option for them and the resulting outcome of the surgery upholds this judgment, then it fails as an enhancement because it was not the result of the convergence of NBIC avenues. However, if someone was offered an implanted modification that allowed her to increase her hearing ability, it would only be an enhancement if it satisfied the individuals PSN criteria and so was crucial to her personal optimal state. If the implanted modification was not crucial to her personal optimal state, it would not be an enhancement.

A thread in definitional formulations of enhancement has been to specify improvement according to the state of the enhanceé pre-enhancement or according to the aimed at state of the enhanceé post-enhancement. Integrating this with the Perception Approach further complicates the assessment or at least adds a layer onto the PSN criteria. This requires not only mapping the procedure in question according to its potential to deliver under capacity or over capacity outcomes. It would mean working in a time line assessment. That is, an implanted modification for hearing would be an enhancement before the actual implantation of the device, yet might not be an enhancement post implantation of the device.

**Strength Assessment of the Perception Approach:** The main strength of the Perception Approach is its integration of first person perspectives. It is capable of delivering a fine-grained approach to defining enhancement that encourages members of the inquiry to assess the context of the issue, and in particular, the PSN criteria of the individual for whom the enhancement pertains. This is something that was categorically absent from the Negative-Comparative
Approach and the Grouping-Resemblance Approach. While the Social-Pragmatic Approach championed a more communal or problem based framework that required reliance on the context of the situation, the Social-Pragmatic Approach did not seem able to account for the fine-grained detail needed to import an individual’s assessment regarding enhancement especially if one’s understanding of what an enhancement is diverged from the larger population or was outside what was deemed a worthwhile problem by the community. The flexibility of the Perception Approach also allows one to account for instances of disenhancement, which has fallen under the Welfarist Approach and will be examined next.

Weakness Assessment of the Perception Approach: The Perception Approach is open to the same concerns that the Social-Pragmatic Approach is (equivocation, criticism, and evaluative assumption concerns), yet it is able to hedge generalization concerns.

Equivocation Concerns: The Perception Approach is open to equivocation concerns. Such a personalized and subjective approach to defining enhancement might increase the equivocation problem by multiplying the functional definitions of enhancement exponentially. For each perspective and associated PSN criteria, one would need to generate a matching conception of enhancement. Also, the flexibility of the conceptual framework means that what is an enhancement for one person may not be for another given the relevant PSN criteria in play. Also, that same procedure might not be an enhancement for that same individual for no other reason than they changed their mind about the procedure, much the same way one could change their mind about what to have for dinner. This is to exaggerate the point, but such a flexible conception is allowable under the Perception Approach. This is one further interpretation of what Chadwick has framed as a complexity issue for the Perception Approach. That is, that such a framework unnecessarily multiplies the proposed conceptions of enhancement. This is
something that Menuz et al. acknowledge, but accept by citing that such a complex matter deserves a complex concept.

**Criticism Concerns:** A Buchanan-inspired critique would be to highlight the tremendous amount of irrational and unjustifiable aims this approach would include in enhancement arguments, as well as the absurdity of arguing that certain outrageous demands are permissible or required to be provided. While such a critique is compelling, there is certainly room for limitations being set from other approaches and perceptions that could inform what is and is not justifiable as a matter of pursuing enhancements. However, that ‘what is an enhancement’ is defined by such an inclusive strategy (i.e. in an extreme form that whatever the patient says is an enhancement is an enhancement) seems to render assessment of the accuracy of judgement about enhancements outside the realm of criticism. The subjective criteria potentially places it beyond praise or blame. After all what sort of argument could one pose to convince someone that a particular procedure does not constitute an enhancement for him because he is wrong about his PSN criteria. Perhaps there are some coherentist objections to be made, as in there is some inconsistency in the position being held, but it is just not sufficient. If the Perception Approach is going to be able to hedge this subjectivist weakness, it is going to need to be grafted onto some other concept.

**Evaluative Assumption Concerns:** The perception approach also seems open to evaluative assumption concerns. By empowering the individual as the sole identifier of what an enhancement is and using PSN criteria as the identifier of whether or not this procedure counts as an enhancement, their particular moral framework has already been integrated into the discussion. This seems to put the why question and the resulting normative justification on the wrong side of the inquiry. Before we have identified the procedure as an enhancement, it already
has been normatively justified. While that justification may be open to criticism or analysis, structuring some descriptive manner of assessing the boundaries of the debate would be useful for avoiding this concern.

**Generalization Concerns:** The Perception Approach does help us to deal with the generalization concern because it is fine-grained enough to account for aspects that, for example, the Social-Pragmatic Approach might run over. The Perception Approach accomplishes this by anchoring the discussion to the individual and protecting the space for that individual’s personal perception of the procedure to take priority.

**Toward Constructing a Hybrid Theory:** Following the above analysis, enhancements are pursuits along avenues (pharma, genetics, etc.) that aim at achieving values of social importance, and of individual perspective. While the Perception Approach helps us to deal with generalization concerns, there needs to be another grafting to attempt to deal with the remaining equivocation, criticism, and evaluative assumption concerns.

2.2.3) A Welfarist Approach

**An Overview of the Welfarist Approach:** Several authors have embraced the Welfarist Approach. Savulescu has championed a Welfarist Approach to understanding enhancements that focuses human enhancements on “leading a good life.” In its initial formulation, Savulescu seems to be agnostic on what conceptions of well-being are applicable. While the Perception Approach is committed by its very formulation to a subjectivist normative framework by one interpretation, the Welfarist Approach does appear to be committed to an objectivist sense of normativity among others and seems open to integrating subjectivist criteria as well. That is, the criteria that determines whether or not something contributes to well-being can be mind-independent and so constituted by something outside of the person’s mental state (objective facts
of the case, for example). Indeed, it is the abstractness of the approach that allows it to at least theoretically make room for competing moral frameworks and the assessment of empirical questions that would need to be answered in order to make an accurate assessment of whether or not something contributes to the actual promotion of well-being. Rather than providing an assumed list of values, the Welfarist Approach is a more generalized approach that requires doing some normative analysis in the process of identifying whether or not the pursuit under question is indeed an enhancement. If the stated outcome of the approach is to think of enhancements as those activities that are increasing things of value to people and the value of people, then it will be necessary to make sense of what those things of value are and whether or not pursuits in question actually deliver on that promise. Thinking of this in relation to the enhancement-treatment distinction—of which Savulescu is explicit that the Welfarist Approach does not need—treatment will and should be ultimately subsumed under the category of enhancement. The details being that those pursuits which are directed at issues of disease and disability are matters of treatment that are important because addressing them promotes well-being as a matter of alleviating disadvantaged states. Likewise, pursuits that promote or increase advantaged states that typically would fall into the category of enhancements also fall into the category of enhancement here.\textsuperscript{83} Basically, for Savulescu’s Welfarist Approach, it seems everything that is broadly framed as a biomedical pursuit belongs in the enhancement category.

Likewise, de Melo-Martin has defined enhancements as pursuits along bio-psychological avenues that increase the likelihood of living a good life in an effort to argue that mere risk-benefit analysis is not sufficient for assessing the moral permissibility or impermissibility of enhancements. While she is not defending any specific enhancement and is actually more interested in the assessment models used to assess the acceptability of enhancement pursuits, her
assumed conceptual framework places her in the Welfarist camp.\textsuperscript{84} Harris also defends the Welfarist approach. He makes the argument that no one in fact actually thinks enhancements are a bad idea, at least if they are being honest. Pursuits that are designed to help people live better lives are accepted in other areas besides the biomedical arena such as the home with childrearing and at school with education programs, etc.\textsuperscript{85} The main conceptual point being the aim of living a good life is inherently normative and a basic assumption in dedicating time and resources in the acquisition of these goods.

\textit{Strength Assessment of the Welfarist Approach:} One strength of such an approach is that subsequent arguments based on this approach can easily adopt a beneficence justification for application.\textsuperscript{86} It provides an intuitive framework for making sense of enhancements pursuits, especially if you accept the analogical reasoning that biomedical enhancements pursuits are basically the same as non-biomedical pursuits like education and child rearing, which are commonly held to be a matter of promoting well-being at least by design. They all aim at bettering and helping ourselves and others to live a good life, but perhaps this is question begging to someone on the outside and who does not share these intuitions.

Also, the Welfarist Approach has been embraced and championed by thinkers that want a more expansive definition of enhancement. That is, the flexibility of the concept to account for and assimilate diverse pursuits (that are argued to be enhancement) is a strength of the Welfarist Approach. While examining diminishment as a form of enhancement, Earp et al. defend a version of the Welfarist Approach because it is capable of widening the scope of enhancement inquiry beyond simple augmentative presumptions, and this introduces into the fold interesting cases like memory destruction for victims of rape and war or pharmacological attachment blun ters for those involved in abusive relationships.\textsuperscript{87} The point being that a group of pursuits
that are accepted as enhancements or at least studied under the category of enhancements are not pursuits that aim strictly to augment users. If the aim is improvement or helping people to live a good life, then it might be necessary to account for subtractive actions under the enhancement umbrella and not just additive actions. Finally, while the Perception Approach has been previously criticized for not having the foundation to be critical enough of some enhancement pursuits, the Welfarist Approach is able to handle this by at least potentially promoting objective criteria as its conception of living a good life, and this will be examined in more detail below.

*Weakness Assessment of the Welfarist Approach:* The Welfarist Approach is open to the equivocation and evaluative assumption concerns, yet it is able to hedge generalization concerns from a perception approach graft and is able to hedge criticism concerns in their own right.

*Equivocation Concerns:* One objection to the Welfarist Approach is that it requires a substantive and clear definition of well-being in order to be useful. There have been many attempts to formulate the issue or render its practical directions; however, according to Savulescu, this might be one of the theory’s strengths as it could invite engagement and dialogue about the meaning of well-being in the specific context. With this in mind, there still needs to be substantial conceptual work done on the definition of good, welfare, or well-being. It seems likely that there will be some agreement at this abstract level, but as the conception of the good gets more concrete and particular there is likely to be a lot less agreement. The question becomes where proponents of the Welfarist Approach turn to resolve such issues. This remains an open question and not necessarily an insurmountable problem; however, the strength or weakness of the proposed framework will need to be assessed.

*Criticism Concerns:* This category of concern is where the Welfarist Approach shines. While the Social-Pragmatic Approach and the Perception Approach both failed to provide a
robust foundation for successfully criticizing ‘bad’ enhancement pursuits as such, the Welfarist Approach presents the possibility of objective criteria in the assessment of the process of determining whether something qualifies as an enhancement. If the normative basis for justification is already assumed in the concept, then the identification of the pursuit as an enhancement has already done the heavy lifting of the normative assessment. This means the criticisms based on whether or not some pursuit in question counts as an enhancement are determined by whether or not this pursuit will contribute to promoting the good life or the well-being of its user. If those criteria are at least capable of being objective, then one has a suitable foundation for assessment and formulating criticism.

**Evaluative Assumption Concerns:** That the Welfarist Approach is necessarily normative raises some concern. In particular, one worry about the Welfarist Approach is that it might encourage people to medicalize issues that are not traditionally within the purview of medical doctors. It also makes it difficult for people to differentiate between what counts as an enhancement and what does not, simply because it seems everything counts as an enhancement as long as it promotes well-being.

**Generalization Concerns:** While the Welfarist Approach does seem open to generalization concerns, this is where the hybrid formulation comes in to play. For it we blend the Welfarist Approach with the Perception Approach, we can use the Perception Approach to hedge the concern because the Perception Approach helps us to prioritize the individual decision maker in the conception of enhancement.

**Toward Constructing a Hybrid Theory:** So far our hybrid formulation can handle two of the four concerns framed above. Of the equivocation, criticism, evaluative assumption, and generalization concerns, only the equivocation and evaluative assumption concerns remain.
While the Social-Pragmatic Approach was open to all four concerns, grafting on the Perception Approach helped us deal with the generalization concern and grafting on the Welfarist Approach helped us deal with the criticism concern. That leaves the equivocation concern and the evaluative assumption concern to be dealt with here. These two concerns map onto problems identified in the enhancement debate under the category of the vagueness problem (equivocation concern) and the differentiation problem (evaluative assumption concern), which will be examined now.

Following the above analysis, enhancements are pursuits along avenues (pharma, genetics, etc.) that aim at achieving values of social importance, of individual perspective, and of well-being. Missing from the assessment of the conceptual landscape of the enhancement debate is an organizational lens. Taken together—as a hybrid of approaches—each approach generates a comprehensive scheme for analyzing enhancements, and one that can help healthcare organizations cope with them. Making sense of this requires examining 1) the context of the healthcare organization and 2) those most likely to be charged with helping the healthcare organization make sense out of enhancements—healthcare ethicists. The strength of an Organizational Approach is something that will take the rest of the argument of this work to establish fully. However, in respect to the concerns framed so far for other approaches to defining enhancements, if an organizational approach can successfully deal with them, it gives a good reason for adopting the approach over other candidates.

It may be helpful to revisit the Negative-Comparative Approach to use as a foil for understanding how to adapt the Welfarist Approach and in turn the hybrid formulation that encompasses the Social-Pragmatic and Perception Approach as well. Arguably, the two front runners for how to define enhancements are the Negative-Comparative Approach and the
Welfarist Approach. Each approach has strengths and weaknesses. As a quick review, the Negative-Comparative Approach defines enhancements by contrasting them with the concepts of health, normal, and treatment (i.e. enhancements are biomedical pursuits designed to augment beyond the normal). The Negative-Comparative Approach has been generally criticized for vagueness problems; namely, if it is unclear what the boundary of normal is, then definitions that depended on boundary drawing concepts that are vague will tend to create border-line cases (instances where it is unclear in which conceptual category this thing belongs). In opposition to the Negative-Comparative Approach, the Welfarist Approach defines enhancements as biomedical pursuits that aim to increase someone’s ability to live a good life. Arguments about whose conception of the good life matters aside, the Welfarist Approach has been criticized for leading to a differentiation problem; namely, the broad designation of ‘leading a good life’ is too inclusive to capture what we commonly mean by biomedical enhancements (i.e. all common medical treatment seems to be an enhancement and so does education, wearing eyeglasses, vaccinations, etc.). This leaves us with the following dilemma:

1. If we embrace the Negative-Comparative Approach, we face the vagueness problem.
2. If we embrace the Welfarist Approach, we face the differentiation problem.
3. Either we embrace the Negative-Comparative Approach or the Welfarist Approach.
4. Either we face the vagueness problem or the differentiation problem.

The argumentative strategy here is to attack premise 3 of the above dilemma and to offer a third conceptual approach—an Organizational Approach. Agar astutely points out that accepting “conceptual pluralism” may be needed when attempting to map such a diverse and complex subject as the enhancement debate and this Organizational Approach is offered with these pluralistic sympathies. However, some agreement on basic terms would certainly help facilitate clearer dialogue on the subject, and the conceptions with fewer challenges and more benefits should be preferred. For the sake of the argument and for the sake of beginning to frame
what an Organizational Approach can contribute to the debate, let’s assume an organizational interpretation of enhancements is preliminarily defined as:

E1: Enhancements are pursuits along biomedical avenues that are beyond the current scope of organizational practice. Here ‘avenues’ means (pharmaceuticals, genetic engineering, surgery, etc.) used to pursue a particular aim (increased strength, increased empathetic responses, greater ability to remain focused without sleep). The central claim here is that an Organizational Approach is useful for dealing with the dilemma facing current popular approaches. An uncontroversial and initial impetus for posing such a conception is simply that enhancements are produced and used by organizations. By shifting the locus of orientation of the concept away from the individual (as in betterment of individual characteristics), and away from the scope of abstract categories (as in outside the scope of treatment, health, normal, medical profession), and towards the organization, one gains some ground in dealing with the above dilemma. This does not mean these issue do not need to be addressed. For example, such boundary drawing could sound something like the following: this service is currently something that we do not offer at this time because it is (too expensive, not efficacious, not safe, not what we traditionally do, not available in this area, etc.). The Organizational Approach allows us to make room for a de facto versus de jure distinction in the enhancement debate. That is, it is important to point out two interpretation of ‘scope’ in this organizational definition by means of a de facto versus a de jure lens. The scope of organizational practice from a de facto lens simply is the actual matter of fact state of affairs account of the services and practices of a given organization (standards of care, treatment procedures and processes, research aims, etc.). The de jure interpretation of ‘scope’ indicates the organizational practice that is officially sanctioned. Officially sanctioned could mean a lot of things in different organizations, and it is assumed it is reasonable to offer an abstract categorical
framework for sanctioning. What matters for this conceptual work is teasing out the *de facto* meaning of scope from the *de jure* meaning of organizational practice. The *de jure* meaning of scope is relevant to the enhancement debate, and the trick is to separate it out from a positivistic notion of scope. This leaves the following as the proposed definition of enhancement to be defended against the horns of the dilemma:

E2: Enhancements are pursuits along biomedical avenues that are beyond the current scope of organizational practice (*de facto*) that in order to be justifiable (*de jure*) must aim at achieving values of well-being, social importance, individual perspective, and that are in line with the organizational mission.

Adopting E2 is justified because doing so helps us to avoid the dilemma facing the Negative-Comparative and Welfarist Approaches to defining enhancement. An Organizational Approach to enhancements has several difficulties that will be addressed below. Ultimately, the section argues that they are all either unsubstantial or that an Organizational Approach can accommodate them.

*The Vagueness Problem and Equivocation Concerns:* In dealing with the vagueness problem, the organizational conception of enhancement has certain benefits over the Negative-Comparative Approach. Namely, it is more accessible, quantifiable, measureable, and descriptive. It is worth noting that the Welfare Approach might suffer from vagueness issues too. The vagueness troubles associated with health, disease, and normal can be explored and dealt with at the backend of deliberations. That is, while such concepts are important and need to be addressed, by narrowing the scope of the vagueness qualifier it is possible to formulate a more manageable conception of enhancement based on descriptive organizational service delivery or production. They do not need to be handled up front and as a matter of definition. The *de facto* boundary of the organization in question can help us cope with the challenge of vagueness. Vagueness seems to appear in the normative conceptions implicit in the Negative-Comparative
definition of enhancement. By framing them in an organizational manner and attaching a normative framework for future deliberation one can identify phenomena that qualify as enhancements. Instead of leading off with “what does it mean to be a healthy human being, for example,” characteristics of the scope of the initial inquiry can be drawn by “how are we serving this population from this institution” or “what public needs is the organization designed to serve and how can we pursue these.” These are not easy questions, but they are empirical ones for which there exists an objective answer. The organization may be complex and it may be difficult to gather the information, but it is not insurmountable. The organizational set is more manageable and the de facto vs. de jure distinction can help us sort the arguments and issues of the debate. It is the organizational lens that helps define a common lens for dealing with equivocation concerns and this is bolstered by using a de facto framework for assessing what is an enhancement.

*The Differentiation Problem and Evaluate Assumption Concerns:* What is the difference between this designation and treatment creep or simply improvements in medical care? Doesn’t adopting this approach to enhancements mean one loses the ability to identify the distinctive “beyond treatment” pursuits that some argue are controversial by their nature? What is the difference between this designation and better medicine? In effect, adopting the E2 definition means that healthcare organizations will never actually practice enhancements, because as soon as something becomes justified, then it becomes no longer beyond the scope of current practice. In dealing with the differentiation problem, the organizational concept of enhancement has certain benefits over the Welfarist Approach. The first level is descriptive and drawn by the organization in question. The second is normative and a matter of determining the justification of the pursuit in question in terms of satisfying standards drawn from 1) values of well-being, of
social importance, and of individual perspective, and 2) the charge of the organization’s mission. The organizational component of the proposed definition creates a filter for drawing distinctions. On one hand, we arrive at the distinction *de facto* or as a positivistic account of what it means for a pursuit or action to be treatment. Does this description pick out medicine practices? But wouldn’t it catch pursuits that are simply the improvement on accepted medical practices currently in use, for example more accurate diagnostic tools or faster computers? These things are simply a part of medical care evolving and not what we mean by enhancements. Sure, but it gives us a way to think about diagnostic creep in an ethical framework, while recognizing the organization’s identity and role in the larger healthcare environment. The boundary of the organization frames the distinctiveness needed to facilitate identification and deliberation.

Taking into account some challenges facing the two major conceptions framed above, it is useful to adopt an Organizational Approach. Again the *de facto* component serves the problem by allowing for distinctions to be made based on an organizational boundary, while the *de jure* component of the definition leaves room for organizations to distinguish between pursuits that synergize with the mission and the values that the organization champions. Here, the *de jure* aspect of the definition can do some of the heavy lifting for us.

With E2, we can differentiate medical treatment from enhancement. When a hospital identifies new technologies that will improve its current practice of medical care and it adopts these new technologies, isn’t this hospital adopting a new technology that by the E2 definition is to be considered an enhancement? But once an enhancement always an enhancement, right? Not necessarily by this definition. Things identified as enhancements at one point and time may be adopted into mainstream practice and lose the enhancement “shine.” Is this something to be concerned about? Consider at one point in time eyeglasses were probably considered novel
much like transcranial magnetic stimulation is now. What happened? Eyeglass use became accepted, common, and integrated into the practice of the group. Can we differentiate wearing eyeglasses from enhancement with E2? It depends on the *de facto* assessment of eyeglass prescription and use within a given organization’s served population and whether such pursuit is officially sanctioned and justified (*de jure*). The concept ‘enhancement’ is an “on the cutting edge” type of concept whose boundaries shift with the shifting landscape of healthcare delivery, biomedical research, cultural approval and disapproval, etc. It is a wave concept and not a particle concept. Today’s enhancements are potentially tomorrow’s standards of care and the organizational level is a useful place from which to make sense of this. A part of this shifting boundary may well be pressure to change put on the *de jure* aspect of an organization’s conception of enhancement. In some sense, there will be tension between *de-jure-as-officially-sanctioned* and *de-jure-as-should-be-officially-sanctioned*. The question being: are we justifying the new pursuit instrumentally and should we change the very system that generated the instrumental justification?

The solution to this concern could be to accept that we should purge or substantially revise the boundary of treatment in that instead of tucking enhancement under the treatment umbrella, we fold treatment into the enhancement umbrella. That is embrace enhancement and allow what was conceptually recognized as treatment to dissolve into enhancement. Understandably, this may be too radical a step for such an entrenched concept as ‘treatment,’ but if we can free ourselves from the conceptual burdens while retaining what is useful about the concept, it may turn out one has a good reason to conceptually let go of the dominant role of the term ‘treatment.’
Directly in response to the evaluative assumption concerns, the benefit of adopting an Organizational Approach is to protect against the assumptions associated with the question begging concerns above. That is, by recognizing the *de facto* from the *de jure* component in the concrete practice of healthcare organizations and recapitulating that dynamic within the actual conception of enhancements, one can recognize the need for a justification framework in the concept while locating the actual assessment of whether something is an enhancement and should be endorsed as exterior to the conception itself. The *de jure* component of the conception functions as a place holder. The proposed organizational conception does have a justificatory component; it just leaves the specifics of the justification as an open question. By doing so, it helps make justification explicit in the dialogue. What here will be the topic of the next chapter.

*Concluding Thoughts on an Organizational Approach*: Returning to the strength assessment of the Negative-Comparative and Welfarist Approaches, the Organizational Approach to enhancement is well placed because of its hybrid construction to integrate the strengths of providing a framework for regulation and prioritizing the promotion of well-being. These both being essential characteristics of the *de jure* component of the definition. The *de jure* component also promotes adherence to the context (from the Social-Pragmatic Approach), recognizes the value of the individual in constructing a conception of enhancement (from the Perception Approach), and offers a certain flexibility that allows users to renegotiate the boundary of the concept. All of which build an explicit conception of enhancement.

It is worthwhile to make the distinction between organizational practice as a type and organizational practice as a token. This is something that will have to be integrated into the argument more fully at a later stage; however, it seems probable that the proposed conception is more than able to accommodate this distinction. It simply means constructing a definition of
enhancements as 1) type: beyond current organizational practice writ large across a system, region, nation, or global; or 2) token: beyond a specific individual organization or an instance of a type. While it is a useful distinction, it represents a further nuance in constructing another approach and is in line with the conceptual pluralism stance adopted earlier. However, it may be the case that a certain approach better serves a specific organization.

In conclusion, after examining the five major approaches in the enhancement debate (the Negative-Comparative Approach, the Grouping-Resemblance Approach, the Social-Pragmatic Approach, the Perspective Approach, and the Welfarist Approach), there is good reason to adopt an Organizational Approach to enhancements. Comparing implicit approaches (the Negative-Comparative Approach and the Grouping-Resemblance Approach) with explicit approaches (the Social-Pragmatic Approach, the Perspective Approach, and the Welfarist Approach) gives one reason to prefer explicit approaches in general. The Organizational Approach is a hybrid formulation of explicit approaches and as such it is an explicit approach designed to avoid the major concerns facing explicit approaches in general (equivocation concerns, criticism concerns, evaluative assumption concerns, and generalization concerns). In summary, the definition of enhancement proposed and defended in this chapter is that enhancements are pursuits along biomedical avenues that are beyond the current scope of organizational practice (de facto) that in order to be justifiable (de jure) must aim at achieving values of well-being, social importance, individual perspective, and that are in line with the organizational mission. This offers a coherent conceptual foundation for approaching the enhancement debate and also sets the stage for the rest of the argument. Conceptually, the next two chapters deal with how to make sense of the de jure distinction in the enhancement debate and in the Organizational Approach by examining the major justification for and against enhancement in the debate (Chapter 3) and by
formulating and defending a justification of enhancements for healthcare organizations in particular (Chapter 4). The remaining chapters (Chapter 5 and 6) help to make sense and integrate aspects of the de facto component of the Organizational Approach into the debate.


Stephanie Bell et al., "Australian University Students' Attitudes towards the Acceptability and Regulation of Pharmaceuticals to Improve Academic Performance," *Neuroethics* 6, 1 (2013): 197-205.


Brian D. Earp, Anders Sandberg, Guy Kahane, and Julian Savulescu, “When is diminishment a form of enhancement? Rethinking the enhancement debate in biomedical ethics,”


Chapter 3) Assessing the Enhancement Debate

The first step in examining the *de jure* aspect of an organizational approach to enhancements is to assess the larger normative debate about enhancements.\(^1\) As such, the central question this chapter begins to look at “is whether or not enhancements are morally permissible?” Unfortunately, answering this question—even tentatively—is beyond the scope of the chapter. The aim here is much more modest and that is to clear the underbrush of the discussion about enhancements of some inconclusive justifications that have been offered for or against the moral permissibility of enhancements. The idea is to contribute to forming an answer to this central question by examining the most prominent arguments in the debate to date and by exposing the central objections that leave those argument wanting. An exhaustive analysis of the enhancement debate is not offered and would indeed take an entire book length work itself, if not more. By narrowing the scope of arguments examined to those most influential in shaping the direction of debate is good enough. Specifically, each section examines the primary argument offered either in support or against enhancements, the major objections that suggest the argument is at least inconclusive, and finally, attempts to articulate what can be learned from the argument and its objections that can be carried forward to inform the inquiry into an organizational approach to enhancements. By claiming that each argument is inconclusive or at least does not conclusively answer whether or not enhancements are morally permissible, this is not to suggest that there is nothing that these arguments can teach us about helpful ways to think about the *de jure* aspect of an organizational approach to enhancements. Therefore, each section of the chapter briefly highlights what could be useful about the arguments examined, takeaways so to speak, for the larger organizational approach of the work and to be integrated more fully into the latter half of the book.
The chapter is divided into two sections. The first examines and analyzes the major arguments against enhancements under the headings of the argument from bad character, the argument from human nature, the argument from inequality and protection of autonomy from manipulation, and the argument from human dignity. The second examines and analyzes the major arguments for enhancements under the headings of the argument from procreative beneficence and the argument from transhumanism.

3.1) Critiquing the Major Arguments Against Enhancement

The four most prominent arguments for enhancements in the enhancement debate are the argument from bad character, the argument from human nature, the argument from inequality and protection of autonomy from manipulation, and the argument from human dignity. Each argument in itself is generally presented as providing a conclusive reason for the obligation not to pursue enhancements. By examining each argument and the objections they have received, this section shows that each argument fails to prove its respective conclusion.

3.1.1) The Argument from Bad Character

**The Argument from Bad Character:** Sandel argues that there is something inherent in enhancement technologies (and the pursuit of its aims) that is expressive of moral corruptness. For Sandel, enhancements and the “drive to mastery” that are implicit in them are signs of a “bad character” because such a drive portrays a lack of openness to the “unbidden” and a lack of appreciation for the “giftedness of life.” Sandel’s argument hinges on his understanding of these concepts and their implication for enhancement pursuits, so it is worth taking a closer look at each in turn. The overarching theme of Sandel’s argument is the drive to mastery, which will be referred to as the Drive to Mastery Thesis here. The Drive to Mastery Thesis holds that
enhancement pursuits are expressions of an immoral, or at least morally problematic, impulse to control and configure the natural state of human beings. It is important to note that Sandel seems to be approaching the enhancement debate as a virtue theorist, and it is useful to think of appreciating the giftedness of life as the virtue correlative to the vice represented by the Drive to Mastery Thesis. Appreciating the giftedness of life is a concept that is open to secular and religious interpretations, and Sandel offers both in his argument. As biomedical technology becomes more powerful and its capacity to cause greater effects on the natural state of human beings also increases, aspects of our lives that were once off limits to such technology, and more importantly to our control and manipulation, are now things that we can easily (or soon will be able to easily) change. For Sandel, the potential integration of contemporary biomedical technology results in several biomedical enhancement pursuits that are unsettling. If you do not think you are smart enough, there is a pill for that. If you do not think you are pretty enough, there is a surgery for that. If you do not think you are tall enough, there is a hormone injection for that. Being able to manipulate aspects of ourselves that were once thought to be unmalleable has worn away a collective stance of openness toward our present and our future. No longer is it about working the vineyard to produce stronger and healthier vines, and therefore better wine, rather it is about changing our taste for the wine that is around us. Not that this needs to be a one or the other choice, but more importantly, changes in biomedical technology coupled with the drive to change aspects of ourselves that were unchangeable is the central dynamic of the Drive to Mastery Thesis. There are simply things that are out of control and more pointedly there are things about ourselves that should be out of our control. Living with this is essential to what it means to be human, and learning this is what it means to cultivate an openness to the unbidden; that is, the willingness to accept the things about ourselves and about our state in the world that
are uninvited and that might have something to teach us or may benefit us in the long run. The consequences of this are threefold, for Sandel. First, the drive to mastery smothers humility. Enhancement essentially make it more difficult to remain humble and to accept our position in life. The augmentative capability of enhancements aggrandizes our sense of importance. Second, enhancements exponentially increase the responsibility people have for their actions and their life. If ought implies can, the more one can do, the more one is morally responsible for, and increasing what we can do is basically what enhancements aim to augment. From a sociological lens, the more successful enhancements are at changing aspects of ourselves, the more society will expect that its members use enhancements to become, for example, smarter, prettier, and/or taller. Third, it is this hyperagency—this ability to change almost everything about ourselves—that erodes a sense of solidarity in a community by making community members less reliant on each other and more reliant on biomedical enhancements. The cohesion that is built through facing a common challenge or shouldering a burden together will be lost by or at least threatened by hyperagency. While these consequences are the result of the integration of enhancements into our lives and into our societies, as virtue theory analysis, Sandel is also commenting on the habit of mind that results from embracing the drive to mastery. That is, not only do the pursuits in question effect our lives, but the habit of pursuing these very pursuits also has and will continue to have an effect on our lives. The Drive to Mastery Thesis is not only a critique on what we are making ourselves into by embracing enhancements, but it is also a critique on what embracing enhancements—with its background drive to mastery assumption—is doing to what we are willing to make ourselves into. A similar argument against enhancements has been offered under the label of playing God. It will be instructive to briefly examine the similarity it has with the argument from bad character.
The Playing God Strand of the Bad Character Argument: There are at least two versions of the argument against enhancements from playing God. The first is the theistic version that stipulates that enhancements infringe upon the domain that is proper solely to God. That is, if there is something sacred about life, the course one’s life takes, and/or the given endowments one has, then interference in this scared domain constitutes a violation of God’s authority. As such, enhancement pursuers are “playing God” by manipulating and interfering in God’s domain. For example, attempts to selectively abort a fetus because of genetic abnormalities or attempts at designing children through genetic manipulation arguably illustrate enhancement pursuits that are subject to such a playing God objection because such pursuits infringe on God’s sovereign domain. The second version of the playing God argument is nontheistic. It, in some sense, imports the idea of a God-like being that is omnipotent and omnipresent without concern for whether such a being actually exists. As such, enhancement pursuits are morally problematic because such pursuits—characterized, for example, as designing another’s life or choosing who lives and who dies—are actions beyond any human being’s limited capacities and/or authority. Colloquially, proponents of such an objection seem to harbor the question: “who are you or we to make such decisions and pursue such activities?” In short, the nontheistic version of the playing God argument can be construed as an objection to enhancements from hubris.3

Criticisms of the Argument from Bad Character: The argument from bad character has received extensive attention in the literature on enhancements. Several objections to the argument suggest it is worth abandoning. By examining 1) the conceptual and rhetorical objections, 2) the faulty account of agency objection, 3) the overlooks good consequences objection, 4) the overestimates the value, relevance, and coherence of the unbidden objection,
and 5) the overestimates the value of humility objection, this section defends the claim that the argument from bad character is not compelling.

*The Conceptual and Rhetorical Objections:* There are two general critiques of the argument from bad character that are not insurmountable, but worthy of mentioning insofar as they point out areas where the argument from bad character could be tightened up a bit. The first is a conceptual critique of the argument that amounts to concerns about the vagueness of several of the operative concepts of the argument. The most dubious of them are the notions of the ‘unbidden’ and ‘giftedness.’ The unbidden has received some close analysis as a matter of how suitable it is to think of the unbidden as openness to the future. Likewise, the notion of the giftedness is being understood as the given and the philosophy of gift giving, which are worthy of some attention. The second is a rhetorical critique that holds Sandel’s argument is not really an argument, at least in the shape that it is given in its classic presentation, but is rather just a rhetorical mask under which one needs to do some heavy lifting in order to construct an argument.

*The Faulty Account of Agency Objection:* Two substantial objections presented by Harris and Buchanan hold that the argument from bad character assumes a flawed understanding of agency. First, Harris objects to Sandel’s claim that enhancement pursuits are liable to greatly increase the moral responsibility of its users or those that are subjected to enhancements in the case of the genetic engineering of children, which Sandel thinks of as the problem of “explosive responsibility.” For Sandel, this would generate unrealistic and undesirable claims of being held accountable for not using enhancements on ourselves at work or on our children. Harris’ counter focuses on an absurd assumption in Sandel’s argument that, according to Harris, holds moral responsibility is something that is escapable. Harris counters by highlighting the existential
quality of moral responsibility and that it is inescapable in that we always have to choose as moral agents. The operative concept here is having a choice and not, in contrast, how many options there are to choose from in that situation. In fact, Harris continues by adopting explosive responsibility as simply a matter of what it means to be a being living with the existential realities of choice. Therefore, Harris concludes that the concern about explosive responsibility adds nothing new to the debate and that it assumes a flawed understanding of human agency with a focus on Sandel's lack of appreciation for the existential nature of human agency and choice.  

Second, Buchanan objects to Sandel’s argument because it assumes a flawed understanding of moral psychology. The basis of this claim for Buchanan is that Sandel’s conclusion is simply too bold. It is very difficult to defend the claim that every instance of an enhancements pursuit necessarily expresses a bad character. Buchanan provides several plausible examples that serve as counters to Sandel’s claim. Buchanan’s overall critique of the argument from bad character is complex and thorough, and in it he points out several things that are problematic for Sandel’s argument specific to this flawed understanding of a moral psychology critique: 1) that Sandel is committed, at least by one interpretation, to a slippery slope argument leaving no defensible position between plebian treatment and dominating mastery attached to enhancement, and 2) that there may be some forms of enhancement that aim at betterment or are just short of perfection that avoid Sandel’s charge (having surgery for 10/20 vision perhaps to enhance bird watching and one’s appreciation of nature or moral enhancements). If not every instance of enhancement pursuits stem from a drive to mastery and there seems to be several examples that stem from if not laudable motives maybe even neutral ones, then according to Buchanan, Sandel’s argument fails to be convincing as it is too bold and broadly formulated to account for the actual and potential nuances of moral motivations when it comes to enhancements.
The Overlooks Good Consequences Objection: Several critics of Sandel’s argument from bad character have voiced objections that the argument ignores everything but the potential bad consequences of enhancement. By focusing exclusively on potential bad outcomes, the argument from bad character, so the criticism goes, presents an overly pessimistic and therefore one-sided assessment of enhancements. Following up on the comments above, Buchanan is skeptical that Sandel does not consider the potential good consequences that could arise from any enhancement. Likewise, so is Kamm, Roduit, and Savulescu & Persson. Kamm’s critique under this theme is that Sandel seems to cling to the treatment-enhancement distinction as a way to separate what he wants to keep as permissible, while the possibility that some enhancements might be used to develop and pursue treatments blurs the line between the two (for example, increasing a scientist's stamina in order to pursue a cure for a disease). Roduit’s assessment is that it is possible that enhancements could be used to bolster the same virtues of humility, gratitude, responsibility, and solidarity, which Sandel argues are doomed by enhancements. Savulescu & Persson, in an argument more closely examined in the next chapter, have championed several types of enhancement, but most pointedly, moral enhancements. The concise thesis of the argument is that enhancements can be used to bolster appropriate moral responses, which is especially useful, for example, in a time of exponentially increasing technological power and a more connected global community. While Kamm and Roduit are specifically targeting Sandel, Savulescu & Persson are addressing some of the potential good consequences of pursing and using enhancements. All of which suggest that Sandel is overlooking the potential for good consequences in his argument from bad character.

The Overestimates the Value, Relevance, and Coherence of the Unbidden Objection: The inherent value of unbidden is arguably one of the most criticized aspects of Sandel’s argument
from bad character. For Sandel, the unbidden are parts of our lives that are natural, are properly beyond our control, and that constitute the gifted aspects of life best experienced with an openness to what the future will bring. This could be almost anything, it seems, in the way that Sandel conceives it and in his argument he tends to prefer highlighting aspects of parenting in order to illustrate his points. The unbidden can be approached from both a theological and secular point of view, and Sandel seems to primarily rely on the latter in his argument although his primary cite for the concept of the unbidden is a theologian. In this regard, Harris’s objection to Sandel is that the argument from bad character misleads when it puts the natural on a pedestal in terms of accepting the unbidden or in terms of thinking of excellence as properly the product of naturalness. Simply put, there are such things that are natural about the world and should not be accepted. Harris is concerned that Sandel is conceptually manipulating the conversation by sanctifying the unbidden to promote treatment, yet to downplay enhancements.11 Likewise, Kamm echoes this sentiment and argues that it is important to recognize that the natural and the good represent two distinct conceptual categories.12 In response to Sandel, Buchanan raises the interesting question of whether it is even possible for us to escape the unbidden in our lives speculating that the defense of such a bold claim as ‘enhancement can free us from the unbidden’ must be the product of a very strong and clearly incorrect understand of genetic-pharmacological-surgical determinism.13 Kahane’s critique of Sandel’s argument is that Sandel has an incoherent conception of the openness to the unbidden as accepting randomness and that Sandel’s opposition to enhancement technologies represents an instance of a problematic drive to mastery in itself. That is, Sandel has such a narrow and skewed understanding of mastery that it represents its own hidden drive to mastery; particularly, one that tries to eliminate the permissibility of enhancements.14 Finally, McConnell points out in his analysis of Sandel’s
argument that the difference between taking a position of mastery as embracing enhancements versus taking a position of accepting the giftedness of life by opposing enhancements may not be as clear a divide as Sandel thinks it is; that is, with no coherent line to draw between treatment and enhancements, the argument from Bad Character simply rules out too much.\(^{15}\)

*The Overestimates the Value of Humility Objection:* Harris has been critical of Sandel’s reliance on the concept of humility and its importance or value for the argument from bad character. Although Sandel does not go into much detail about the concept of humility and neither does Harris, the very use of ‘humility’ as an assumed virtue, an assumed vice, or at least a neutral quality is question-begging without more substantial analysis. Harris seems to argue that it is beside the point to discuss the moral permissibility of enhancements, but his point is also that the virtue of humility is not itself a given.\(^{16}\) While the exchange between Harris and Sandel is limited, the burden is clearly on Sandel as humility and its inherent value, according to Harris, needs to be defended. It is worth noting that one does not need to take Harris’s stronger position in order to form an objection to Sandel’s reliance on humility. Simply being neutral about the value of humility or even conceiving of humility as a relative character trait in relation to the context in question will suffice.

*Concluding Thoughts on the Argument from Bad Character:* The classic formulation of the argument from bad character has taken quite a beating. The argument has been reformulated by Hauskeller into what is best thought of as not a conclusive objection against enhancements, but rather a concern about the influence of enhancements pursuits on both users, providers, and researchers. Hauskeller has also picked up on this strain of the argument and reformulated it to make an assessment of the problematic effect that can arise from such hyperagency or the capacity to change every aspect of one’s life and the implications this has for solidarity. Danaher
is rightly skeptical of the force of such a reformulation, in particular as a matter of how the enhancement project can be reconstituted to promote solidarity and bolster communal responsibility. ¹⁷ There is a line of thought that has its origin in Sandel’s writing and has been picked up by Hauskeller that forms a reasonable concern about enhancements' compatibility with promoting competition. One way to think of this sort of objection is as a siren call concern in which enhancements insofar as they can bolster competitiveness can bring out the less than desirable aspects of our characters. It is important to note that this is not a causal argument, but rather a concern about the allure of enhancements that may distract us from values that are important to individuals as well as communities. Sparrow defends this siren call concern and he warns of the potential “rat race” that enhancements could cause as the drive for mastery manifests itself in problematic ways of outdoing each other in pursuit of goods and rewards. Likewise, Brody raises the concern of what he speculates is an over interest in enhancement pursuits among academics and students. ¹⁸ While he forms an empirical claim that would need more evidence to substantiate, if the evidence is there, it illustrates another potential affect of enhancements pursuits and a reason to be wary of their intoxicating quality, although not necessarily a conclusive reason to abandon the enhancement project as Sandel hopes.

3.1.2) The Argument from Human Nature

The Argument from Human Nature: The concept of human nature has a vast literature and unfortunately the controversies that saturate this inquiry have been necessarily imported into the enhancement debate. Arguments from human nature tend to take a number of formulations, but they all seem to have the following skeletal structure: human nature is something that should not be manipulated, destroyed, or altered because of its sanctity, inherent value, or moral inviolability, and this is exactly what enhancements pursuits aim to do or actually do. ¹⁹ Probably
the most dominant text in the debate comes from the President’s Commission in their report *Beyond Therapy*.\textsuperscript{20} It relies on the idea of naturalness to justify the claims that enhancements are immoral or at least morally suspect. Several of the thinkers below are represented on the commission and offer more developed articulations of their arguments elsewhere, so it is worthwhile to focus on those explanations instead. One of the challenges in examining this argument is that ‘human nature’ cuts across a number of different arguments from several authors and, for the most part, each argument has a different role for ‘human nature’ to play.

Consequentialist versions of this argument look to the cost of altering human nature and hold, for example, that altering human nature will hinder humans in some substantial way. Although Habermas might dismiss this consequentialist label, his basic argument is that pursuing enhancements—and here he has in mind genetic enhancements—will hinder human beings’ ability to accurately reflect on their moral commitments to each other and ultimately to generate moral judgments.\textsuperscript{21} Habermas has been flagged as the major defender of the human nature argument and perhaps unfairly in some regard.\textsuperscript{22} While Habermas is directly interested in the concept of human nature and its implications for the enhancement debate, he is best understood as framing an objection against enhancements based on the concern about manipulation, inequality, and infringing on autonomy. This is not to say that human nature does not play a critical role in his argument, but just to say that it is simply part of a premise and therefore a step along the way to a larger and more complex conclusion than just the human nature argument outlined above. Therefore, Habermas will be the subject of the next section.

Another consequentialist approach to the human nature argument is offered by Fukayama as he explores the implications of dismissing conceptions of human nature for political life and human rights, although he might disagree with the consequential labeling of the argument.\textsuperscript{23}
Fukayama’s argumentative strategy is to underwrite the value of human nature with the value of human rights. According to Fukayama, if one wants an adequate account of human rights, then one necessarily needs to underwrite that account with a normative understanding of human nature. Without a grounding in human nature, there is no way to connect normative analysis—of the kind that Fukayama is defending—with the ends of morality. A robust understanding of human nature provides the necessary grounding and is essential to formulating an approach to human rights that can withstand the challenges of emerging technologies. This normative account of human nature can frame boundaries for what is or is not acceptable when it comes to pursuing enhancements. Human nature is something that is malleable, but not spineless and as it is instrumentally of value, and if there is something that challenges this instrumental value, it needs to be a concern. This is what enhancements that could change human nature do.

Non-consequentialist versions tend to focus on enhancements as inherently threatening and sometimes rely on assessments of human dignity in order to explain the issue. As human dignity is the focus of another section of this chapter, we will set aside a detailed look at the topic here. Defenders of the argument from human nature sometimes bolster their arguments with a notion similar to Sandel’s notion of accepting the giftedness of life as was examined in the previous section. It is also worth noting that a strand of Fukayama’s argument seems to be committed to a non-consequentialists defense of human dignity that is so closely linked with his analysis of human nature, it might be difficult to fully extricate the two from each other. Finally, one of the most prevalent arguments from human nature is Kass’s formulation of the argument based on the wisdom of repugnance. Kass’s claim is that wide spread repugnance at enhancement technologies is sufficient to warrant their moral impermissibility, without the need for further argument or critical analysis. To be precise, Kass is concerned with cloning in his
initial formulation of the argument, but there is no innate limit to the application of repugnance. The foil for this repugnance seems to be some natural or accepted foundation that is being challenged by the pursuit in question as the generator of the repugnance.

**Criticisms of the Argument from Human Nature:** The argument from human nature has also received extensive commentary in the literature. Those mentioned below are among the most forceful and warrant moving beyond this argument. By examining 1) the conceptual objections, 2) the mixed bag objection, 3) the evolution objection, 4) the flawed account of moral reasoning objection, and 5) the which repugnance and whose disgust objection, this section defends the claim that the argument from human nature is not compelling in its current forms.

**Conceptual Objections:** Buchanan, although he is critical of the argument from human nature, does an exceptionally thorough and systematic job of fleshing out the different conceptions of human nature that are relevant to the enhancement debate. Ultimately, he argues that it is probably more accurate to think of ‘human natures’ as opposed to thinking of a single unified conception of what ‘human nature’ means. Buchanan offers five interpretations of what ‘human nature’ means. The assessment of the five conceptions can serve as a conceptual orientation to the argument while examining Buchanan’s astute articulation of the objections to each conception, and in what follows, each conception will be integrated into its respective objection. Before turning to that, it is important to note some of the conceptual objections to arguments that rely on human nature.

Lewens argues that one is probably better off forgetting about human nature because of the ambiguities in the concept and the imported antiquated expectations that the concept of human nature brings into the enhancement debate. Interestingly, his assessment of the debate concludes with issuing a warning about the pitfalls of being seduced by a teleological conception
of human nature. While the conceptual ambiguities in the debate are troubling, Lewens seems overly reliant on simply highlighting a bias toward teleological strands of the argument.\textsuperscript{27} Eberl, for example, formulates a teleological conception of human nature that relies on a Thomistic understanding of flourishing and the goods that help produce that flourishing according to the natural categories of life, sentience, socialability, and rationality. For Eberl, there is nothing in the conception of human nature from a teleological perspective that necessarily rules out developing enhancements that allow humans to flourish and a teleological sense of flourishing simply implies answering a question like: does this enhancement contribute to someone’s flourishing as a matter of promoting socialability, for example? There need to be arguments and evidence presented in order to justify such a claim, but here seems to be a case where a teleological sense of human nature could actually defend some enhancements.\textsuperscript{28} The point being, it is difficult to conceive of what is necessarily antiquated about promoting socialability. 

Daniels argues that ‘human nature’ is something that is not so easily changed. His evidence for this assessment is based on the analytic claims that human nature is a population, dispositional, and select concept. By a population concept, Daniels has in mind changes of individuals and the probability that the applied change will manifest the desired outcome is probably a long way from effecting the entire population. All this means, to effect change in human nature, one would need to implement an enhancement on not only a global scale but one that would effect all current and future generations and would need to be necessarily effective, which would require an unfounded commitment to genetic, pharmacological, and surgical determinism. Both of which, Daniels argues, are highly unlikely. By a dispositional concept, Daniels argues that human nature is in some sense understood as a tendency to manifest a particular characteristic or behavior. So, understanding one’s tendency toward something
requires understanding the context surrounding its manifestation. Therefore, changing human nature with this dispositional quality in mind requires a massive change across the entire species plus a change in the degree of the tendency. Most likely changes to an individual would simply change the individual position among other individuals with respect to some benefit received from the modification, say for example weakening a tendency toward aggression. By a selective concept, Daniels argues that the human population has changed or at least has undergone changes that have effected the averages of a population, such as an increase in average height, and these are not considered enhancements per se. Seeing as this is not typically considered an enhancement, it implies there is some base assumption about the instances of enhancement that requires a selective stance for identification. Whatever that selective stance is is another question, but massive changes in an augmentation of height, for example, do not seem to be worthy of identification as a massive change in human nature. For Daniels, this is further evidence that human nature is not easily changed.29

Directly commenting on Daniels argument, and indirectly on Lewens’ argument, Murphy points out that the metaphysical account of human nature can and does help people make sense of enhancement technologies and their opposition to them. Although this does not seem to necessarily rule out whether a metaphysical conception of human nature would be compatible with changing human nature. Much depends on what your metaphysical conception of human nature is (innately selfish and evolution informed, divinely designed, etc.).30

The Mixed Bag Objection: Kamm and Harris raise versions of the mixed bad objection against the argument from human nature claiming that human nature is something that contains both good and bad parts, so any claim that rests on the inherent goodness and inviolability of human nature needs to account for how to handle the undesirable parts of human nature.31
Although Kamm and Harris are explicitly commenting on Sandel’s use of human nature in his argument from bad character, the objection holds here also. The list of potential bad parts is easy to draw up and disease appropriately enough is high on the list. Even Kass rails against Sandel for making this sort of assumption.\textsuperscript{32}

Also, Buchanan offers a concern based on this sort of mixed bag objection based on a linked whole interpretation of human nature. The ‘argument from linked whole’ strand of the human nature argument holds that human nature and the goods that are implicit in our human nature are intimately linked to what are the less attractive parts of human nature, and to manipulate and change what is less attractive is to threaten what is good about our human nature because of this intimate link. Buchanan’s counter argument is to challenge the conception of interconnectedness on empirical grounds by means of demanding empirical proof for such a claim. Implicit in his analysis is the formulation of interconnectedness as a matter of a normative hold-over from the mischaracterization of ‘human nature’ and the ‘natural’ as normative terms when they are properly descriptive terms. One interpretation of the implication of Buchanan’s critique is that ‘interconnectedness’ is really just ‘human nature’ with its unfounded normative charge in disguise. Buchanan argues that it is perfectly reasonable to alter human nature because human nature contains both good and bad qualities and judgement needs to be rendered at the concrete level of said qualities, not at the abstract level of human nature. The possibility of rendering such judgements about human nature demonstrates that one’s ability to formulate moral judgment is significantly independent from any meaningful conception of human nature.\textsuperscript{33}

The Evolution Objection: There is also an aspect of Buchanan’s critique that focuses on an understanding of evolution as something that arguably is akin to enhancement all along and
attempts to highlight the not-so-novel nature of enhancement pursuits. The argument for enhancements from their not-so-novel character is more of a defensive argument that attempts to shift the burden of the argument back on those that are against enhancements. The argument unfolds as follows: arguments against enhancements seem to imply that enhancement pursuits are so novel, strange, new, and/or cutting edge that one should be precautionous, at least, and prohibit them, in the strongest sense of the argument, because of enhancements’ novel nature. However, proponents of this argument hold that enhancements are not novel; therefore, enhancements ought not to be opposed. This is a step away from endorsing enhancements, but the argument’s effort to switch the burden of proof towards opponents of the original argument makes it a pro-enhancement argument. Support for the claim that enhancements are not so novel sometimes comes in the form of arguments by analogy that attempt to compare enhancement pursuits with evolution, natural selection, or other “enhancement-like” practices that are not traditionally thought to be enhancements, like vaccinations, drinking coffee, or consuming traditional remedies like yohimbe and mulondo roots in some African countries like Gabon and Uganda or kola nuts for mental enhancers in parts of Nigeria. The persuasiveness of this argument tends to rest squarely on the force of the comparison, and if the comparison is compelling, then there may not be sufficient reason to be precautionous or oppose enhancements. Such precaution, for example, would be comparable to being precautionous about evolution or vaccinations, the former being logically or conceptually difficult to process and the latter being perhaps improbable at best. It is worth noting that no matter how common something is, it does not make is morally obligatory or even morally permissible, which is just to say there is a long way to go to bridge such arguments into compelling reasons for promoting enhancements.
The Flawed Account of Moral Reasoning Objection: The argument from human nature has been criticized generally for conflating descriptive assessments of human nature with normative judgements, at best without providing substantial defense to such a move. Buchanan raises this objection while examining the potential formulations of human nature at play in the debate. Three will be examined here insofar as they point to problematic instances of the use of ‘human nature’ in the enhancement debate. First, the argument from the preconditions strand of the human nature argument holds that enhancement threatens human nature in that enhancement may damage one’s ability to make moral judgments. Buchanan’s counter argument is that such concern is irrelevant for determining whether one ought to pursue a specific enhancement and that more broadly such concerns about practical reasoning are different from concerns about human nature. Second, the argument from the constraint strand of the human nature argument holds that human nature conditions morality in that human nature formulates restrictions around what is possible—that is what we can do—and as such forms restraints around what we ought to do. As such, human nature has moral relevance insofar as it has some constraint-impact on what is possible and by extension on what is normative. However, Buchanan’s counter argument is that determining whether something can be done is different than determining whether something should be done. That is, categorically ‘ought’ and ‘can’ are two separate types of inquiries; so answering the ‘can’ question offers no insights about the answer to the ‘ought’ question. Third, the argument from the goods strand of the human nature argument holds that human nature is an essential part of understanding what is good for us. That is, in its conceptual interpretation, what ‘good’ means is irremovably determined by our constitutive human nature, so that determining what is good for someone is a matter of determining what type of being they are. In this sense, human nature is central to normativity. Buchanan’s counter argument is that
assuming this restriction is true, it offers no help with determining whether or not one ought to manipulate and change one’s human nature, as manipulation would only entail a potentially new set of ought judgments restricted by one’s new human nature. Therefore, this does nothing to help us make a moral determination about enhancement. The basic thrust of normative essentialism is that if one rationally reflects on human nature and what is natural, one can discover moral requirements. That is, as Buchanan explains in assessing the President’s Bioethics Council’s argument on reproduction, discovering what is natural about reproduction leads one to discover what it is that one ought to do in his or her sexual and reproductive life. Buchanan’s counter argument is that the Council loads the term ‘human’ with a normative charge when it has none; that is, when ‘human’ is meant to be merely a descriptive term.

Groll raises an interesting counter to these sorts of objections by highlight the idea of ‘human form’ as a reliable and credible source for normative inquiry about enhancement technology and as an interpretation of human nature. By human form, Groll examines the vital processes that are necessary to and contribute to the context of living for the being in question. Even if these are then examples, categories of basic needs like food, shelter, water, and higher needs like education, achievement, and companionship could also offer a thin structure to make sense out of forms of life. Thickening it up might be controversial as there will ultimately be disputes about the specific and concrete application of such an abstract idea as human form, but the abstract framework, Groll argues, is enough to contribute to the debate in a meaningful way. Ultimately, Groll concedes that human nature as a matter of human form does not and more strongly cannot conclusively decide the enhancement debate, but that is a far cry from human nature being totally irrelevant and beside the point when assessing enhancements.35
The Which Came First, Repugnance or Moral Judgement Objection: In some circles the argument repugnance serves as the last stand for people who want to object to enhancements, but might not know exactly why. May offers a much needed and potentially devastating question to those that cite repugnance as the ground for their dismissal of enhancements. It some sense it boils down to claiming that defenders of the repugnance argument commit a post hoc or cum hoc fallacy. That is, just because the feeling of repugnance either comes after or simultaneously to the moral judgement that enhancements are bad does not necessarily mean there is a causal relation between the two in that the badness of enhancements is picked up by someone and experienced as repugnance. Without the empirical evidence to support the direction of causality, one is left with a Euthyphro type problem. Is something repugnant because it is bad, or is something bad because it is repugnant? Saying which one is the case simply does not make it so, and not having an account of this is a significant weakness in a moral justification. Also, if you defend the first (something is repugnant because it is bad), it seems hard to account for instances when people have reported repugnance over issues that are now considered morally neutral, or even acceptable, or instances when people have made moral errors or even of making sense of moral disagreement (for example, African Americans playing professional baseball in America was seen as repugnant by some Americans). If you defend the latter (something is bad because it is repugnant), it means being committed to a strong account of emotional grounding of morality (perhaps committing one to emotivism or subjectivism), which makes it hard to account for moral disagreement (after all morality is simply expressions of emotions, what can someone be wrong about) and moral criticisms (what is wrong with not allowing people with different skin color to play baseball, it is simply a matter of how one feels about it).
Concluding Thoughts on the Argument from Human Nature: Exhaustively managing this extensive and diverse argument landscape is beyond the scope of this chapter, but enough ground has been covered to establish that the argument from human nature is not compelling in its current forms, especially when offered as a conclusive objection to enhancements. The concept of ‘human nature’ does have its challenges and arguments that depend on ‘human nature’ to do the heavy normative lifting suffer from these challenges. Buchanan, Kamm, and Harris win the day in this regard. However, Eberl and Groll have crafted new conceptions of the human nature argument that offer a more abstract and thinner conception of human nature that might have some promise. The concept of human nature has received a lot of attention in the enhancements debate, and it might be worth wondering if it has received too much. When books begin to be published around the usefulness of the concept (arguably a very narrow conceptual question), one can appreciate the attention to detail and wonder about whether we are all being overly analytic, however interesting and well done the scholarship is.\(^{37}\) It is worth considering that there seems to be such robust and well-argued points on both sides of the “is there such a thing as human nature and does it morally matter?” question that moving on without a conclusive answer is not unreasonable. For as Pinker and Prinz remind us when we read their works on human nature together, human nature is probably more important and less important than we think it is when it comes to making sense of morality and in particular to making moral assessments of enhancement technologies.\(^{38}\) There are some significant conceptual issues that make the current argument from human nature at best too nascent to be compelling. While Habermas was set aside in this section and saved for the next, letting him have the last word on human nature is instructive. As a matter of facilitating dialogue, Habermas is often concerned about focusing on reasons that are acceptable to the entire community involved in the dialogue.
While ‘human nature’ or at least an agreed upon conception of human nature currently seems to miss this mark, letting it have a space at the table seems warranted, but ‘human nature’ arguments examined here should not be allowed to finish the conversation.

3.1.3) The Argument from Inequality and the Protection of Autonomy from Manipulation

The Argument from Inequality and the Protection of Autonomy from Manipulation:

Habermas argues enhancements are in conflict with autonomy as a matter of violating an offspring’s capability for self-direction and the right to freedom from genetic manipulation. The argument from inequality and the protection of autonomy from manipulation has received robust examination and arguably is inextricably tied to the argument above from human nature. For the sake of our analysis, there has been an effort to tease them apart, at least superficially. Habermas argues that enhancements (here he focuses on genetic enhancements) threaten the species and in particular what Habermas thinks of as the ethical self-understanding of the species that is a necessary part of one’s ability to direct one’s own life. As such, enhancement threatens our moral identity insofar as enhancement threatens what were once unchangeable aspects of who we are. This unchangeable aspect of our human nature provides a foundation for how we ethically understand ourselves, each other’s actions, and the world around us. This also effects how we interact and communicate with each other, which is a crucial aspect of morality. Genetic enhancement of offspring who are unable to consent means that those offspring are in some regard unable to author their lives. These changes to human nature will bleed over into our sense of equality, which is integral to liberal society and moral interactions between people.

What the “unchangability” of ourselves before being subjected to genetic enhancement creates is a level playing field that forms the basis of our conception of ourselves as the authors of our lives and the sense of moral responsibility we have for our life plans and actions. Our ability to
assess, plan, scrutinize, and take ownership of our lives is at stake. Arguably the two strongest contributions to the enhancement debate are Habermas’ interest in integrating species ethics into the inquiry and his thoughts about unilateral aspects of genetic interventions that threaten Habermas’ vision of the importance of open communication and reasoned-based dialogue about ethical matters.

Criticism of the Argument from Inequality and the Protection of Autonomy from Manipulation: Habermas’ argument is complex and has generated many interpretations and qualifications as a means of bolstering his argument. Several objections suggest that in its current form the argument is flawed. Here, by examining 1) the autonym objection, 2) the genetic enhancement is not-so-novel objection, 3) the genetic determinism objection, 4) the genetic enhancement is not necessarily detrimental to autonomy objection, and 5) the our moral self-understanding and equality objections, this section defends the claim that the argument from inequality and the protection of autonomy from manipulation is not compelling.

The Autonomy Objection: The autonomy objection comes in two different forms. The first form comes from Sandel and Kass. Although both Sandel and Kass are sympathetic regarding Habermas’ conclusion, they are skeptical about the premises Habermas’ uses. The second form comes from Harris and is concerned with Habermas’ understanding of autonomy, and unlike the first form, is hostile to Habermas’ conclusion. First, Sandel has voiced a similar concern against enhancements, although he is skeptical of Habermas overreliance on autonomy to make the point. Sandel argues that Habermas overemphasizes autonomy and the individual at the expense of the collective or communal. Sandel’s own argument against enhancement focuses on perfection and mastery and is more concerned with drives to mastery that are arguably fueled by promoting autonomy. Likewise, Kass echoes this charge and extends it to include
procedures for perpetuating the community. That is, genetic technologies directly interfere with natural reproduction such that, for Kass, it is not just the community that deserves protection but also the processes of how that community grows and continues its existence into the future. Pursuits that promote deviating from this natural course are to be avoided, and genetic enhancement pursuits promote this deviation. Again the focus on the communal (over the promotion of individual autonomy) is what drives the analysis, and arguably is what Kass finds perplexing about Habermas’ analysis. Second, Harris takes a much more pointed approach to Habermas’ argument (boarding dangerously close to *ad hominem* attacks at times). The main thrust of Harris’s argument against Habermas’ reliance on autonomy is that Habermas’ sense of autonomy and in turn consent is way too strong, and if it were true, it would cost way too much. Harris argues that Habermas sets the bar too high by expecting that everyone or even anyone has open dialogue and participates in a reason-based discussion about how they were raised or are being raised while they are being raised. Child rearing and human development simply do not work that way. Having a say in what factors influence your development, as a child for example, is simply out of the question, for the most part. So, if Habermas is concerned about unilateral influences on the unborn, he needs to be concerned about unilateral influence on the born. For Harris, Habermas’ standard for autonomy and in turn consent is way too strong. Harris seems to argue (or perhaps assumes) that the default should be to eliminate threats to health and well-being that are within a parent’s and societies’ locus of control. Not having perfect information about the future or outcomes is not an excuse for not acting to better our children, and neither is not having a crystal ball. Speculating on children that as adults might reflect on modifications they received, Harris suggests they replace any angst they feel about this with gratitude. The
very choice of their parents' attempt to promote their child’s advantage is more than enough to justify their actions.\textsuperscript{45}

\textit{The Genetic Enhancement is Not-so-Novel Objection:} Harris and Glover offer a critique of Habermas that focuses on the analogous relationship of genetic technologies and common tools and aims of child rearing. Harris’s other contribution to the debate has been to stress that ‘from manipulation’ is vague and that any argument that rests firmly on this—like Habermas’ argument does—is problematic. We might not be comfortable using the word manipulation to describe our attempts to raise our children, but the euphemisms of mold, raise, and form, are basically equivalent. Parenting requires instilling values, for example, and seems to occur almost by default if not intentionally pursued. The point being, parents use the tools available to them to shape their children as they see fit and for the betterment of the child (hopefully). Education plays a key role in this and is perhaps the go to example. For Harris, education is analogous to using genetic technologies. That is, it is just another tool in the tool belt.\textsuperscript{46} But notice, that both parenting and being at the mercy of the genetic lottery seem to challenge Habermas’ authorship requirement. Although, Glover is sympathetic that too much intervention would be a burden and challenge to authorship, at least some seems to be acceptable. If Habermas is going to be consistent, he should rail against the authorship violations of the genetic lottery, which are not an issue for him.\textsuperscript{47}

\textit{The Genetic Determinism Objection:} Several thinkers have objected to Habermas’ understanding of genetics, and in particular, Habermas is sometimes excused of being a genetic determinist. For example, Agar challenges Habermas’ distinction between genetic and environmental features by pointing out that human development does not support the distinction the way Habermas needs it to. Agar cites Wasserman who argues that Habermas is committed to
genetic determinism. For Agar the issue is that a child still has control over the influence that such genetic interventions can have on their life. There is a crucial distinction between the possession of genes and managing their effects. As such, Agar challenges Habermas’ authorship charge by comparing the difference between receiving a genetic intervention versus allowing that genetic intervention to influence you. Returning to the educational arena, while a child cannot refuse the genetic intervention that would enhance his ability to learn, for example, the child can refuse to go to school or refuse to study. This chosen behavior would minimize and perhaps nullify the influence the genetic intervention has on the child. The aim to defend the distinction between genetic and environmental interventions also has implication for Habermas’ authorship charge. For if the past has control over the future, as genetic enhancements causes, future generations subjected to genetic enhancements will not be authors of their lives in such a way that disrupts the common moral understanding of who humans are. However, for Agar, this still unjustly prioritizes internal genetic interventions over external environmental matters. If Habermas is right, the problem that he describes would also need to apply to environmental interventions. At the heart of Agar’s objection is the power the person has to resist, and this is enough to establish authorship. Likewise, Coady objects to what he interprets as an unwarranted assumption by Habermas; namely, that a child might be upset or even unnerved about the genetic makeup they were intentionally given by their parents, but this does not affect the child’s ability to author. Habermas, according to Coady, would seem to need some fatalistic premise linking genetic makeup with destiny or maybe some sort of indentured servitude to the occupation the parents have envisioned and genetically selected for the child, which is implausible. It is worth noting that according to some authors like Christiansan, it is controversial whether or not Habermas is committed to some form of genetic determinism, but
saying so does not provide an argument. Morar goes a step further and attempts to bolster Habermas’s position, but still argues that Habermas seems committed to some form of soft determinism, at least. The crux of Morar’s argument rests on claiming that Habermas may really be saying, rather than arguing genetic intervention commits the enhanced to a particular path, that it only limits the enhanced to a range of options, but that is enough to challenge authorship.

The Genetic Enhancement is not Necessarily Detrimental to Autonomy Objection:
Defenders of enhancements have provided several examples of instances where enhancements may actually bolster autonomy. If these are accurate, they formulate an objection by counterexample to Habermas’ arguments. In particular, Savulescu et al. argue that such enhancements are not only permissible but morally obligatory as some genetic enhancements are capable of increasing autonomy. As this argument will be the focus of a later section, it will have to wait until then for a fuller examination. Lev has also offered several examples of enhancements that could potentially be used to bolster autonomy. Lev’s argument is interesting in that he is sympathetic to restricting some forms of enhancement. In particular, he points out how risk aversion enhancements could potentially be very attractive to parents that want to protect their children, but limit choices for the enhanced. However, Lev defends memory enhancements and mood enhancements as noncontroversial means to promote autonomy without sacrificing the well-being of the enhanced. For example, mood enhancements can help foster a calm and level-headed demeanor that allows for clear thinking and analysis of choices.

Our Moral Self-Understanding and Equality Objections: Habermas’ conception of our moral self-understanding and the role it plays in morality is such an important aspect of his thought about enhancements, it is worthwhile to take a quick look at several of its difficulties. First, Gunson has challenged Habermas on the usefulness of his inviolability of human nature
claim. Habermas claims genetic enhancement changes what has been unchangeable and what
has set a critical foundation for an understanding human beings as moral agents, and that leaves
us with two interpretations of this claim. If the claim is interpreted descriptively, then the
descriptive account does not help us answer the central question of whether or not we should
change human nature. If it is a normative account, then it begs the question. Either way the
claim seems to be problematic for the enhancement debate.\textsuperscript{55} Second, Habermas claims that
awareness of being unenhanced would be an unpleasant thing for the enhanced. That is, being
enhanced and being in a Habermasian sense ‘unequal’ would be a painful experience. The
problem with this as a reason for limiting enhancement is that it is an empirical question that
requires evidence and we simply do not have that evidence yet. While it is still possible that
awareness of enhancement would be harmful, it is underdetermined.\textsuperscript{56} Third, Habermas is
committed to a symmetrical account of moral equality where the status of someone is determined
by the equal footing with others on the horizon of being natural beings free from intentional
genetic manipulation. Morar has pointed out that it is difficult to reconcile such a symmetrical
account with beings that do not have equal genetic footing with normal human beings, which
causes potential issues for accommodating animal and disability rights.\textsuperscript{57} Finally, Pugh has
pointed out that there is an internal tension between claiming that therapeutic genetic
interventions are acceptable while claiming that genetic enhancement interventions challenge
authorship. It seems if authorship really matters, then it would also matter for therapeutic
interventions. Since, it does not—at least for Habermas and Pugh—this seems to be a problem
for Habermas’s argument.\textsuperscript{58}

\textit{Concluding Thoughts on the Argument from Inequality and the Protection of Autonomy from Manipulation:} While the argument from inequality and the protection of autonomy from
manipulation has its problems that leave it wanting, there are two efforts to develop the argument that have some merit. First, Herrisone-Kelly argues that although the Habermasian discussion of genetic enhancement has focused on what he deems third-person assessments of the immorality of genetic enhancements, such an objection might better suit first-person uses of enhancement when such use will short circuit one’s sense or actual responsibility for enhanced capacities performance. Second, Enhi and Aurenque have made an interesting contribution to the debate by extending Habermas' thought on to moral enhancements (enhancements that aim to increase or augment the moral nature of the enhanced). They argue that moral enhancements are problematic based on a Habermasian approach because moral enhancement will make it more difficult to address the social issues that give rise to the very need of the enhancement, and moral enhancements will be more pointedly open to the abuse of violating authorship and communicative actions. Issues that will be more in focus in the later discussion of justice and equality. Finally, it is worth pointing out an argument that is in derivable from some of the concerns the Habermas raises regarding issues of social control and potential abuses. While not a conclusive argument against enhancements, it is a useful lens that escapes the objections above. The argument from social control stresses the concern that enhancement technologies will become instruments through which people may be abused or exploited by their larger society, external power structures, or government sanctioned ideologies. These concerns come in a variety of ways and can be categorized as explicit and implied coercion. As explicit coercion, enhancement technologies become tools through which people are manipulated in order to satisfy some societal goal, for example, prenatal or genetic screening that attempts to eliminate certain characteristics of individuals or individuals themselves deemed unsuitable by society. As implicit coercion, enhancement technologies and more specifically their acceptance and use may
create pressure on individuals to pursue or use such measures. For example, if cognitive enhancement drugs used by military personnel in order to heighten senses or allow them to remain awake and alert for longer periods of time become common practice, this may create an expectation or an obligation to use such enhancements. Allowing and promoting enhancements, as such, may place one’s career prospects, livelihood, and the safety of one’s team as motivating reasons for using enhancements. There is also a larger social-economic dynamic potentially at play here in terms of medical tourism issues that carry forward into the argument from inequality. As a matter of the argument from social control, the exploitation of a population can be analyzed according to the economic market that entices countries that are struggling to provide basic healthcare to their populations to invest in non-basic healthcare or enhancement-like technologies in order to draw foreign interest into the country. While the distribution concern is a matter for later in the argument, the social dynamic that may harness members of a society to operate within such a dynamic is a matter akin to the argument from social control.

3.1.4) The Argument from Human Dignity

The Argument from Human Dignity: The argument from human dignity is expansive and open to several interpretations in the literature. To simplify the collection of arguments, the central idea captured by these arguments is that enhancements threaten human dignity. Aside from which conception of enhancement is endorsed, different interpretations of 1) threaten, 2) human, and 3) dignity, each in turn generate separate strands of the argument from human dignity. Several of the most prominent will be examined below.

Annas has offered a version of the argument that objects to enhancements and states in particular that genetic enhancements are crimes against humanity and a violation of basic human rights. The argument against enhancements from harm to humanity can take several different
formulations according to the following categorical framework: actual versus potential harm, quantitative versus qualitative senses of humanity, and consequential versus deontological interpretations of the argument as a whole. While an exhaustive analysis of this framework is beyond the scope of this work, below is a sampling of some of the major arguments from this sort of camp. Annas is a major proponent of the argument that we should consider, in some cases, enhancement pursuits to be crimes against humanity. There seems to be at least two ways to interpret such a concern. First, enhancements are capable of causing harm to the total population of humanity, and activities that are capable of causing harm to the total population of humanity are ethically problematic. Therefore, enhancements are ethically problematic and should not be pursued. This argument offers a quantitative and precautionary take on the concern over harm to humanity. There is also another interpretation of this type of concern that highlights the defeasible nature of our epistemological claim that enhancements are harmless and tries to establish a precautionary stance. The argument is as follows: enhancements are capable of causing harm to the total population of humanity, and activities that are capable of causing harm to the total population of humanity are ethically problematic. Therefore, enhancements are ethically problematic. Also, conceptually qualifying the effected population leads to versions of this argument that may highlight future generations as well as a current/actual population. The next version of the argument from harm has overtones of the argument from human dignity and presents a more deontological assessment of a reason not to pursue enhancements. Any action or pursuit that by its very nature is an overwhelmingly gross violation of the sanctity and/or dignity of an individual person is ethically impermissible as its magnitude represents a crime not just against the individual but against all of humanity. Enhancements are such a gross sort of violation, and therefore, enhancements ought to be impermissible. While the preceding
arguments have a generalized scope as relates to enhancements pursuits, the scope of this argument is particularly relevant for genetic germline types of enhancement strategies, for example. That is, it is arguably less relevant, for example, when analyzing short-term pharmaceutical interventions that are limited in effect to just the individual in question. While the above examples focus on the abstract nature of the harm, concrete examples of potential harms generated by the use of enhancements include unforeseen effects of prolonged pharmacological enhancement and addiction.

Likewise, the argument against enhancements from common heritage is similar in style to several argument above; however, the concept of “common heritage” and the prevalence of it in the global bioethics inquiry arguably justifies its categorization as a distinct argument. The argument unfolds as follows. First, the global human gene pool is a matter of the common heritage of humanity. A limit assessment of the concept of “common heritage” for the purposes of this argument could highlight the common or communal ownership of something like the human genome and cautions against it being privatized for commercial and/or scientific uses, for example. Second, activities that threaten the preservation of the global human gene pool are ethically problematic. Enhancements threaten the preservation if the global human gene pool; therefore, enhancements are ethically problematic and ought to be impermissible. Again, this argument can take varying interpretations depending on whether the preservation of common heritage is justified from consequential or deontological grounds. For example, and in its deontological form, justification of the premises could take the strategy of claiming that the human genome is not the type of thing that can be privately owned because it belongs to all of us collectively or is not capable of being owned. In its consequential form, justification for the premises could take the strategy of claiming that preservation is a matter of preserving the
common genetic heritage from manipulation that may cause bad consequences for present and future persons.  

There is also the background Kantian commodification objection that holds enhancements are problematic insofar as enhancements require that one treat human beings as objects to be manipulated and that doing so violates a Kantian maxim against treating humans as a means to some end.  

The basic aim of the Kantian project is to ground the inviolability of human dignity in the capacity for rationality and in turn the autonomy of a free person capable of choosing and acting with reference to the moral law. The key aspect for our purpose is that Kant aims to ground human dignity in a capacity. Among others that will be examined below, Fukayama and Kass have been critical of capacity-based accounts and have each, in turn, developed alternative accounts of the argument from human dignity based on their assessment.  

Fukayama also stresses the importance of anchoring human dignity in the whole human race as a conglomerate that highlights genetic and metaphysical qualities of humans, especially as a matter of complexity and connectedness. Avoiding reductions and retreating to versions of human dignity that rely solely on whether or not a being has a certain capacity leaves Fukayama with what he terms “Factor X.” Granted it is not the most descriptive or informative of labels, but for Fukayama, there is something about human beings that separates them from the rest of nature. It is all these human capacities together as a whole that constitutes a human’s moral status. Enhancement pursuits become problematic because they threaten this complexity by inviting tendencies to promote consequentialist aims that limit. For Fukayama, the cost of not embracing this Factor X type of human dignity is that one loses the ability to defend meaningful and adequate human rights.
Another proponent of the dignity argument is Kass who focuses his explanation of dignity and how it is threatened by enhancements on the idea of dignity as embodiment and behavior. The point of Kass’ assessment is to ground dignity in the concreteness and indeed the messiness of human life, with its struggles, hopes, and joys. For Kass, dignity is not primarily about a metaphysical status that humans possess, but rather is about what some humans do in the balance of adversity and aspiration. Kass’ understanding of dignity is thoroughly based in virtue theory. It is in the face of hardship and virtuous responses to hardship where people either display or earn their dignity. These hardships do not necessarily require heroic responses, for Kass sees dignity in humans responding to the basic needs of life both in caring for themselves and for others around them. Dignity is an excellence in behavior or action and, as an excellence, it is something that we can strive for in ourselves and also recognize in others. Pursuits—like enhancements—that disrupt this process are morally problematic.

Criticism of the Argument from Human Dignity: Before turning to criticism of particular arguments examined above, it is worth assessing some objections to human dignity arguments that have been formulated as general objections, such as the conceptual objection, the overly pessimistic objection, and the impasse objection, before turning to criticism that aim at particular versions of the argument from human dignity.

The Conceptual Objection: Macklin has offered the boldest critique of the concept of dignity in the bioethics debate writ large by characterizing the use of ‘dignity’ as basically useless. The thrust of this is based on claims that the concept is vague and ambiguous. Vagueness concerns are echoed below in Fenton’s comments; the charge being that definitions of dignity do not offer enough concrete guidance about ethics. While dignity is often presented as an integral part of moral principles at issue, it is often unclear, so the objection goes, what one
should do in the moment to promote dignity. The second charge of ambiguity of the concept has been demonstrated by the outline of this section. There are multiple and even conflicting conceptions of dignity that are at play in the bioethical inquiry in general and in the enhancement debate in particular. Whether or not these conceptual issues could possibly be worked out in further defenses of, or reformulations of, ‘dignity’ is an open question. However, the current state of dignity argument does seem to be open to this latter sort of conceptual objection.

The Overly Pessimistic Objection: While dignity can be recognized as important aspects of justification for and objections to enhancements, they disregard the good that enhancement technologies can provide. When arguments are wielded as cautions that is one thing, when wielded as trumps that by their pronouncements end discussions, that is certainly another. Uses of ‘dignity’ in arguments against enhancements have been wielded largely as trump cards, which seems to be problematic at least for some types of enhancements. The works of Savulescu, Harris, and Bostrom could all be used in support of this claim, but as they are respectively the focus of the next two sections, a fuller examination of their positions will be reserved until later.\(^{68}\)

The Impasse Objection: Zemlicka offers a unique commentary on the use of dignity in the enhancement debate by offering what he terms as a diagnosis of the impasse that such inquiry has reached. Zemlicka’s narrow claim is that reliance on the concept of dignity in the inquiry over enhancement leads to regression problems as competing version of the concept aim to push their way toward an ultimate (and shared) foundation, which according to Zemlicka does not exist (although I am not sure he would say it as such being that a claim of not existence might stretch his comfortability with analytic metaphysics). His argument also has implications for bioethics writ large. While one can reserve judgment on his larger or even methodological
approach, Zemlicka’s argument suggests that the term dignity is at the same time too loaded to be useful and not robust enough to facilitate consensus (although again, Zemlicka most likely will argue against the possibility and value of consensus).  

*The Concreteness Objection:* Turning to objections aimed at particular variants of the argument from human dignity, and in response to Annas, Fenton points out correctly that human rights seem to be used in the debate on enhancements as a sort of trump card, but its use requires the framing of an actual violation, which she argues Annas fails to show. Annas relies on tracking his conception of human dignity, much like Fukayama, back to human nature and forward as the basis of human rights. While I have chosen to tease out the aspect of human nature in a previous section, we will turn to a closer analysis of human rights justification in a moment. The concern here is to frame the nature of the threat that enhancement possess (in the case of Annas’ analysis that is genetic enhancement in particular). As such, a threat requires a threatened, and it is unclear what particular harm is caused to an abstract notion of humanity. The following questions are rhetorical but point to the limitation of stretching the idea of crimes too far, as Annas does: who specifically is harmed, who files the charge of being harmed, who is investigated, who offers testimony, who is judged, and who is punished? While one can appreciate the desire to spread the bounds of bioethics beyond quandary analysis based on particular narrow problems, it is unclear the legalistic framework is adequate to the task. Without a coherent platform for such claims, the argument collapses into the argument from human nature. A similar critique can be leveled against the argument from common heritage. Namely what benefit gets conferred to whom, or who gets violated by not receiving a stable and unchanged genome? This assumes that such a frozen snap shot of the genome is even possible,
with genes presumably being deselected and being purged from the gene pool as matter of course.

_The Capacities Approach Excludes Too Much Objection:_ In response to Kantian-inspired capacities approaches, Mitchell et al. have been skeptical of such capacity based approaches in general. The basic thrust of their argument is that capacity approaches leave out instance of persons that should be regarded as having dignity. Specifically, their argument assesses suitability of capacity-based accounts to account for three aspects: 1) for beings that have dignity or a related moral status that lack the specific rationality capacity in question (i.e. someone in a PVS or infants), 2) for instrumentalization aspects of what it means to focus on capacity in spite of the whole person or persons involved, and 3) for rationalities' content empty assumption about modes of reasoning instead of what is reasoned to or concluded. This is to say nothing about the possibility of formulating and defending an animal rights or environmental ethics under a capacities’ understanding of dignity. Ultimately, Mitchell et al. favor a religious interpretation of human anthropology that is surprisingly pragmatic.71

_The Overreliance on Human Rights Objection:_ In response to Fukayama, rights theory is much more diverse and robust than some proponents of the argument from human dignity presuppose, whether this is intentional, a matter of preference, or a matter of ignorance is beside the point. The point being that if one can construct an adequate theory of rights that does not necessarily rely on human dignity as a primary justification, it challenges arguments like Fukayama’s that rely on the connection. An exhaustive defense of this is beyond the scope of this chapter, but briefly examining Hunt’s thoughts on historical-based rights theory can be useful. If one assumes that a human right is something about a person that generates a correlative duty in another, there is still the metaethical question of what grounds the
epistemological force of such claims. Outside of the general content of human rights, what gives human rights dialogue its normative foundation—or metaethical foundation—can be formulated as a matter of what makes responding to such violations of human rights compelling. Some have argued that there is an emotional or visceral reaction to human rights violations that ought to provide the bedrock for human rights arguments.\textsuperscript{72} That is, the self-evidence of the universal, equal, and natural status of human rights championed by many human rights theorists is arguably theoretically grounded in a \textit{prima facie} reaction to human rights violations. Hunt makes a compelling argument for this as she speculates about the role of forming one’s moral imagination in the rise of human rights inquiry around the time of the French Revolution. Specifically, she claims that novels were an essential tool in the development of moral imaginations and for the generation of equality claims. As such, the birth of human rights dialogue can be psycho-historically interpreted as the internalization of another’s pain (for example in the face of the suffering that gave rise to the French Revolution and/or the gross violations at the hands of those who torture others). One problem with this type of foundational grounding strategy is that the justification above is open to a circularity charge; that is, something along the lines of it forces people to define and identify human rights and human rights violations in an ‘I know when I see it’ manner.\textsuperscript{73} The need to declare violations necessarily presupposes a background, and if the abuses the declaration is responding to are only accessible through a visceral or emotionally repulsive charge, this potentially limits bioethical inquiry and human rights dialogue.\textsuperscript{74} Although Hunt seems to have an inclination toward a personal identity claim, it is plausible that a conventional positivistic account of rights could do the same to bolster and codify this impulse toward right recognition in another. If the psycho-historical assessment of such response is captured in communal text, institutions, practices, and/or sensibilities, then it invites the question
of what metaphysical factor X really contributes to the theory. If Fukuyama is not able to define it, maybe it is not there and maybe it is not needed.

*The Which Virtue Matters Objection:* In response to Kass, behavior and virtue accounts are also open to the capacities exclude too much objection. In one sense, if someone does not display the correct virtue or behavior in the face of adversity or service to another, then what is to be made of their claim to dignity? This also begs the question about which virtues are to count, and it seems difficult to select a group of virtues without being in some sense arbitrary about their selection. Kass tends to rely on the traditional list of Aristotelian virtues, but granted his argument is not about virtues but about what they can contribute to how one understands human dignity and in turn the role human dignity plays in the enhancement debate. Therefore, reliance on a brief assessment of virtue is reasonable, but the background metaethical question remains: what gives justification to the list of virtues proposed as virtues?

*Concluding Thoughts on the Argument from Human Dignity:* There is no denying the popularity and prominence of the concept of human dignity in the bioethics literature and beyond. The concept has had a major and what will probably be a lasting impact on applied ethics and political philosophy. It has also been wielded and championed by both secular and theological thinkers alike. Indeed, its versatility might be one of its most concerning aspects, but its ubiquity seems to demonstrate its value to the debate even if it has failed to conclusively sway those for or against enhancements to the wisdom the opposing camp purports to have. Bostrom’s response to those critical of the enhancement project that cite violations of human dignity as the reason one should avoid pursuing enhancements instructively points out that any version of human dignity worth wanting needs to be inclusive enough to capture who we are now as well as who we might become. In this sense, human dignity based on mere pedigree is simply not
enough. It is somewhat ironic that the response of the person that has been the central voice for transhumanism to those that defend the argument from human dignity is that their conception of the dignity is not robust enough. Next, a recent attempt by Kirchoffer to articulate a multidimensional approach to human dignity in the enhancement debate is worth looking at briefly as it attempts to construct a hybrid understanding of human dignity, the proverbial attempt to have one’s cake and eat it too. It is by far one of the most creative attempts to develop the concept of human dignity; however, one cannot help but wonder if all that Kirchoffer does is to open up the concept to all of the objections looked at here. Rather than building a robust concept of human dignity capable of contributing clarity and normative force to help us reason to a conclusion about what to do about enhancements, one is left with the thought that all he really did was broaden the surface area that constitutes the target for opponents of the argument to attack. All that being said, it is difficult to establish any conclusive objection to enhancements in general from the state of human dignity argument that exists so far. That is not to say there may not be something conclusive to come or that human dignity is a useless concept, as some have claimed. For if it really is so useless, it seems to be in use a lot.

3.2) Critiquing the Major Arguments for Enhancements

The two most prominent arguments for enhancements in the enhancement debate are the argument from procreative beneficence and the argument from transhumanism. Again, these arguments are generally presented as providing conclusive reason for the obligation to pursue enhancements. By examining each argument and the objections they have received, this section shows that each argument fails to prove its respective conclusion.
3.2.1) The Argument from Procreative Beneficence

*The Argument from Procreative Beneficence*: The argument for enhancements from procreative beneficence can also be referred to as the argument from and obligation to better our children and can be formulated as follows: All parents and perhaps societies in general have an obligation to better their children and/or the children of their society and enhancements are tools for helping to better the lives of children; therefore, enhancements ought to be permissible and possibly ethically obligatory. The argument has two strands, the first—the benefit to others strand—is broader in context and application, while the second—the obligation to better our children strand—is narrower and focuses on procreative issues exclusively. This section will focus on the second strand as it is the dominant one in the debate; however, it will be useful to situate it in relation to the larger benefit of others strand as a manner of teasing out its implications for the rest of the argument.

*The Benefit to Others Strand*: The argument for enhancements from benefit to others attempts to formulate a positive argument for enhancements as opposed to, for example, a negative formulation of an argument from autonomy, for example. If the conclusion of the argument from autonomy is that there is no reason to believe that enhancements ought to be considered ethically impermissible, and as such, in this formulation, it provides no affirmative reason for pursuing enhancements per se. The argument from enhancement from benefit to others makes, in this sense, a stronger sort of claim. A version of the argument is as follows: pursuits that can contribute to the well-being of the larger community ought to be allowed. Enhancements are such pursuits; therefore, enhancements ought to be allowed. The stronger formulation can be made by replacing “ought to be allowed” with “ought to be pursued.” The benefits that others can receive from enhancements may include what enhancements, like
pharmaceutical avenues that can increase one’s creativity, contribute to the cultural life of a community. Also, if pharmaceutical cognitive enhancements can help military personnel stay awake longer and be more alert on military operations, then the safety of (benefit of) their team and country might be arguably served by such enhancement pursuits. If the end goals of a certain practice are normative and enhancements can help to secure those end goals, then abstractly enhancements, or so the argument leads, must participate in or be normative themselves too. This argument can be extended to reformulate a conception of equality, such that if enhancements can help to level the playing field by mitigating intellectual or developmental disadvantages or allowing those with more difficulty in securing adequate economic opportunity to do so, then it might be worth considering enhancements as promoting equality rather than bolstering inequality.

The Obligation to Better Our Children Strand: Savulescu and Kahane have reformulated the principle of procreative beneficence from its earlier version. Here, the focus will be on the most recent version offered. While similar to the argument from benefit to others, this argument offers a stronger claim that implies that not only is enhancement ethically permissible; it is obligatory in some cases. While this is arguably a version or derivative of the argument for enhancement from benefit to others, the particular formulation of the argument deserves special consideration. The argument develops as follows: all parents and perhaps societies in general have an obligation to better their children and/or the children of their society. Enhancements are substantial tools for helping to better the lives of our children; therefore, enhancements ought to be permissible and possibly even ethically obligatory. Savulescu and Kahane offer a version of the argument aimed at promoting the well-being of children according to their formulation of the principle of procreative beneficence. That is, anyone having a child has a moral obligation to
select the child with the best possible well-being given the available information. If such a principle is normative, then the implications for enhancements through genetic manipulation and/or pharmaceutical methods as tools to pursue and/or secure a child’s well-being are also normative. Briefly, it is worth noting potential germline and non-germline versions and implications of such an argument. Harris has also offered a similar argument that has received several objections.  

**Criticism of the Argument from Procreative Beneficence:** The argument from procreative beneficence has been a prominent argument in the pro enhancement camp. Championed by Savulescu and later also by Kahane, the argument has received several critical objections that challenge the argument’s conclusion that parents have a moral obligation to create the best possible child. By examining 1) the impersonal harm objection, 2) the unjustified reliance on intelligence objection, 3) the undue burden on females objection, 4) the internal perspective objection, 5) the many ways to reproduce objection, 6) the operationalization problem objection, 7) the individualistic objection, and 8) the eugenic objection, this section defends the claim that the argument from procreative beneficence is not compelling.

**The Impersonal Harm Objection:** Bennett argues that the theoretical foundations of the principle of procreative beneficence are ultimately grounded in the concept of impersonal harm. Impersonal harm has its roots in the work of Parfit and suggests that there are grounds for formulating moral judgements about harm caused when there is no actual person being harmed insofar as the actions chosen bring about a world that is worse than it could have been. The central point for Bennett is to draw a line around what is morally relevant in this regard and what is simply a matter of preferences, and she argues that reproductive choices are simply a matter of preferences. Granted they are important and meaningful preference for people. The
point being that the place to draw the line around whether or not something is a moral issue is whether or not, in this case, there is some actual person being harmed. As the principle of procreative beneficence applies to future generations, so to speak, there is no actual person being harmed and so no grounds for moral claims, only preference claims. If we do not accept this, then we end up committed to arguing that the disabled are worth less than the abled, violating reproductive autonomy, and supporting eugenics. She follows this argument up with a closer examination of the implications of Parfit’s work for the principle of procreative beneficence by arguing that more justification, beyond an intuition, is needed to establish the claim that the principle of procreative beneficence is obligatory.81

*The Unjustified Reliance on Intelligence Objection*: Carter and Gordon argue that besides it being controversial that we will be able to select for intelligence genetically, there is good reason to believe that selecting for intelligence will not necessarily lead to selecting for best quality of life.82 Carter and Gordon aim at a premise in Savulescu’s argument that defends the promotion of non-disease traits, in particular intelligence. The central claim is that even though we may select for intelligence in the hope that such a trait will be useful for promoting quality of life from an instrumental perspective (as intelligence Savulescu argues contributes directly to better planning, better memory, and to conceiving of one’s own meaning of a good life) and from an ethical theory perspective (as intelligence can help one pursue hedonistic ethical goals, desire-based ethical goals, or objective-based ethical goals, for example), there are plenty of counter-examples that show that this is not necessarily the case (how many intelligent people suffer displeasure, strive to forget things for their own betterment, etc.) Their argument is not a deductive refutation, but rather an inductive one that at least claims that Savulescu has a long way to go to establish the probability of the connection between intelligence and quality of life.
The Undue Burden on Females Objection: De Melo-Martin points out several limitations and oversights to Savulescu’s argument, the most pointed of which focuses on the burden such a moral obligation to select for the best possible child will cause women. Aside from the difficulties of determining what should be selected to produce the best possible child and financial access issues that make it unlikely that such selection for non-disease traits will ever be mainstreamed, there is the concern that women will unfairly be burdened with the bulk of the moral obligation. That is, in practical matters, woman will be obligated, according to Savulescu’s argument, to pay for, educate themselves on, and disrupt their schedules and perhaps life projects, to pursue the obligation of accepting the principle of procreative beneficence. Interestingly, folding the two objections together (inadequate financial access and concerns about how poverty effects and the prevalence of its effect on the female populations of the planet) strengthens De Melo-Martin’s objection.  

The Internal Perspective Objection: Herissone-Kelly claims that prospective parents have no obligation, prima facie or otherwise, to select according to the principle of procreative beneficence. His argument rests on the distinction between taking an internal perspective on the prospective child versus taking an external perspective. By internal perspective, Herissone-Kelly means that one imagines what it is like to be that child and to imagine what kind of life that child will have from that child’s perspective. In contrast, an external perspective aims to imagine what kind of life that child will have and to imagine what kind of life that child will have in comparison to other prospective children. The external perspective is appropriate for legislators or policy makers only, and it is the one the Savulescu adopts. Prospective parents are under no obligation to adopt this perspective and, according to Herissone-Kelly, it might even be morally problematic for them to do so. Parents that recognize the importance of what their child thinks is
important is something that is praiseworthy, and the external perspective can potentially obfuscate this. While Herrisone-Kelly is critical of the principle of procreative beneficence, he does offer what he argues is a plausible reformulation of it that, if anything, offers a much more moderate position as compared to the one Savulescu defends. The argument goes that prospective parents adopting the internal perspective could say that they are obliged to not create a child that would experience an unacceptable amount of suffering. There will still need to be argument over what constitutes an unacceptable amount of suffering, but it offers a useful way (via the distinction between internal and external perspectives) for establishing what is problematic with Savulescu’s argument.84

The Many Ways to Reproduce Objection: Holm and Bennett have challenged the principle of procreative beneficence to account for reproductive technologies effect on ways of reproducing. The assumption being that there is nothing in the principle of procreative beneficence that would seem to limit such obligation to natural reproduction, so one needs to explore expansion of the argument beyond the confines of natural reproduction to include instances of single reproducers, gamete donors, serial donors, non-human animal reproduction, for example. However, doing so creates some troubling implications. Consider the case of gamete donation, if the principle of procreative beneficence applies and is an obligation, then it seems to challenge the acceptability of such donation that in practice has high levels of uncertainty regarding the donor parties. The implication being that the obligation to create the best possible child becomes improbable due to lack of information, or gamete donation becomes unacceptable as there is no way to establish the likelihood and ultimate verification of well-being in the resulting offspring. While not a conclusive objection, it does seem reasonable that the principle of procreative beneficence would be stretched beyond the confines of natural
reproduction by its proponents, and in the least, that will require accepting some tradeoffs that could be problematic in themselves or in conflict with liberal sensibilities that spawned the argument from procreative beneficence in the first place.  

*The Operationalization Problem Objection:* Several authors point to the conceptual difficulty of determining guidance and actions from abstract appeals to well-being given potential difference and conflicting understandings of the concept. Whether or not this holds, there is also the issue of what to do about procreative choices even if there is justified agreement on the concept of well-being. The question being: how to operationalize the principle of procreative beneficence when advising couples, for example. Here it is useful to think of Parker’s warning about the potential self-defeating and paradoxical nature of the principle of procreative beneficence for if we accept that we each have a mix of good and bad qualities, it seems unlikely that generating the best of possible children in an effort to at least maximize the good qualities constitutes what it means to live a good life. Perhaps Kass’ notion of dignity as virtuous activity in the face of diversity gains some traction here. If this picture of what it means to live a good life is compelling, it generates a potential warning for what it could mean to pursue this ‘best possible’ ideal and what neurotic visions it could produce. Granted this is not a conclusive objection, but a warning about the abuses such an idealistic pursuit could inspire or entail.

*The Individualistic Objection:* Parker has criticized the principle of creative beneficence for being too individualistic. By individualistic, Parker is concerned that the principle is over focused on a class of individuals that have access to such reproductive technologies. This also, for Parker, points to the lack of context awareness of communal aspects and implies the principle of procreative beneficence is blind to societal and political realities that make justifying the
obligation of the principle of procreative beneficence unrealistic, never mind the difficulties of implementing it.\textsuperscript{89}

\textit{The Eugenic Objection:} Sparrow has offered perhaps the most damaging critique of the argument from procreative beneficence; namely, that the consequential formulation of the argument commits those who endorse it to a eugenic vision eerily similar to what Sparrow terms the eugenics of old. For as Sparrow argues, if the aim is to decrease the amount of suffering in the world, then characteristics like race, if one lives in a racist society and you are of the race that is being discriminated against, or like sex, if one lives in a sexist society and you are of the sex that is being discriminated against, are characteristics that one has an obligation to address through enhancements. This consequentialism coupled with the liberalism favored by Savulescu, for example, generates an internal tension for citizens of a liberal society who are to enjoy as much freedom as is compatible with equal freedom of other citizens, while there is an obligation meant to influence and infringe on reproductive autonomy. Sparrow speculates that proponents of the argument from procreative beneficence imagine themselves as defenders of rationality in the face of irrational religious beliefs or antiquated beliefs; however, Sparrow insightfully offers the economic market as the major contemporary driver of coercive influences on society. Perhaps the biggest fear is that parents might someday not have a choice in the children they bring into this world due to the need to compete in the marketplace or, God forbid, the color of their skin.\textsuperscript{90}

\textit{Concluding thoughts on the Argument from Procreative Beneficence:} Argument over the principle of procreative beneficence will most likely continue. Notable defenses of the argument have been offered by Saunders and Elster, but it is unclear if the volley of criticism has been fully answered.\textsuperscript{91} It seems safe to conclude, at least tentatively, that the principle of procreative
beneficence has some serious outstanding challenges to cope with before it is mainstreamed, if that ever happens. It is worth noting several things about the argument. First, the larger argument, that the principle of procreative beneficence is derivative of is largely unscathed by arguments leveled so far at the argument from procreative beneficence. Second, the continued back and forth over the plausibility and coherence of the argument for procreative beneficence suggests arguments that rely on reproductive avenues will most likely be a difficult road to gain consensus over. Notice the larger benefit to others argument also can avoid this avenue. This is to say that making room for beneficence and avoiding the individualistic critique offered by Parker offer the potential for a compelling argument. Also, thinking about how to integrate an internal perspective into the debate as well as the communal and contextual matters raised so far may be fruitful, and reliance on reducing unacceptable amounts of suffering seems to be a less controversial level to explore in future argument.

3.2.2) The Argument from Transhumanism

The Argument from Transhumanism: The argument from transhumanism is composed of a number of rationales for pursuing biomedical enhancements that could potentially transform humanity into something beyond our current state, some of which fall under categories of assuming the burden of proof rests on those that oppose enhancements, the prospects of enhancing evolution, implications of liberalism and the enlightenment, the inherent value of living longer lives, and the inherent value of being bigger, stronger, faster, and smarter. Organizing arguments under the label the argument from transhumanism is perhaps misleading as there is no single argument at play in the debate, but rather a collection of arguments. It is better to think of transhumanism as an umbrella term that collects many different transhumanists
of many different stripes and colors. The term transhumanism designates a collection of arguments and claims that share a loose resemblance. One of the challenges of examining the central tenets of transhumanism is partially due to the interdisciplinary nature of thinkers that work on the topic of enhancements from the transhumanist perspective. One can usefully think of transhumanists as falling on a spectrum derivable from their zeal for or repulsion from the basic topical claims associated with transhumanism. One popular way to describe the poles of that spectrum is in terms of full blown transhumanists at one end of the spectrum and liberal bioethicists at the other. This is to over simplify the distinction, but transhumanists tend to be more militant and committed to developing human beings into posthumans; that is, to radically change humans in their current form into something that surpasses the limitations of what it means to be human. This project, as transhumanist broadly construed, tends to embrace a plethora of means in order to do this (germline genetic engineering, brain-machine interfaces, mind uploading, pharmaceutical enhancements, etc.). They tend to argue that humans have an obligation to pursue these enhancements for the betterment of all, at least in the boldest forms of transhumanist thought. Those designated as liberal bioethicists would most likely not embrace the term transhumanist, but have been identified as such by transhumanist and those commenting on the debate due to their defense of obligatory enhancements. Savulescu and Harris are prime examples in this regard. They tend to be tethered, as bioethicists, to issues of medicine and less focused on matters of technological progression, computer science, robotics, etc. However, this is not necessarily the case. Their writing, as compared to proper transhumanists, also tends to be directed at negative problem solving as opposed to positive attempts to create something beyond the human for its own sake. Granted, these are broad generalizations of a diverse and often
fragmented literature and group of thinkers, but it serves as a quick orientation to the intellectual landscape.

The core of transhumanist thought can be traced back to the Enlightenment and what is sometimes characterized as the Baconian desire to master nature. Whether this is a fair characterization is debatable, but transhumanists’ focus on embracing reason as paramount to humanities’ survival and ability to thrive by overcoming the limitation of the human condition is undisputable. This is typically harnessed with a democratic political outlook that aims to promote freedom in general, and as Sandberg explains, in particular, a right to morphological freedom as the right to change one’s body as one deems fit. One of the most dominant voices in the transhumanist dialogue over enhancements comes from Bostrom. His earlier writing firmly articulated and embraced the mainstream transhumanist message; however, as of late, his move to identifying as a technopressive suggests, at least, the development of his thought away from certain forms of transhumanism. The central point of Bostrom’s argument in support of transhumanism is that possessing augmented health, cognition, and emotion can help humans to live better, more enjoyable, and more productive lives. He paints the picture by highlighting examples like thinking clearer, easily recognizing psychological hang-ups that hinder us, a greater appreciation for things we find attractive and beautiful, enjoying a healthier lifespan that is longer and an ability to have the battle of the critique that youth is wasted on the young, etc. This is all intrinsically valuable even at marginal levels such that increasing someone’s capacities beyond any normal range is justifiable as it too would be intrinsically more valuable. Bostrom admits this is an argument that could turn out to be wrong, but one can easily assume he thinks it is right and will be proven right. However, the evidence is in embracing the path and using enhancements; it is set as an invitation to try and prove it for ourselves.
Criticisms of the Argument from Transhumanism: Before turning to objections that are unique to the transhumanist debate, it is worth noting there are several general objections that have received attention in previous sections that are applicable here. Sparrow has objected to transhumanism based on moral status and the Kantian notion that practical rationality assumes mutual relations and accountability that the creation of beings beyond humans will lack when compared with the non-enhanced, and his argument is only the tip of the moral status objections to transhumanism. Koch has voiced the argument that transhumanism is repackaged eugenics open to the same abuses that the world witnessed during WWII. Jotterand has objected to transhumanism because it violates human dignity. Hauskeller has criticized transhumanists as being committed to the same sort of conception of human nature that the transhumanists themselves tend to criticize, and as such, transhumanism is internally incoherent. By examining 1) the local values objection, 2) the essentialist objection, 3) the incoherence of authoritarian liberalism objection, 4) the civil unrest from inequality objection, 5) the conceptual impossibility of the posthuman objection, and 6) the against functionalism objection, this section defends the claim that the argument from transhumanism is flawed and is not compelling.

The Local Values Objection: Agar offers a critique of transhumanism that relies on the notion of the importance of local values for humans and meaning in life. For Agar, local values are those values that are dependent on the judger. For example, as Agar points out, we value particulars about our life such as our partner, what we call our home, our family, our favorite memories of growing up, our dog, etc. These can all be recognized as universal goods in the abstract, as in the good of sharing your life with someone or pursuing life projects; however, the particular value my relationships have are precisely derived from their localness. Transhumanists on the other hand value pursuits that are only meaningful in the abstract; that is,
transhumanists are concerned with moving humanity beyond its current limitations and into something else, something better, and something post-human. The challenge here, for Agar, is that so much of the meaning of our lives is wrapped up in local values that the pursuit of abstract goals and what the transhumanists propose is simply foreign to the localized things we value. It is a threat and a meaningful threat. This does not mean that one day our local value might not change or expand, it simply means that universal values of the type that transhumanists tend to propose are not easily going to gain traction, and for good reason. While it is straightforward and compelling to make sense out of some of our local values in terms of limitation, this does not mean that we need to praise suffering, pain, and the struggle for survival as the only meaningful account of human dignity and the value of being human.¹⁰¹

*The Essentialist Objection:* Aydin criticizes transhumanism for being just as conservative as the conservative opponents of enhancement technologies. In particular, he uses a Nietzschean assessment of the transhumanist argument to establish that transhumanists rely on an essentialist view of what it means to be human, which is exactly what transhumanists so often attack about conservatives. He supports this analysis by laying out the implausibility of a value neutral account of emerging technologies, which means for Aydin that notions of healthier, smarter, and faster, are all bound to the context that gives them meaning. In this sense, these concepts are objective but not absolute, as in they can be subject to change and qualification. If smarter is determined by the ability to focus and Provigil can affect the ability to stay awake and alert over extended periods of time, then smarter and what it means becomes conditioned by that context. This makes it almost impossible to predict what will enhance people in a sort of extended manner or with regard to the future, which means pursuits of the future thing (or distant
future thing) called the posthuman and a specific avenues capacity to get us there are misguided.102

*The Incoherence of Authoritarian Liberalism Objection:* Hughes, a proponent of transhumanism, offers an astute assessment of some of the contradictions with the transhumanism project. While his piece attempts to map the potential for divergent camps to entrench along different interpretations or defenses of basic transhumanist principles, the larger argument of the piece supports what can be argued as the incoherence of the transhumanist position. Being mindful of earlier comments about the many faces of transhumanism, the assessment offered by Hughes is so broad that it must cut through and apply to most transhumanists as such. Hughes identifies several fault lines in the transhumanist position and a subset of them are of interest for this inquiry. For example, most transhumanists defend liberal democratic politics, where each citizen is to be allotted as much freedom as is compatible with the freedom of other citizens and also each is afforded an equal voice in the decision of policy or order in the society. This contrasts with the obligation mindset of many transhumanists and the almost authoritarian formulation of the requirement to pursue enhancements.103

*The Civil Unrest from Inequality Objection:* Agar has been critical of creating posthumans, something he argues transhumanism is committed to, because the creation of a separate class of citizen as posthuman will inevitably lead to conflict as posthumans may demand that unenhanced humans give priority to the beliefs and desires of posthumans. In fact if posthumans as bigger, faster, stronger, smarter, and live longer on average than unenhanced humans, then unenhanced humans may not have a choice in the matter.104 In a parallel idea, Hughes points out instances of this fear turning into violence at the hands of citizens, for example of Ted Kaczynski who cites genetic engineering as one of the anti-technology reasons
for his bombing attacks. This rests on the strength of the inequality objection that was expressed formally earlier in the chapter, yet has implications here. It is worth noting that the inequality challenge has received several compelling criticisms that as a matter of moral status and dignity have held that pursuing the posthuman is a problem either because pursing the posthuman is incoherent or that our conception of dignity cannot handle it. The following objection represents the strongest argument in favor of the incoherence objection. As our examination of the role of dignity in the debate showed, figuring out dignity’s role in the debate continues.

The Conceptual Impossibility of the Posthuman Objection: Lawrence argues that the very conception of posthuman and transhuman as indicating anything beyond human, and therefore deserving of the same right and dignity due to any human, is simply misguided. The designation of beyond, for Lawerence, is unclear and misleading at best and at worst is speculative rhetoric. He uses the history of humankind and the developments humans have enjoyed as an example of qualitative changes that humankind has undergone, without there being an ontological shift needed to understand who we are now. After all, to say that humans have not enjoyed drastic changes in quality of life from our very earliest reproductively compatible ancestors is absurd. Lawrence examines several different approaches to defining the human and finds them all capable of adopting change without purging the human from the equation. The shifts in what it is like to be human have been great, but making sense of what it means to be beyond human, for Lawrence, is a wasted exercise and our attention should be turned toward more interesting and pressing questions. Buchanan also offers a conceptual argument about the impossibility of posthumans. His argument centers on the idea that ‘personhood’ is what he deems as a “threshold” concept. That is, it is a concept that envelopes a selected group that it
designates with moral status and not one that cherry picks a few (as a matter of superiority or inferiority, for example) from a larger cohort.107

The Against Functionalism Objection: Munch brings to light a latent assumption in the work of Bostrom and likewise in those transhumanists in her articulation of the functionalist commitments of Bostrom’s work. This latent premise assumes that humans are properly thought of as computers, and as computers, humans and the human mind are basically the sum of inputs and outputs. This reductive understanding of what it means to be human conflicts with what Munch, relying on Merleau-Ponty, characterizes as the “embodiness” of being human. What the functionalism lens does is force human beings into a dichotomized value scheme; that is, either we function properly and produce the right outputs given the inputs we receive or we do not function properly. For Munch, the lens of functionality imports a power structure that carries with it an implicit value judgement that the disabled are to be disvalued. Presumably, promoting the value of what it means to be embodied regardless of the functionality of the body (how well it performs) is where we should begin to orient our value judgments toward.108

Concluding Thoughts on the Argument from Transhumanism: It is worth noting that two major arguments against enhancements in general are being saved for the next section; namely, the argument from speculation and justice. As the objections reviewed so far are sufficient and the objections from speculation and justice are directly applicable to the central argument of the next chapter, a closer look at them will be reserved until then. Agar’s notion of local values is instructive here as it points to the potential abuses transhumanism can open us up to. However, the capacity of transhumanism to graft itself onto a commonsense assessment of what is good in our lives with the idea that more of it must be better is surely intoxicating for some. The anchor to help mitigate this is to remember the latent assumptions that transhumanist seem committed to
bring to the defense of transhumanism. That is, as Munch has pointed out, brokenness can give meaning, although brokenness is perhaps too functionalistic of an assessment, but it is a potential part of being embodied. Also, as Agar reminds us, it is worth speculating whether conceptually we ever really get beyond our local values. That is, as Buchanan argues, maybe there is no real way to make sense of what it means to be posthuman. Maybe the futuristic idea of what it is like to have such grand capacities is unavailable to us and therefore unimaginable in a meaningful way, but also conceptually confused in such a way that the ‘posthuman’ is nonsense. With that being said, this seems to allow us to at least peel off the radical aspect of posthuman speculation, and in doing so, it would be plausible to see the ideas of Bostrom (promoting health, promoting improved cognition) in medical textbooks or educational textbooks. The basic aim is not so far off.Trimming the sail of transhumanism certainly changes it to something that is not properly transhumanism, but like examining the previous arguments for and against enhancement, it has something to contribute to the dialogue. It just does not conclusively appear to be able to resolve the debate in its given form.

**Concluding Thoughts on Assessing the Enhancement Debate:** This chapter examined the major arguments against enhancements (the argument from bad character, the argument from human nature, the argument from inequality and protection of autonomy from manipulation, and the argument from human dignity) and the major arguments for enhancements (the argument from procreative beneficence and the argument from transhumanism), and found both major arguments for and against to be wanting. Insofar as each argument has been offered as a conclusive argument either for or against enhancements, the argument of this chapter defended the claim that they fail to deliver on that aim. An assumption of this chapter has been that these arguments can still be useful in determining an answer to the question of “whether or not
enhancements are morally permissible?” even that their conclusive nature is wanting. In some cases, however, the arguments examined have been so flawed as to not even seem compelling in formulating a general presumptive reason for tentatively accepting their conclusion. In any case, the assessment of the debate can be instructive in helping to formulate and inform the de jure aspect of making sense out of what an organization should do about enhancement pursuits. The following offers a brief summary of each takeaway as a general concern to help guide an organizational ethics framework for enhancements.

Takeaway from the argument from bad character: It is worth being mindful of the allure of enhancements and specifically what affects such an allure can have on individuals and communities, especially as a matter of encouraging or discouraging certain types of resource allocation, individual behavior, and research.

Takeaway from the argument from human nature: It is worth being skeptical about relying on concepts that that import commitments into a debate that are not shared by the members of the community in which the concept does its normative work. This is not to say that such concepts do not have an important place in the debate. It is to say that one should be skeptical about such concepts wielded as trump cards that close the discussion. Lastly, more abstract and thinner conceptions of human nature could prove fruitful and are worth developing and exploring.

Takeaway from the argument from inequality and the protection of autonomy from manipulation: A focus on first person assessments of enhancements and the distracting quality of moral enhancements have some traction, and the concern from social control stresses the concern that enhancement technologies may become instruments through which people may be abused or exploited is worth considering further.
**Takeaway from the argument from human dignity:** The impact and ubiquitous nature of the concept of human dignity justifies its value in the debate for no other reason than it represents a common conception that bridges diverse camps and could prove to be useful in reaching consensus, if possible.

**Takeaway from the argument from procreative beneficence:** While above it was argued that reproductive matters are too contentious at this point, the larger argument from benefit to others escapes the objections leveled against the argument from procreative beneficence and is worth taking a closer look at.

**Takeaway from the argument from transhumanism:** With such an abstract and idealized goal as transhumanism holds, especially as obligation to pursue the posthuman, it is worth being concerned about what it means to extend ourselves and our inquiry beyond our local values.

Finally, as a general critique, comparing the five arguments examined in this section shows the prevalence of genetic enhancements in debate. This is an important topic and clearly deserves space in the dialogue, but one wonders if it has had too dominant a role in the dialogue given its centrality in the prominent arguments of the debate. Likewise, critiquing enhancements and focusing solely on one type of enhancements will immediately and drastically weaken any inductive argument and render any deductive argument fallacious. Respectively, it amounts to assuming most by relying on only some or defending all while indicating a few. Stretching the debate beyond these confines will serve it well.

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1 Sections of this chapter were previously published in the *Encyclopedia of Global Bioethics*, “Enhancement,” 2015, Gary Edwards. With permission of Springer.


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104 Nicholas Agar, Humanity’s End: Why We Should Reject Radical Enhancement (Cambridge, MA: MIT Press, 2010), 151-177.


Chapter 4) The Adaptability Argument for Enhancements

The next step in examining the *de jure* aspect of an organizational approach to enhancements is to formulate a prima facie reason for pursuing enhancements. By assessing the state of the enhancement debate and finding the major arguments both for and against enhancements to be inadequate, this section turns toward establishing a constructive argument that justifies some enhancements, with a specific focus on promoting the ability of individuals and communities to change in response to their environments. This is what is meant here by the concept of adaptability. The overall argument of the chapter is as follows:

- **Premise 1:** Biomedical pursuits that promote or augment one’s ability to adapt ought to be permissible.
- **Premise 2:** Some enhancements do promote one’s ability to adapt.
- **Conclusion:** Therefore, some enhancements ought to be permissible.

This is also to suggest that for healthcare organizations ‘adaptability’ can be a useful concept when structuring a framework for determining the permissibility or impermissibility of specific enhancements. Ultimately, it is important for healthcare organizations to formulate answers to the ‘for whom’ and ‘what enhancements in particular’ questions that the conclusion of the adaptability argument will generate, because they are in the position to best construct adaptability justifications from a conception of enhancement derived from well-being, social, and individual perspective approaches. This chapter aims to help healthcare organizations begin to answer such questions by framing a matrix for conceiving of the “whoms” and “whats” that ought to be potential candidates for consideration (for example, who: professions on the cutting edge of performance expectations—military, law enforcement, surgeons, disaster relief teams, first responders; what: unknown environmental risks, global threats, certain cognitive biases, etc.). These arguments would need to be balanced with other competing interests as a matter of just resource allocation, for example. The argument here is not designed to be a no exceptions
utilitarian or deontological argument; however, it does promote a consequentialist stance at times yet is open to types of deontological and virtue-based claims. The aim is to encourage healthcare organizations to take consequential, deontological, and virtue-based premises seriously in their deliberations.

The chapter is divided into two sections. The first section lays out and argues for the conclusion that some enhancements ought to be permissible by examining the historical and philosophical frontrunner of the adaptability argument. The chapter then turns to defending premise 1: biomedical pursuits that promote or augment one’s ability to adapt ought to be permissible, and then to defending premise 2: some enhancements do promote one’s ability to adapt. The second section deals with two potential objections to the adaptability argument; that is, the speculation problem and the justice problem.

4.1) The Adaptability Argument

The argument will be built in stages. The first section lays out the historical roots of the adaptability argument and distinguishes it from the unfit for the future argument given by Savulescu and Perrson. By examining several objections aimed at moral enhancements, which the argument from unfit for the future relies upon, and more direct objections, we will begin to tease out the strategy of the argument that focuses on adaptability. The second section begins the case for the adaptability argument by articulating and justifying the first premise (biomedical pursuits that promote or augment one’s ability to adapt ought to be permissible), and the third section does the same for the second premise (some enhancements do promote one’s ability to adapt) under the heading of a survival heuristic.
4.1.1) The Argument of Unfit for the Future

*The Argument from Unfit for the Future:* Perrson and Savulescu argue that human beings, at least on their current trajectory, are at risk from a number of environmental, technological, and/or terrorist driven threats, which will be heightened by the acceptance of cognitive enhancements, and that the level of such threats makes moral enhancement an obligation, as a means to shore up people’s fitness. The argument for enhancements from one’s unfitness for the future attempts to highlight the types of challenges that human beings will face in the future (and arguably do face currently to some extent) and to suggest that pursuing enhancements might be a way, or the only way in some strong formulations of the argument, for securing one’s fitness for the future. The argument can be constructed as follows. If the future will provide environmentally and technologically driven challenges to people’s health and survival, then one must adopt enhancements (especially moral enhancements) in order to meet those challenges. The future will provide such environmentally and technologically driven challenges to people’s health; therefore, one must adopt and promote enhancements (especially moral enhancements) in order to meet those challenges. While the argument has ramifications for different types of enhancements, its formulation by Persson and Savulescu stresses the importance of moral enhancements for future fitness. Moral enhancements are any biomedical avenue or means that is designed for augmenting a person’s moral sensitivity, with some forming such moral sensitivity as a matter of moral motivation, a robust sense of normative ethical belief, a minimalist increase in moral appreciation of one’s actions, or an increased capacity for sympathy and/or empathy. Whatever the outcome, the argument highlights the need for moral enhancement in the face of threats that are capable of global devastation (nuclear disaster, pandemics, etc.) on the one hand and/or threats that are beneath our sensitivity to adequately
respond to (subtle lethal changes in environmental pollution that accrue their cost over long stretches of time). So the argument goes, if these threats cannot be met as a matter of people’s fitness for such phenomena, then there is a moral obligation to pursue such enhancements.\textsuperscript{1} In a summary of their argument, Persson and Savulescu offer the four central theses of the argument: 1) “it is easier to harm us than to benefit us,” 2) “due to the progress of scientific technology, we are now in a position to cause ultimate harm, that is, to forever make worthwhile life on this planet impossible,” 3) “since our moral dispositions are designed for life in small communities with limited technology, there is considerable risk that we shall cause ultimate harm,” and 4) “we need to consider moral enhancements if possible by biomedical means, alongside traditional means to minimize the risk of us causing ultimate harm with the advanced technology that we need to give a huge human population good lives.”\textsuperscript{2} It is worth noting that not only do Persson and Savulescu consider nuclear weapons and biological weapons to be tools of ultimate harm, they also consider cognitive enhancements to be part of that set too.

The argument from unfit for the future relies on moral enhancements directly and so is open to criticism aimed at moral enhancements in particular. My aim here is to briefly examine some charges leveled against moral enhancements, but not to offer an exhaustive analysis that would need a book length assessment in itself. By examining the major objections against the argument from unfit for the future and highlighting its more controversial parts, my aim is to table the argument due to its controversial nature while staying neutral on its defensibility. The more relevant point for this analysis comes from drawing a conclusion about the strategy and nature of the argument as opposed to the details of the argument.

\textit{The Argument Over Moral Enhancement:} Douglas frames the debate about moral enhancements as emotion regulators that can help positively affect the emotional basis of
motivation and behavior (tempering the impulse to violent aggression, for example). Originally framed as a counterexample to conservative thinkers that were concerned that enhancements, even if they help the individual enhanced, would harm others. Douglas’ argument is that moral enhancements as such would not only benefit the person enhanced, but would also benefit those around the enhanced. Those that embrace moral enhancements sometimes disagree with each other over matters of what specifically constitutes a moral enhancement in terms of what is the correct underlying capacities that should be enhanced. The three most popular areas of inquiry center around emotional, cognitive, and motivation interventions, and again there is the issue of preferable avenues of moral enhancement (pharmaceutical, genetic, etc.). There is very little substantial argument over a single intervention that is “magic moral pill.” With these preliminary issues aside, there are four major objections to moral enhancements that can be organized under the categories of 1) the moral pluralism objection, 2) the freedom objection, 3) the moral enhancements won’t deliver objection, and 4) the other means of sufficient objection. It is important to remember, this summary is limited as the argument for moral enhancements has received a lot of attention recently.

First, the moral pluralism objection holds that because there is so much disagreement over morality and which ethical theory is the most compelling, whatever moral enhancement is proposed will be controversial at least for some. Such controversy greatly inhibits the moral enhancement project. For example, Beck raises several objections based on outstanding conceptual challenges around developing a consensus on the meaning of morality and imbedded metaphysical challenges around the implications of divergent understandings of free will on the debate about moral enhancements. Although she is tentative about the practical application of moral enhancements, she does identify a few areas of application that she is at least partial to,
moral enhancements for criminals for example. However, she unfortunately pushes this whole concern about moral enhancements as a concern that is simply not immediate apparently due to the conceptual and metaphysical issues above. The problem here is that this assumes conceptual and metaphysical disagreements will slow down application or at least attempts at application, which seems to be not very compelling. There are plenty of normative disagreements about politics and no shortage of attempts and actual implementation of rules based on judgements that are a part of that disagreement. One can have a notion of what it means to be a patriot and can be aware of philosophically heated and conflicted discussions about the meaning of patriot, having pride in one’s country, the threats that may affect one’s way of life, and none of that would seem to be a hindrance to the actions of those that fight for their beliefs, soldier, terrorist, or pacifist alike.\(^5\)

Second, the freedom objection holds that moral enhancements will short circuit or inhibit genuine moral judgement and behavior, either as a matter of effecting moral deliberation or making it more likely that those morally enhanced will be manipulated or open to manipulation. For example, Harris raises an objection to moral enhancements as a matter of the prospect that such cognitive enhancements would negatively affect the role of choice while facing moral dilemmas.\(^6\) In another argument, Harris has made comparable claims against moral enhancement from the freedom related framework of self-reflection.\(^7\) Bublitz has joined the chorus against moral enhancements by arguing they may infringe upon mental freedoms (for example, the right to your thoughts being your own and your right to be free from thought interference).\(^8\) Finally, Sparrow is concerned about abuses made possible by the existence of moral enhancements.\(^9\) However, there are several rather strong arguments opposed to such concerns. For example, Rakic objects that one is always free not to decide to be morally
enhanced, as long as moral enhancement is not compulsory and enforced by the state as mandatory, which Rakic strongly opposes. DeGrazia is more interested in the outcomes of moral behavior, and while not committed to overriding freedom, is careful to weigh out the issue that protecting freedom, any kind of freedom, at all costs is an unattractive position. That is, there are moral behaviors that enhancements can hinder or subvert that would be more valuable than protecting freedom at all costs.¹⁰

Third, the moral enhancement ‘will not deliver’ objection holds that whatever moral enhancements are proposed to do, they simply will not be able to effect moral behavior or outcomes in any significant way. Shook argues that moral enhancement may be possible through the regulation of emotions barring the identifications of which emotions and which intensities are acceptable, but there are a number of arguments that suggest a morality pill is unrealistic and impossible stemming from concerns about rendering people more thoughtful or heightening moral appreciation, for example.¹¹ Another variety of this objection relies on the complexity of determining the precise correlates of ethical decision making and the futility of assuming that we can map it accurately in order to manipulate it productively.

Concerns about the Unfit for the Future Argument Itself: While the above objections aim at moral enhancements in general, several objections are worth examining that have been formulated directly at the argument from unfit from the future. The argument from unfit for the future is also open to several objections that were leveled against the argument from procreative beneficence (ethical permissibility of modifying children, for example). There is also some concern about the effectiveness of the traditional means we have. Why bother with moral enhancements using novel means when good old fashion means (like education, for example, and especially if better funded) still work. Some have attacked particular assumptions in the
argument. For example, Carter and Gordon point out that moral enhancements are most likely going to be inextricably tied to cognitive enhancements, so concerns about the riskiness of cognitive enhancements will be applicable to moral enhancements. Some have argued specifically against the utilitarian theoretical foundations of the argument from unfit for the future. For example, Agar is skeptical of the piecemeal application that he believes will affect how moral enhancements are realized in practice. That is, Agar does not offer a principled analysis of what is troubling about enhancements, rather, he is concerned with the particular effect the use of moral enhancements might have. As moral enhancements are often championed by utilitarians, Agar uses the moral theory, which espouses what is good is what produces the greatest good for the greatest number, to show how moral enhancements could potentially render the major defense against the absurdity of sacrificing a minority to save or increase the happiness of a larger number. For if a surgeon can sacrifice one healthy individual, harvest their organs, and distribute those organs to five people that are in need, then according to the utilitarian maxim, the right thing to do is for the surgeon to sacrifice that one person. The popular defense to this is for utilitarians to reply that the negative emotional response the doctor has about sacrificing that one healthy patient absolves the doctor from having to follow the utilitarian calculus. As Agar points out, it is simply a use of the Kantian notion that ought implies can. However, the issue for Agar is the negative emotional response is precisely what a moral enhancement like oxytocin can effect, especially if it allows the surgeon to “over-empathize” with the five people in need of organs. While this is speculative and dependent on practical considerations, it suggests to Agar that 1) such piecemeal application is potentially problematic and enough so to make moral enhancements suspect in the least and 2) moral enhancements are
best left to the realm of philosophical thought experiments that help us think through implications of our moral beliefs and commitments.\textsuperscript{13}

4.1.2) The Derivative Argument from Adaptability and Minimalistic Well-being

The Derivative Argument from Adaptability and Minimalistic Well-being: There is a derivate argument to be made as a matter of adaptability that purges the claim to moral enhancement or at least remains neutral on moral enhancement and avoids the utilitarian and enforcement commitments that Savulescu and Persson are committed to above. Adaptability is fundamentally about promoting the ability of individuals and communities to change in response to their environments. What we learn from the argument from unfit for the future and the debate about moral enhancements is that although there is issue with assuming which normative framework is king, it is at least theoretically defensible to embrace the instrumental application of such enhancements in some cases. The two most important things of note is that the argument from unfit for the future brings into focus, first, that adaptability is valuable and that, second, adaptability sometimes needs to be defined in relation to potential as well as actual threats. Here is where Douglas’s project is misunderstood. One of the ideas he is defending is that there are certain instrumental aspects of moral judgement that enhancements can help bolster, which in turn will bolster morality. It is this base level bolstering that gets us above the threshold, and we can build moral positions we see fit after that. With this in mind, the aim of this section is to defend the first premise of the central argument presented in the introduction of this chapter; namely, biomedical pursuits that promote or augment one’s ability to adapt ought to be permissible.

By focusing on adaptability, the concern is over one’s ability to cope with challenges that effect one’s minimalistic sense of well-being. This sense of well-being can be constructed over a
spectrum with survival on one end and thriving on the other. This section assumes as a starting point that making sense of a base threshold for assessing well-being as the promotion of survival is uncontroversial. That is not to say that there are not different ways to understand survival or that there are not different ways to implement however it is that one understands survival. There also could be justifications that are beyond or more robust than just mere survival. Returning to the first premise of the central argument of this chapter—biomedical pursuits that promote or augment one’s ability to adapt ought to be permissible—the overarching focus on adaptability helps to make sense of these pursuits in terms of other paradigms in healthcare that share a common goal. Caberra’s work on social enhancements is especially helpful in this regard. She maps the enhancement debate by designating the inquiry into three separate paradigms: the biomedical, the transhumanist, and the social. As the transhumanist paradigm has already been addressed, it will be set aside here. According to Cabrera’s designation, the biomedical paradigm adopts an individualistic understanding of persons that think of people primarily as individual operators pursuing goals determined by autonomous deliberation.\(^{14}\) Enhancements in this paradigm focus exclusively on making biological changes to these individuals. In contrast, the social paradigm conceives of people as nodes or primarily as a being that is in relationship to others. Enhancements in this category exclude biological interventions and focus solely on environmental interventions.\(^{15}\) Some may object, and indeed Cabrera is sensitive to this analysis, that social enhancements are not really enhancements per se. Granted, as our earlier inquiry into the conceptual space of the enhancement debate attests, there are a multitude of approaches to defining enhancements. Here, the semantic question is less interesting than what focusing on adaptability helps us to do in organizing the various paradigms at play in the debate. Namely, it provides a conceptual scheme that allows us to collect diverse and perhaps conflicting paradigms
into a single conceptual space. Biological interventions that focus on individuals are justifiable in order to promote their adaptability and likewise environmental interventions that focus on promoting communal goals are also justifiable in order to promote their individual or communal adaptability—that is, the ability to cope with challenges that effect one’s minimalistic sense of well-being. The idea being that biomedical pursuits belong in the same adaptability category as social enhancement pursuits, so objections at the abstract level against all biomedical enhancements would have to be applicable to social enhancements also, resulting in a reductio ad absurdum.

With an initial justification of the premise, it is time to turn to a different lens for making sense out of the justification of adaptability along global, transgenerational, and local lenses. These categories are presented as theoretical frameworks for making sense out of what adaptability could mean given one’s theoretical commitments. The division of the frameworks attempt to capture a wide range of categories that can be considered as the horizon of the debate. The following section—defense of the second premise of the argument—develops vertical categories and highlights specific applications. The resulting matrix (horizontal theory categories crossed with vertical application categories) generates numerous potential justifications for the argument from adaptability. Only one theory and application cross needs to be compelling for the argument to hold, but the more that hold, the more compelling the argument from adaptability should be.

*Three Theoretical Lenses for Making Sense of Adaptability:* The social and biomedical paradigms of enhancement can be made more substantial by investigating the relevant categories of implementation along global, transgenerational, and local lenses. By examining each category, the aim is to help make sense of what a justification by adaptability entails according to
each lens. This will need to be abstract and theoretical at first, but will turn to the more concrete examination in the next section. The goal is to draw commonality between this conception of adaptability and the already existing dialogue in bioethics in general about global bioethics, local value justifications, and argument over the protection of future generations. While adaptability does not explicitly appear in each of these inquiries, its commonality with each will be made apparent and serve as a way of integrating these particular lenses into the enhancement debate. It is important to note, accepting or adopting all three lenses is not necessary to defend the usefulness of adaptability or enhancements in general. Rather, each is offered here as a way to propose that the concept of adaptability is powerful insofar as it can integrate a diverse collection of lenses and as such it can provide a robust justification scheme for defending some enhancements.

The Global Lens: The concept of global bioethics has encouraged those engaging in the global bioethics analysis to approach bioethical problems from at least the following three frameworks: 1) an entire Earth framework that highlights the global dimension of bioethics in terms of health challenges and/or risks that may effect the global population as a global population, 2) an inclusive framework that highlights the global dimension of bioethics in terms of the inclusion of all bioethical issues relevant across the globe, and 3) a methodological framework that highlights a comprehensive bioethical vision for normative, substantive bioethical judgments. Outside of these three frameworks or orientations, sometimes the definition of ‘global bioethics’ is dominated by the ‘why someone should care’ issue, as in why someone from one country with a particular ethical orientation, culture, language, etc. ought to be ethically concerned about someone from another country with a potentially opposing ethical orientation, culture, language, etc. While these three frameworks to global bioethics create a
conceptual horizon from which to understand the concept ‘global bioethics,’ arguably there is an internal tension to holding all of these approaches at the same time. In particular, these three frameworks can be characterized as falling on a normative-descriptive spectrum that on one end formulates ought claims as substantive judgments applicable writ large, and on the other end that formulates global bioethics as rather descriptive projects of ethics or perhaps moral cataloguing writ large. The aim below is to offer a heuristic lens from which to begin to synthesize a conceptual framework to counteract and eliminate this tension and then use such a lens to engage and formulate enhancement regulation.

Before turning to such a synthesis, it may be valuable to assess the concept of ‘global bioethics’ from a bottom-up lens that adopts an anthropological or problem-based analysis of the concept of ‘global bioethics’ from the perspectives of inequality, scandal, trust, and globalization. From the perspective of inequality, health resources and standards of care vary widely from a global lens and this, in turn, has become magnified by free market economic pursuits and agendas.\(^\text{18}\) The impact of historical colonization, fear of disease (i.e. plague), major socio-economic shifts (i.e. industrial revolution), and increased travel (i.e. technological advances of aircraft) have highlighted the interconnectedness of the global population; and this paired with a neoliberal agenda that encourages free market pursuits, and sometimes imperialist drives, has greatly magnified the health effects of globalization.\(^\text{19}\) Likewise, scandals involving medical doctors participating in the execution of prisoners for organ procurement\(^\text{20}\) and medical doctors’ complicit participation in abuses of power like torture\(^\text{21}\) have greatly influenced the current conception of global bioethics. Also, abuses of medical research in ‘developing’ countries have contributed to the desire to formulate a global ethical discourse.\(^\text{22}\) And, finally, internal rationing practices of limited resources or medical practices such as kidney dialysis
rationing or selling organs have contributed to the need for a more just ethical discourse in global bioethics.\textsuperscript{23} While not an exhaustive examination of the concept of global bioethics, these anthropological reflections help to inform what specifically a synthesis heuristic will need to be able to take into account in the enhancement debate. If nothing else, these anthropological concerns set the stage for how to make the enhancement debate relative to global bioethics inquiry, and what other concerns such enhancement inquiry competes with in the larger global bioethics inquiry.

Loosely, there are two major streams of thought that influenced the founding and progression of global bioethical inquiry. The first is a narrow orientation, is clinically problem-focused, and is historically a matter of its medical ethics based orientation for considering bioethics issues.\textsuperscript{24} Arguably, this stream has produced a minimalist foundation—if any at all—for substantial global bioethical inquiry. Characteristic of the stream is Jonsen’s classic work \textit{The Birth of Bioethics}, which in a 400 page book less than 2\% of the text deals with ethical perspectives from outside the United States of America or from a more expansive lens than the problem solving context of American medicine.\textsuperscript{25} The second stream of thought takes a more expansive orientation to bioethics, so much so that it aims at a long-stretching, all-encompassing global lens from which to engage in bioethical inquiry.\textsuperscript{26} And it is this second perspective from which it makes the most sense to analyze the work of Potter. For Potter, bioethical inquiry needed to (and needs to) synthesize a scientific—biologically informed—perspective with an ethical perspective that is sensitive to global dynamics. In some of his writings, this heuristic lens through which this impulse was unified and focused was driven by the concept of ‘survival.’\textsuperscript{27}
This synthesis aim is captured in some of Potter’s other writings by the metaphor of a bridge as a matter of the proper role and scope of bioethics—and indeed global bioethics. Potter argues that the knowledge that scientists accumulate needs to be constrained and directed as a matter of serving the progress of cultures, peoples, and health. The role of bioethics should be, according to Potter, to facilitate progress with the aim of synthesizing factual assessments with non-factual assessments, while comparing such knowledge with its possible and plausible future application and implication. The hope, then, is to help secure progress as opposed to assuming that it is a given. Bioethics needs to bridge the dualisms that explicitly or implicitly splinter one’s future and communal decisions.28 Survival, in this analysis, becomes a crucial component in alleviating the tension between a normatively substantive framework and a descriptively cataloguing framework. While there still needs to be more work done to substantiate what survival may entail in concrete situations, the abstract argument here seems to suggest at least a theoretical compatibility.

For Potter, arguably, the major starting point for adopting a survival heuristic can be formulated as a rejection or concern about complacency; that is, all the scientific advancement and progression of medicine to deal with or provide for an individual’s and a population’s health ought not be assumed as the given outcome of our activities.29 What this new spirit of engagement needs to look like may vary according to context; however, an inquiry that is informed by physiological, psychological, sociological, cultural, and political arenas is critical for current and future survival.30 A key tenet of such orientations requires that bioethicists avoid the reductionistic tendencies of science by broadening their perspective and refusing to divorce hard science from ethical inquiry.31 As such, for Potter, a global view of survival necessitates that bioethics becomes inseparable from biology.32 And, biology, or what contributes to the
biological health of human beings, greatly expands the purview of bioethics beyond the narrow confines of a problem-focused and historically clinical ethics driven paradigm. Potter’s multidisciplinary intuition about a new paradigm for protecting life is preceded by a broad sense of adaptation. And such a foundation is necessarily future orientated, and will require a paradigm shift in terms of values and the scope of one’s moral concern, a confluence that can be understood for Potter as wisdom.

Aside from the theoretical or ideological clashes from divergent clinical, political, ethical, and cultural paradigms, concerns of practical engagement both at the micro-clinical and macro-organizational levels are and will be paramount. While modeling global bioethics discourse on international law discourses may be useful, such a modeling recapitulates a similar struggle within the international discourses, namely that enforcement and regulation, or the lack of such means, limits effectiveness. It may be worthwhile, in the spirit of embracing a broader purview, for global bioethical inquiry to consider what else can and ought to be folded into global bioethics under the purview of a survival heuristic. Certainly, there is a need for adopting all types of global health risks that effect global populations as such; that is, more specific health challenges in the forms of pandemics, disasters, and environmental deterioration. And, there is also potential for criticism that a survival heuristic is too minimalistic; that is, there may be need for a more robust thriving heuristic in order to justify bioethical inquiry.

The expansive purview required to analyze survival extends beyond the realm of the individual, the social, and the cultural and also needs to take into account survival in terms of threats posed. Yet, the extent to which one must anticipate potential threats remains an essential aspect of securing survival or at least increasing the probability of survival. Designations of categories of risk beyond personal into local, global and transgenerational require further
specification in terms of scope, likelihood, and level of harms. But even processing risk in such a way creates a broader lens for the reach of enhancement technology. It assumes that a dynamic response may require that one balance the risk of change against the risk of not changing, and further that accurate risk assessment will need to capture categories of threat. Underlying this threat is the natural ability or inability to cope with the challenge, such as cognitive biases that make one more prone to global catastrophic risks such as overestimating the likelihood of traumatic injury and underestimating the likelihood of disease. Ultimately, some sort of cognitive enhancement or moral enhancement may be able to allow humanity to cope with these threats. And, genetic engineering could be used as a tool for encouraging biodiversity or heterogeneity, which may increase one’s chances of surviving a pandemic. If one can make sense out of global threats, and justify linking enhancement pursuits to coping with these global threats, then it suggests a reframing of vulnerability in terms of global concerns.

The extent to which one must anticipate potential threats remains an essential aspect of securing survival or at least increasing the probability of survival and this rests on promoting adaptability in light of categories of risk framed from local, global, and transgenerational perspectives. Processing risk in such a way creates a broader lens for the reach of enhancement technology, and it assumes that a dynamic response may require that one balance the risk of change against the risk of not changing, and further that accurate risk assessment will need to capture categories of threat. For example, climate change could pose a threat as both immediate and gradual long-term change in climate could affect species’ survival. The point is to allow room for the view that not embracing enhancements might create or increase the probability of humanity’s susceptibility to certain future global threats. If one can make sense out of global threats, and justify linking enhancement pursuits to coping with these global
threats, then it suggests a reframing of enhancement pursuits in terms of global concerns and coping as a matter of pursing well-being. Pursuits that would potentially be dismissed as enhancements today could turn into the coping tools of tomorrow, and this is what embracing a well-being perspective for defining enhancements allows one to pursue. Certainly, there is a need for adapting to types of global health risks that effect global populations as such; that is, more specific health challenges in the forms of pandemics, disasters, and environmental deterioration.\textsuperscript{45}

\textit{The Transgenerational Lens:} This section turns to examining the idea of protecting future generations and attempts to integrate them with the idea of the common heritage of humanity and eventually with enhancement pursuits as a way to make sense of the transgenerational lens. While common heritage and its use as a conclusive objection against enhancements was set aside earlier, it still has value in terms of formulating reasons in the larger enhancement debate, and so is worth a closer look here. The following four central ideas form the conceptual backbone of the ‘common heritage of humanity.’ Something designated as part of the common heritage of humanity: 1) cannot be owned individually, 2) must be cared for by all of humanity, 3) must have the benefits derived from it fairly distributed among all, and 4) must be used for peaceful ends.\textsuperscript{46} The idea that research can be initiated on such things designated as common heritage has also been defended, especially if such research does not constitute a serious threat to the object in question.\textsuperscript{47} As such, the concept of common heritage points to moving orientations from local culture to human culture, from local membership to global membership, and from private ownership to communal responsibility.\textsuperscript{48} In the history of common heritage, many sorts of objects have been designated as the types of thing that can fall under the umbrella notion of common heritage, and this ranges from sea beds to historical sites
to Antarctica, etc.\textsuperscript{49} The concept of common heritage has also been extended to genetic material in particular and the human genome in general.\textsuperscript{50} In regard to the human genome, this has posed some to argue against individuals profiting from common heritage, and the formation of a “global genome trust” for the fair decimation of knowledge.\textsuperscript{51} Regardless, there seems to be some worry that such a notion as the common heritage of humanity strains the contractual genesis of the concept and challenges balancing sovereignty, ownership, and benefit.\textsuperscript{52} For some, the common heritage designation implies action and in particular conservation.\textsuperscript{53} For some, implicitly or explicitly, common heritage seems to imply something transferable and transferability raises questions of ownership.\textsuperscript{54} The aim here is to bridge three articles (articles 3, 4, and 16) of the \textit{UNESCO Declaration on Bioethics and Human Rights} in order to form a minimalistic justification ladder for protecting future generations.\textsuperscript{55} Article 3 frames human dignity and human rights as foundational concepts that ground moral status as a matter of individual identity. As such, the hope is to establish some broad articulation so as to defend human beings against abuses, violations, or infringements that are contrary to one’s moral status as a matter of rights claims. By identifying moral status with such a broad conception, the hope seems to be to demonstrate a justification that transcends appearances, cultures, age, sex, and any other category deemed arbitrary by its specificity.\textsuperscript{56} With a broad foundation in place, Article 4 frames the responsibilities that are required for those designated with a moral status, and it does so as a matter of benefit maximization and harm minimization.\textsuperscript{57} Article 16 aims to extend both the original moral status claim of article 3 and the responsibilities claim of article 4 to encompass future generations.\textsuperscript{58} In this sense, future generations are all those human beings—who have moral status because of their inherent dignity—that will or that one assumes will exist in the future.
As such, the following four principles are crucial for the protection of future generations:

1) one must make an adequate account of the needs and interests of future generations, 2) one is responsible for maintenance of the perpetuation of humanity, 3) one has special responsibilities toward the human genome, and 4) one has special responsibilities toward things designated as common heritage. This framework requires conceptually integrating common heritage with the protection of future generations. However, there are several challenges facing this integration. First, one of the challenges facing the integration of the concept of common heritage with the protection of future generations is the type of analogical analysis that seems to drive common heritage analysis; that is, such analysis depends on the claim that sea beds are like the human genome. While this may not be insurmountable, it does raise ambiguity in the analysis. Second, rights claims toward future generations and in line with common heritage understandings require weighing the existence of humans that do not exist. This raises epistemological problems of how does one know the interests of future generations, or what will necessarily harm future generations. The operative issue is how to extend human status to subjects that are not yet subjects, how to make sense of one’s right not to be harmed or one’s right to receive some benefit when it is a matter of predictive harm not actual harm. Third, there is also a non-identity problem such that not only does one’s current actions effect the lives of future generations, such also effects who will have a life in the future. That is, the matter becomes even more complicated insofar as making sense out of maximizing benefit or minimizing harm implies a future life capable of receiving such. But one’s actions may have another type of effect leading us to claims like if one accepts this framework, then one has to protect future generations that will never exist. These three problems provide a justification for exploring other options for integrating common heritage with protection of future generations.
One potential candidate is the concept of vulnerability. Vulnerability in its most abstract sense aims to capture all of humanities’ “fragility and finitude.” The concept of vulnerability serves many purposes in bioethical inquiry and arguably provides justifications for judgments about integrity, informed consent, restraining, and research initiatives; and the concept has been classified into many types (special, social, ontological) that highlight such diverse ideas as poverty, migration, HIV, resource allocation, and conflict of interest. The concept of vulnerability has been framed against the backdrop of protecting autonomy and expressing violations of human rights, and historically has alternated between the following polarities: a minimalist and a more robust approach of vulnerability; alterable and unalterable origins of vulnerability. For the sake of this inquiry, it is worth emphasizing the following three categories. Some argument has been made for thinking of vulnerability as an ontological state that is shared by all and that can be conceived as a baseline for all humans. Some argument has been made for thinking of vulnerability as a justice lens through which one ought to make fairness considerations and corresponding ethical judgments. Some argument has been made for thinking of vulnerability as a guiding principle for concrete problems faced by healthcare workers in research and in the clinic. It is this problem based sense of vulnerability that will allow one to avoid the concerns about the human dignity paradigm, while salvaging a sense of universal that such a paradigm offers.

From a vulnerability perspective, enhancements can be seen as a protection tool for future generations as a means of recognizing vulnerability and subsuming common heritage and protection of future generations. Returning briefly to the argument examined earlier, one can subsume the spirit of their aims into an adaptability concern under this transgenerational lens. As such, the argument for enhancements from “unfit for the future” can be formulated as
follows: If the future will provide environmentally and technologically fueled challenges to health, then we must adopt enhancements, especially moral enhancements, in order to meet those challenges. The future will provide such environmentally and technologically fueled challenges to health. Therefore, we must adopt enhancements, especially moral enhancements, in order to meet those challenges. The argument for enhancements from benefit to others can be formulated as follows: Pursuits that can contribute to the well-being of the larger community ought to be allowed. Enhancements are such pursuits. Therefore, enhancements ought to be allowed. The argument for enhancements from obligation to better our children can be formulated as follows: All parents and perhaps societies in general have an obligation to better their children and/or the children of their society. Enhancements are substantial tools for helping to better the lives of our children. Therefore, enhancements ought to be permissible and possibly ethically obligatory. These do not need to be accepted as conclusive arguments, but rather expressing concerns over promoting future generations’ ability to cope. Integrating vulnerability into these arguments provides a way to account for instances of global catastrophic risk and the health problems that might be inherent to them. Also, using global health problems as a framework for interpreting the meaning of vulnerability provides for a universal foundation that is free from the subject problem and the non-identity problem above as there is no theoretical assumption of a particular future subject, only the assumption of future problems. The problems one faces and responding to these problems provides the framework and motivates the analysis. The arguments from unfit for the future, benefit, and obligation to children extend to future generations as a matter of shared global health problems that are a matter of vulnerability, and addressing this will take care of that which is ‘transferable’ and needed by future generations. For example, Powell argues that germline interventions will be needed simply to maintain the
genetic health we currently enjoy, so that genetic interventions will be justifiable insofar as they promote well-being as a matter of maintenance. For Powell, the success of medicine in increasing survival rates and in what he terms as “relaxing selection pressures” will make genetic modifications needed to simply stay where we are.71 Likewise, Dennett’s argument in Freedom Evolves suggests a certain role for freedom as a product of evolution that aims at promoting long term survival of genetic material.72

The Local Lens: In conclusion, due to its more abstract conceptualization, the global and transgenerational lens are much easier to construct. The local lens because of its particular nature can only be given a passing examination, but a passing examination is all that it needs for now. Remembering Agar’s earlier comment about local values and the importance of framing value in terms of the particulars of one’s life used as an objection to the transhumanist argument for enhancements, there is a lens for approaching adaptability that needs to be formulated by locality.73 Also remembering Aydin’s earlier comment about the challenges of predicting based on essentialist assumptions and the need for understanding values that are bound by the contexts that give them meaning, there is an argument to be made for enhancements that can champion local values while avoiding any essentialist commitment.74 This does not mean that one needs to take a side on the issue of essentialist or non-essentialist accounts of human beings; rather, the aim here is to construct a lens that is neutral on these essentialist commitments.

Danaher, like Powell, argues that we may need enhancements simply to defend the values that we hold dear. So, some enhancement, rather than erode our local values, may actually be used in order to protect them. If that is so, it provides a startling counter argument to conservative thinkers that have charged enhancements with being a threat to our way of life, so to speak. Danahar provides a simple yet elegant example to help support his argument. The first
involves a surgeon that has developed a mastery of surgery that is essential to his sense of self-worth. Being told that he is going to be replaced by a surgery robot causes a tremendous amount of grief for him and understandably so. However, the pull of more efficient surgeries and therefore increasing the positive outcomes of surgery for patients and increasing patient well-being compel hospitals in a society to make this change. Danaher sees here a place for cognitive enhancements to make a local value impact on the surgeon and society (and indeed other workers that could be displaced by such advancements) by helping the surgeon, using beta-blockers for example, to increase positive outcomes of surgery without relying on the surgery robot. Levy echoes this assessment with his defense of across the board enhancers that, if determined to be of minimal risk, could be acceptably mandatory such as vaccines that societies require due to avoidance of infectious disease or the ingestion of fluoride from drinking water. Both incur a biological change that is seen as beneficial for the individual, immunity to infectious disease and dental health, and for vaccination at least, also for society.

So how can we deal with the future if the notions healthier and smarter are bound to the context and technologies that allow us to approach these changes. The key is to offer two separate approaches. The first focuses on enhancements that fall within the purview of the local values of the community. As a brief preview, this is a major area where healthcare organizations can contribute to the inquiry. The second focuses on the developing enhancements that promote the more abstract and looser project of promoting our ability to adapt regardless of aim. Mapping the concept of transitions on to this, one ends up with transitions determined by local values and transitions determined by local current and local future threats. It is also worth taking under advisement the weight of the objection leveled against genetic enhancements. While the thrust of the objections and arguments for genetic enhancements may be inconclusive, the very
prominence and frequency of the topic of genetic enhancement gives room for caution. For if the argument in the literature is even remotely representative of the dividedness of the societies which have produced it, this can reasonably give us pause in wanting to defend its obligation or elimination in a conclusive manner. Arguably, this is even more so for germline enhancements that aim to effect progeny, which, it sounds almost silly saying it explicitly, we have never met and do not know what values they will embrace or projects they will pursue. The difficulty of developing this lens in general is because it depends on the particulars of the locality to make it compelling. While the latter part of the argument attempts to make matters more concrete, making the matter truly concrete will need to happen in the trenches, so to speak. This is a role that is ideal for healthcare organizations, but a fuller defense of this will have to wait until later chapters.

4.1.3) Defending a Survival Heuristic

Potters concept of ‘survival’ can be formulated as the expansion of medicine to provide for an individual’s and a population’s health that is informed by physiological, psychological, sociological, cultural, and political arenas and avoids the reductionist tendencies of science by broadening scientific perspective and refusing to divorce hard science from ethical inquiry.77 Potter’s multidisciplinary intuition about a new paradigm for protecting life is preceded by a broad sense of adaptation, and such a foundation is necessarily future orientated and will require a paradigm shift in terms of values and the scope of one’s moral concern, a confluence that can be understood for Potter as wisdom.78 This synthesis is captured in some of Potter’s other writings by the metaphor of a bridge where knowledge that scientists accumulate needs to be constrained and directed as a matter of serving the progress of cultures, peoples, and health with
its possible and plausible future application and implication in mind.\textsuperscript{79} The end aim of all this, for Potter, is survival. There is also potential for criticism that a survival heuristic is too minimalistic; that is, there may be need for a more robust thriving heuristic in order to justify bioethical inquiry.\textsuperscript{80} While being open to the potential value of expanding this heuristic in terms of adding something beyond survival, the baseline of survival will suffice to establish the argument. Aside from the theoretical or ideological clashes from divergent clinical, political, ethical, and cultural paradigms, concerns of practical engagement both at the micro-clinical and macro-organizational levels are and will be paramount.\textsuperscript{81}

Here the aim is to fill in the categories sketched above, while being mindful of the categories’ artificial nature and that some categories are easier to populate with actual pursuits immediately here or on the horizons, while others are research projects or merely speculative. By organizing these technologies there is no claim being made about the moral permissibility of all of these technologies, but it seems likely a diverse audience composed of those committed to different and conflicting moral theories would find at least one of these examples compelling. As such, ethical opposition to some categories, when powerfully formulated, have been included. The idea is to show how these examples support the premise that some enhancements do promote one’s ability to adapt. This section takes for granted the need to establish the safety of these pursuits, which has received attention as a matter of direct harm, indirect harm, and concerns about the lack of long term usage data, to name just a subset of issues.\textsuperscript{82} Also, several examples that pertain to justice issues are reserved for a later section. The state of the literature varies in terms of articulation of general aims versus a focus on specific means addressed at general aims and specific aims. Regardless, each example is illustrative of the examples of enhancements that promote adaptability and in turn a survival interpretation of adaptability.
Where this may not be explicit, more commentary is offered to substantiate the link. Also of note, some assessment of enhancement below adopt a functionalist, well-being, beyond health, or beyond species-typical approaches to understanding enhancements. All of which are also instances of pursuits conceptually compatible with an organizational approach, to a degree as such instances may qualify as *de facto* and *de jure* given the scope of the organizational mission.

As the trend of research has moved away from a focus on mood enhancement from earlier days of the debate, that trend is paralleled in this argument. This is not to mislead, the arguments over mood enhancement and its potential to promote adaptability and survival belong here and indeed could double the length of this chapter. As that is not feasible, mentioning them in passing will have to suffice. I have also left sports doping, cosmetic surgery, and lifespan extension pursuits to the side as they represent more controversial examples for a survival heuristic. This is not to say that they cannot be integrated into this approach, but rather, that the section focuses on cleaner and bolder examples.

*Brain-computer Interfaces for Disabled:* Aas and Wasserman explore the implications of brain-computer interfaces that, for example, allow someone without limb function to manipulate a robotic arm in order to help facilitate daily tasks. For Aas and Wasserman, much depends on how we view these technologies, as either extensions of ourselves or mere tools that we manipulate to serve our goals. Seen as extensions of ourselves, there is a possibility that these devices can help mitigate disability stigma. However, there is a concern of dependence and perhaps exaggerated rhetoric on the nature of disability if such brain-computer interfaces are mainstreamed. Either way, the implications for survival for people who can integrate this technology into their lives is clear as a matter of facilitating independence around activities that meet the basic needs of people. Although Aas and Wasserman do not explore this in the their
article, the implications of this technology for police and military purposes, especially in terms of bomb disposal, also support the relevance of a survival heuristic for understanding adaptability.\textsuperscript{83}

\textit{Enhancing and Dis-enhancing Love for Conflict Prevention and Domestic Violence:}

Earp et al. have examined the feasibility and desirability of harnessing neurochemical modifications for the facilitation of relationships and bonding through oxytocin or oxytocin inhibitors. While there is disagreement on the ethical implications of the pursuit (potential for coercion, promotion of an individualistic bias, etc.) and a larger concern about whether “love” should be a topic of medicine and whether biomedical research should even be working on it, the potential import of such tools for helping to minimize conflict and help those effected by domestic violence, for example, to cope with their situations is undeniable. However speculative the claim that neurochemical influence equal love is beside the point. The issue of developing and potentially using these tools to help facilitate social cohesion or hinder the effects of attachment empower individuals to better cope with their environments and biological limitations in the face of possible threats to their survival.\textsuperscript{84} Garasic raises several interesting concerns to this approach stemming from, among others, a concern that anti-love enhancements could be used by soldiers or entrepreneurs to better pursue military careers or business objectives, and that a developmental hindering and potentially dehumanizing effect could occur.\textsuperscript{85} Marchant and Stevens offer an astute critique of love enhancing drugs in the potential abuse that could arise from being involuntarily exposed to a “love potion” in terms of inducing affection from the unwilling or influencing negotiations and decision makers (judges, for example).\textsuperscript{86} However, if the basic value of love in intrinsic it may be that, as Nyholm argues, the merely instrumental manipulation of love is simply not enough; that is, it is artificial sweetener as opposed to sugar.\textsuperscript{87}
Pharmaceutical Cognitive Enhancement Use by Doctors and Medical Students: Beyer et al. are skeptical of the usefulness of cognitive enhancements, especially of Ritalin for off-label use, and are skeptical of its potential effect as an intelligence boosting drug. However, they note the augmentative effect it is reported to have on short-term memory and perceived ability to focus in spite of its counter effect of long-term memory. While Beyer et al. argue we lack sufficient data to assess long-term effects, the short-term effects on medical students and doctors that use Ritalin off-label as a way to adapt to the pressures of the medical profession that often require long work hours and high stress decision making that directly effects patient care and well-being is substantiated by its usage. While there may be a need to regulate it and to be concerned about its safety and fairness, there is a clear line between the perceived effects of Ritalin and its implications for the physicians and medical students that use it, especially as a means of adapting to harsh working environments, their own professional survival, and most importantly, the survival of their patients. Enck has gone as far to argue that there is an obligation for medical professionals to use cognitive enhancements (methylphenidate, amphetamine, modafinil) insofar as such drugs can be proven to increase patients’ well-being by allowing medical professionals to provide, what Enck terms, “the best care possible.” Likewise, Santoni de Sio speculates on how cognitive enhancement use and its efficacy will potentially change the duties certain professionals have.

Modafinil for Occupational Hazards: Glannon, who is generally skeptical of cognitive enhancements, argues that there is an obligation to provide certain professionals with cognitive enhancements. For example, he points to transcontinental pilots or night workers who have legitimate purposes for its use beyond a disease-based framework. Clearly, with the case of commercial pilots, not only does their survival pertain, but so too does the survival of their crew.
and passengers not to mention ground personal effected by their actions and decisions. Therefore, the argument goes, promoting the adaptability of pilots deserves priority.

*Use of Nootropics in Academia:* Forlini points out that stakeholders' perspectives highlight the need to compete in extremely competitive academic environments and how the use of Ritalin (estimated at 20% of a recent population study of college students) is perceived to help students combat these pressures. Whether or not direct biological manipulation is the best path to take is open to dispute, as Lamkin argues, attempts to deal with the overly-competitive nature of education, the reliance on technological fixes, and how education has turned into a quantifiable business producing this commodity called a degree, are all social aspects of the issue that deserve attention. One can agree with Lamkin’s argument and still wonder whether or not there is an obligation to assist individual’s to cope with the situations they find themselves in while we all wait for such systematic changes to occur, for surely if the systematic changes were easy, we would have done them already.

*Memory Enhancement for Cognitive Dysfunction and Augmentation:* Dekkers and Rikkert argue that enhancing memory may be in its infancy and is plagued by a plethora of conceptual problems in terms of what enhancement and memory mean. However, they claim that the projects of memory enhancement and battling dementia are not only chemically linked as a matter of researched and applied drugs, but are also “intrinsically linked” as a matter of the central importance that memory and cognitive function have for us as individuals. Both attempting to repel the ravages of aging and memory decline due to dementia or Alzheimer’s disease and enhancing memory for whatever goals we pursue are interrelated aims; that is, proverbially, two sides of the same coin. The link between such enhancement and the potential for pharmaceuticals to help stave off memory decline illustrates examples of pharmaceuticals
helping people to adapt to environments and biological changes that threaten their survival. Likewise, Vedder cites instances of transcranial magnetic stimulation that represent a noninvasive way to increase the reliability of eyewitness memory. The application of this could help support the common good as a matter of promoting justice by increasing the accuracy of investigations and court cases. Hui, citing Schacter, categorizes and ethically assesses several errors of standard memory that could be potential targets of augmentation and correction under the guise of the “seven sins memory” (absent-mindedness, transience, blocking, persistence, misattribution, suggestibility, and bias). Each of which can occur in degrees and when crossed with a variety of projects and goals could generate threats to survival and concerns over promoting adaptability.

Memory Blockers for PTSD in Soldiers, First Responders, and Trauma Victims: While controversial, the use of propranolol given shortly after the traumatic incident has been reported to limit the effects of the fusion of stress induced emotional markers that become associated with visual, auditory, and embodied experiences of the trauma. While authenticity and mendacity objections are some potential outstanding concerns, the debilitating effects of PTSD may justify such pursuits. Of interest, Hurley raises concerns about the need to make sense of the moral health of those that use such enhancements. Her argument being that regardless of psychological health per se, there is the import of crossing a moral threshold or the violation of norms that were accepted in peace times that can affect one’s identity as a moral agent. Just short of debilitation, such experience not only need to be written into personal narratives but also accommodated into our moral identities. This gives a good reason to allow refusal of such interventions.

Motivational Enhancement: Kjaersgaard focuses on a subfield of cognitive enhancements that is concerned about motivational enhancement in particular. Examining the
effects of stimulants on motivational issues pertaining to routine and repetitive work or work that lacks to sustain the interest of the worker or produces boredom is an area of enhancement research that needs more attention. Kjaersgaard is ethically concerned that prolonged use of such enhancements may exacerbate the meaninglessness of one’s life and whether or not there is a value to effort that such enhancements thwart. Assessment of survival and adaptability would need to have some more detail than is available in the current literature to be made compelling, but it seems motivational enhancement in the abstract could easily accommodate such a connection. It is worth noting that whether or not there is enough data to conclude that cognitive enhancement use constitutes genuine motivation is open to dispute.

Enhancements for Civic Virtue: Jefferson et al. frame civic virtue as a potential target of enhancements. Citing several avenues (transcranial stimulation, pharmaceuticals for moral and cognitive enhancements), Jefferson et al. argue that potential targets of such enhancements could benefit society at large. In particular they cite efforts to increase tolerance and social cohesion, to augment the study and recall of civic knowledge, and to counteract apathy of social and electoral disengagement. Granted there is a good deal of empirical research on application and outcomes that needs to be done, the unique contribution of the argument is its framing of some beneficial outcomes of using enhancements that are beyond the individualistic framework and can contribute to communal well-being.

Enhancements for Moral Agency: Lev articulates four areas of moral agency that he argues are appropriate targets for moral or cognitive enhancements depending on one’s acceptable distinctions for determining cognitive and moral enhancements respectively. The first is the capacity for “critical reflection” that Lev understands as the capacity to take an independent stance in order to reflect on the implications of one’s behavior and actions
especially in terms of others. Second, the capacity for “impartiality” that requires one to step back and divorce him or herself from attachments that may cloud their judgement about matters. Third, the capacity for “imagination” that helps one to explore the ramifications of one’s proposed actions and behavior in order to consider the potential effects and outcomes that could arise as a result. Finally, the capacity for “interpretation” requires that one assess the facts at play in one’s moral judgements and decision for action with a sensitivity to what heuristics are being relied on to select relevant facts that become a part of moral arguments in support of moral claims. These capacities, Lev argues, are all compatible with accepting moral pluralism and also exist on a sliding scale that would require upkeep and maintenance above some designated threshold. While, Lev’s argument is theoretical and relies on the use of particular avenues not designated in his argument, the implications for adaptability and survival are apparent. For example, any aspect of moral agency that could be augmented or maintained by a proposed drug would have adaptability implications for political leaders charged with making policy decisions about distribution of resources, military policy and action, etc.\textsuperscript{102}

\textit{Cognitive Enhancements for the Promotion of Religious Virtues: } Enhancements have been proposed as useful for the religious. For example, some argument has been made of cognitive enhancement use by Buddhists. With a sense of a Buddhist inspired view of the value of life and the importance of pursuing moral perfection from the lens of escaping samsara, there are two theoretical issues that need to be addressed in terms of successfully integrating arguments for enhancements within Buddhist bioethics. The first is a matter of moving beyond the beyond health paradigm. The second is a matter of moving beyond universal formulations of enhancement and toward capacity formulations of enhancements. Some arguments against enhancements have taken the form of limiting biomedical intervention, and consequently
“bioethically sanction-able” intervention, to the domain of therapy and to the attainment of normal health.103 While beyond the scope of this section, transfiguring such limitations will be crucial to successfully establishing a presumption in favor of enhancements from Buddhist bioethics. The key conceptual areas seem to be around broadening what health means to include a spiritual sense of health in light of moral perfection and escaping samsara. Ultimately reversing this paradigm may require adopting a sort of “genospirituality paradigm” that, for example, conceives of genetic manipulation as a proper tool for spiritual development.104 Also, some arguments against enhancements can and have been interpreted as necessarily being a matter of a universal attempt to better humans in the abstract.105 An argumentative strategy to counteract this overreliance on abstract and overly-generalized arguments is to engage enhancements as a matter of the enhancement of human capacities in specific as opposed to enhancing humans in general.106 Both of these matters—a moving beyond the beyond health model and an enhancing capacities model—will be assumed below. One argumentative strategy in support of enhancements is to focus on the other common Buddhist techniques for pursuing moral perfection and escaping samsara such as meditation and the Eightfold Path. For many Buddhists, meditation is a primary technique for cultivating virtue and for integrating cognitive and non-cognitive aspects of character, moral judgment, and virtue.107 For many Buddhists, the Eightfold Path is a primary technique for cultivating moral perfection and facilitating the journey toward nirvana.108 Successfully integrating, for example cognitive enhancement through pharmaceutical avenues, is a matter of strengthening the analogy between taking Ritalin to enhance one’s focus and meditating to enhance one’s focus, and arguably, this integration becomes stronger by emphasizing how taking Ritalin could bolster one’s ability to meditate and derivatively pursue spiritual ends (integrating aims analysis).109 The argument for enhancements
from benefit to others synergizes with ‘value of life’ commitments from Buddhist bioethics in that enhancement can be harnessed to serve the spiritual aims of those in the community. Through cognitive enhancement by pharmaceuticals, Buddhists may become better teachers, make better articulations of central teachings, and better facilitate overall spiritual learning. Life span enhancement through genetic manipulation could create more time to encourage and foster each other’s spiritual growth, therefore, taking advantage of the unique spiritual opportunity human life provides. How does the argument for enhancements from benefit to others synergize with the pursuit of moral perfections from Buddhist bioethics? Moral perfection, and its pursuit, is a sort of tool that can be used to serve others in their spiritual development. As far as enhancements can bolster such activity, then enhancements can indirectly be used to serve and benefit others.

Enhancing Empathetic Responses: Carter suggests that moral enhancements that aim at increasing the empathetic response of someone could be viewed as medically indicated given the perceived defective state of the person in question (in particular, a lack of empathy). If the behavior of the individual in question is classified as pathological due to significant failures in moral reasoning that are products of a failure to take into account the welfare of another, then a means of intervention, such as a moral enhancement that aims to increase the empathetic response of that person, could be medically indicated. The question of whether something is medically indicated in this case invites the question of whether or not one is simply not medicalizing behaviors that are beyond the scope of medicine. The question being: does the potential use or application of the moral enhancement assume the defectiveness of the individual? This in turn generates concerns about social control, especially given instances of when the implementation of the moral enhancement would greatly benefit society as a whole, but
not the individual as in cases where a lack of empathy serves that individual well. Interestingly, Carter lumps murderous psychopaths together with surgeons to illustrate the point. Also, Tennison has explored the possibility that psilocybin may lead to an increased sense of openness and therefore serve as a moral enhancer.

Enhancement of Human Rights Awareness and Acceptance: Cohen tentatively defends enhancements that can be used to promote acceptance and adherence to the most basic human rights. By tentative, Cohen is aware and accepting of concerns about risk, cost, accessibility, justice, coercion, but he argues that assuming risk and the benefit balance out (and this is something that one can only really do in the moment with direct access to the stakeholders and technology in question) framing enhancements as an “adjunct project” that is complementary to environmental and educational means of promoting human rights is acceptable. While acknowledging disagreement about what specific right would count or even disagreement about what is the correct definition of morality, Cohen sees the prevention of genocide as a foundational example. Cohen uses the metaphor of “one more arrow in the quiver” to illustrate his point, and that it is an arrow that is worth developing.

Brain-Machine Interfaces for Cognitive Warning Systems: Military research into threat recognition systems attempt to identify threats and introduce threat detection from camera and computer inputs with threat detection from the human brain to create a feedback loop. For example, the computer-camera system captures images that are introduced to a human viewer that is wearing a non-invasive head set. The computer monitors the user’s brain-wave recognition of a threat and amplifies their recognition of the screen via the selected image so that the human user can take a closer look to identify the threat. The estimates of reduced workload according to the metric of demand on user, outcomes, effort, etc. was a factor of two compared
to not using the system. This is perhaps an example of enhanced threat recognition in its most immediate form.\textsuperscript{113}

\textit{Genetic Enhancement for Combatting Suboptimal Design:} Given the rate of technological change and the impact that humans have had on the construction of niches that in evolutionary terms potentially take us thousands of years to adapt to, some argue it makes sense to attempt to intervene in that adaptation process. It especially makes sense if one understands evolutionary process to be akin to a blind tinkerer making mistake after mistake until something is good enough rather than a master engineer that designs optimal specimens. As Powell and Buchanan eloquently put it, Mother Nature does not care about post-creation well-being, and they point out several areas where Mother Nature’s design could use some tweaking: suboptimal urinary tract construction susceptible to prostate gland issues in males, suboptimal sinus construction leading to poor drainage, blind spots in eyes, difficulties of childbirth, etc.\textsuperscript{114} All of which can be conceived of as areas of modification that promote adaptability.

\textit{Addiction Treatment and Prevention:} Sofuologo et al. hypothesize that cognitive enhancements (galantamine, modafinil, methylphenidate, guanfacine) could be useful for treating people suffering from addiction. There is some empirical evidence that addicts often suffer from cognitive impairments centered around attention, memory, and impulse control. Insofar as the cognitive enhancements mentioned above have been shown to elevate such conditions or at least help mitigate such issues, cognitive enhancements can be argued as a potential across the board tool that can help battle addiction.\textsuperscript{115} Also, Lev et al. suggests that we should consider enhancing children against unhealthy behaviors, with Nicotine use in mind.\textsuperscript{116} Bostrom takes a similar approach focusing on the enhancement of immune systems, cognitive functions supporting literacy and numeracy, and tendencies toward obesity.\textsuperscript{117}
*Hypoxic Air Machines for Fitness:* Spriggs presents an interesting case of hypoxic air machines that are used to create conditions where people can train their bodies to more efficiently process oxygen. This is beneficial in particular for fitness training or conditioning for physical performance in extreme high altitude climates. The ethical fallout from such technology is primarily limited to assessments of cheating by Spriggs, but he also raises some interesting questions of what should count as biological intervention. This is true especially when one considers that it is a common practice to build training camps in high altitudes, for example the United States Olympic Training Center in Colorado. The creation of an artificial atmosphere in particular helps people adapt to potentially harsh conditions under which their lives could be in danger if they are not properly prepared. There is also an argument to be made that stresses that optimal performance helps to improve the safety of those around you in some lines of work.

*Enhancements for Problem Solving:* Verdoux speculates on the effects of cognitive enhancements and artificial intelligence on the intractable problems of philosophy. For example, some have speculated that if two thousand years of human thinking cannot seem to resolve some of the central philosophical problems we face, maybe these problems are simply unsolvable and we should give up on them. Verdoux is interested in the influence of these new technologies on problem solving, which is about as flexible and adaptable of a pursuit as there is. Agar also explores this topic while defending a more skeptical account of enhancement implications for knowledge.

*Cognitive Enhancement Retention and Working Memory for Pilots and Surgeons:* Warren et al. have documented studies and reviews of potential cognitive enhancements specific to, and argued to be beneficial for, both pilots and surgeons. In summary, they highlight three
pharmaceutical avenues for enhancements of memory based capacities crucial to effective execution of each profession’s respective tasks. For example, Ritalin’s effect on concentration, working memory, planning has been documented. Bromocriptine has been proven to improve spatial-visual working memory, which is crucial to both surgeons and pilots alike. Finally, Donepezil has been documented as significantly increasing retention of complex tasks under emergency situations.\textsuperscript{121}

*Therapeutic Enhancement for the Sense Impaired or Injured Veteran:* Wolbring brings attention to two related issues involving the enhancement of those who for whatever reason are 1) sense impaired and receive some sort of therapy that actually raises their functioning level above the species typical (contacts or surgery that enhances beyond typical vision power) and 2) injured veterans that receive some sort of therapy that raises their functioning level also (limb prosthetic that allows for faster or stronger movements beyond the norm). Commenting on empirical feedback on the suitability of these outcomes, there is a certain amount of acceptability among the surveyed population about such uses.\textsuperscript{122} The operative idea being that such enhancements, even uninvited, may be welcomed tools that promote adaptability for those effected by them.

*Enhancements Through Smart-ware and Bio-ware:* To start, it is worth considering whether or not accessories such as smart glasses count as biological enhancements based on their ability to affect cognitive processing patterns.\textsuperscript{123} However, bold belief that it does constitute biological enhancements may be overstepping. The examples in this category are rapidly expanding and here are a small yet interesting sampling. Reference was made earlier in the argument about exoskeletons both for therapeutic and military use that would fall into this category.\textsuperscript{124} Along these lines, a cool down procedure that rapidly decreases one’s body
temperature post exertion has proven to be more efficacious than steroid use. Another type of
glove is also being developed and used by General Motors and NASA in order to help workers
grip wrenches, for example, and apply two times the amount force or cutting one’s workload in
half.

*Enhancements for Climate Change Recognition:* The section started with teasing out the
residue from the argument from unfit for the future, so it is fitting that our last example should
come from the same work. Persson and Savulescu argue that enhancements could be used to
help us detect threats that are too subtle for us to recognize as immediate threats. They have in
mind here climate change and the inability for not only individuals to adequately appreciate its
potential effect on our survival, but also a liberal societies’ inability to properly regulate and curb
behavior that will (and is) exacerbating the problem. Promoting solidarity and the cognitive
capacity to recognize threats that are incrementally as opposed to drastically threatening, so their
argument goes, will be crucial to our and the planet’s survival.

4.2) *Speculation and Justice Problems for the Adaptability Argument*

With the adaptability argument presented, this section aims to be proactive and defend
the adaptability argument from two potential objections: the speculation problem and the justice
problem. The speculation problem attacks the second premise of the adaptability argument; that
is, that some enhancements do promote one’s ability to adapt. Specifically, one can construe the
problem as taking issue with the concept ‘promote’ and ‘ability to’ by arguing that enhancements
are simply science fiction. The justice problem can be seen as attacking premise 1; that is, that
biomedical pursuits that promote or augment one’s ability to adapt ought to be permissible.
Specifically, one can construe the problem as taking issue with prioritizing augmentation of
one’s ability to adapt. There also seems to be an interpretation of the justice problems that attacks the argument from adaptably more broadly by arguing that the conclusion does not follow from the premises. Both problems will be addressed and responded to below.

4.2.1) The Speculation Problem

The Speculation Problem: The speculation problem holds that enhancements are simply science fiction and the bioethics work that is being done to explore the implications they will have on us and society is a waste of time because the enhancement project is too speculative. This seems to generate a number of options: 1) assume that they are never coming, 2) wait until they are actually here (if that ever happens), or 3) there is no need to be concerned about them. Options 1) assume that they are never coming and 2) wait until they are actually here (if that ever happens) are assumed responses for several thinkers examined below. Analysis of option 3 will follow later in the section.

There is a lot of back and forth in the speculation objection as to whether or not enhancements should be taken seriously. As Annas has warned, however, analysis driven by speculative dooms day scenarios can be unproductive and misleading. Annas stresses the concern of allowing unrealistic scenarios to effect bioethical discourse and the need to offset the speculative tendencies of futuristic philosophy and to avoid wasteful research. Also, there is some reservation about the inevitability of enhancements especially as a matter of skepticism that science can achieve the aims proposed by some pro-enhancement thinkers. If the science fails to deliver or the proposed scenarios never materialize, it is worth considering how much of the current enhancement literature will be filed by historians as utopian ramblings. Unfortunately, this often feels like a push that leaves two opposing camps merely contradicting each other with “I have faith in science versus I do not have faith in science,” and not really
arguing. The speculation problem rests on these insights and is present in the literature in several versions stemming from the rhetoric of media, an exaggerated prevalence, and an overhyped sense of hope and efficacy.\textsuperscript{131}

In particular, Lucke et al. argue it is more fitting to think of the current focus on pharmaceutical neuroenhancements as part of a larger cycle of intense interest in the promise of cognitive enhancements that is historically followed by what they term a “disillusionment.” They make a compelling case as they sketch stimulant use from the early 1900s in making their case. Perhaps the hype generated by repetitive media coverage and guidelines for how to handle patient requests for enhancements are premature as there is insufficient safety data. How is one to reconcile the difference? Either they are here and being used or they are too far away to worry? For cognitive enhancement in particular there seems to be a good bit of hype around finding the “smart pill” that is conceived of as some sort of magic bullet. Perhaps the search for the elusive smart pill is what Lucke et al. have in mind. But if we focus on building blocks of cognitive function, there does seem to be some traction for the claim that there is empirical data supporting the use of pharmaceuticals for limited societal issues (coping with fatigue, for example).\textsuperscript{132} Levy et al. demonstrate how several widely used pharmaceuticals have moral enhancement implications for their users, and make an argument devoid of searching for any sort of magic bullet.\textsuperscript{133} In contrast, Cohen refers to moral enhancements as largely science fiction, but then goes on to review an example from addiction studies that would result in attachment promoters or dampeners with sampling a “repurposing.”\textsuperscript{134} Raising the question of how repurposing justifies the rhetoric of labeling something as science fiction. Also, in parallel fashion, de Melo-Martin and Salles have criticized the moral enhancement project as being guilty of three latent assumptions that are ungrounded (assuming motivational changes entail moral
action, serious moral failings are a result of individual failings, failure of the scientific data to substantiate actual moral enhancement). With these framing assumptions in mind, de Melo-Martin and Salles construct a powerful and articulate argument that commits a strawman fallacy. It only knocks down the magic bullet theory of moral enhancement.\textsuperscript{135}

However, the speculation problem does have some teeth. One consequence of this speculative narrative is that it risks weakening the credibility of ethics work in the scientific community. The need for addressing more practical concerns means that ethicists that focus on speculative matters risk becoming irrelevant besides wasting time and resources. Gilebert and Goddard warn that “thinking too far ahead” in the inquiry over brain implants is irresponsible as a misallocation of resources and potentially reducing the rigorous value of scientifically informed neuroethics to the flippantness of science fiction.\textsuperscript{136} There does seem to be an audience for science fiction, or at least for focusing on the hope of enhancements. Partridge et al., who conducted a media survey to assess the hype associated with the media’s portrayal of neuroenhancements, found an expectedly lopsided portrayal. Of note, they report that of the surveyed media articles that 87% reported neuroenhancements as prevalent, while 94% portrayed it “as common, increasing, or both.” With 95% of the surveyed articles reporting on the benefits, while only 58% mentioned risks, and only 66% mentioned academic sources for support, with 44% naming author or journal.

Up to this point, the distinction of radical enhancement has been left untouched. There is good reason to be skeptical about both pursuits and criticism of radical enhancement, for it is unclear what radical enhancement really will turn out to be. It is worth wondering whether concerns over radical enhancement are what are coloring the speculation problem. If nothing else it seems non-radical and non-transcendent enhancement is what is worth defending at this
point. Perhaps there is some conceptual confusion over the interpretation of enhancement as radical and as non-radical. The distinction of radical has been used to capture instances of enhancement that augment one is natural capacities well beyond species typical or introduce new capacities. It might be worth also taking into account the author of the claim insofar as they may view all enhancement as radical insofar as it seems to be counter or dismissive of what they deem as more pressing global health and global justice issues.137

As a general response to options 1 and 2, it is reasonable to hold that enhancements are already here. The trick is to be precise about the categorization of enhancements in order to avoid the hype and magic bullet issues. Jones suggests that we consider dividing the enhancements into three categories. The first can be seen as simply extensions of health although there will be advancements in technology in this category that will be so powerful as to change the conception of health or what is the standard of care. For Jones, these are happening already in healthcare and biomedical research and have been happening for a while. The second category is enhancements that aim at non-health related super-abilities. These involve the traditional higher, faster, stronger, smarter pursuits, but for Jones are limited in reach (they are not radical) and they are within reach of researchers as in they are actual problems being examined on the bench or in the laboratory. The third category is radical enhancements and where the transhumanist arguments reside. For Jones, the first category is what bioethicists should be focusing on as it is the area where the most meaningful and influential work can be done by bioethicists. While Jones stays neutral of category two, he is clearly in favor of minimizing engagement with category three as it is too speculative to be compelling.138

The third option holds that there is no need to be concerned about enhancements and comes in two varieties. The first offers the claim that these are not new problems and so there is
no need to be concerned about the hype associated with enhancements. The second justifies the claim that there is no need to be concerned about enhancements because there are more pressing and important problems to address. First, there is argument over the best strategies for coping with these types of changes stemming from disagreement over the nature of the challenges that are presented: are these new types of ethical problems or just old issues in a new packaging, do these issues require a new way of thinking or are standard approaches up to the task, is it best to push inquiry toward precision and detail or to focus on the larger and more abstract issue of what these changes could mean for humanity.\textsuperscript{139} In particular, Brody seems to take this claim about these simply being old problems as a justification for ruling out anticipatory ethics. But this does not seem to follow. Old ethical problems that are still ethically problematic are still ethical problems. And if bioethics does not attempt to deal with ethical problems, what else is there for it to do? What Brody may be saying is that normative issues are the same, but the factual matters that comprise or paint the picture, so to speak, change. Developments in artificial intelligence, machine-brain interfaces and nanotechnology, for example, change the factual matters at play. But surely that data driving normative analysis is just as important as the theoretical frameworks used for the normative analysis.

The second version of the ‘there is no need to be concerned about enhancements’ objection attempts to justify this because there are more pressing and important problems to address. For example, Racine raises the concern that non-medically indicated allocation of healthcare resources could place an excessive burden on healthcare systems.\textsuperscript{140} Likewise does Nordmann.\textsuperscript{141} This concern deserves more attention and pushes us into the justice problem, so the defense against this strand will be handled in the next section.
In conclusion, are we only to pursue reactive bioethics? This seems to get medicine and science or at least their relationship to people backwards. Does medicine and science serve people or do people serve medicine and science? Roache defends speculative ethics by defining ethic's regulatory aim in terms of it increasing the likelihood that unethical pursuits will become mainstreamed. Specifically, she claims that concerns about speculation are distractions from pursuing what is more valuable; namely, the possibility of shaping the visions that will drive enhancements pursuits and the technological integration in the future. There also seems to be an incoherence to arguments that criticize speculative ethics by themselves speculating on speculative ethics. If nothing else, it raises the question of where exactly critics of speculative ethics plan on justifying the framework they use to criticize speculative ethics that is not in itself somewhat speculative, at least in a derivative manner, as it is commenting on speculative ethics. Here the best one can do is accept the criticism as a caution and acknowledge the possibility that the threats may not arise or the biomedical science may not deliver on its promises, but to purge speculation is an overreaction as it simply is too powerful of a tool not to accept the risks associated with it. Thinking enhancements are going to arrive can have just as much of an impact in how people perceive medical care and the health organizations that provide it, what ethically appropriate research agendas are, and what is justifiable resources distribution as if they do arrive. If one is going to protect the freedom and equality of human beings that may become involved in enhancements pursuits, leaving enhancement regulation up to speculative chance is unacceptable. As Roache has argued, purging all speculation means relinquishing the ability to mold enhancements and the end to preventing unwanted measures or potentially pursuing explicating beneficial ones.
Where do we go from here? It is worthwhile to keep in mind a few closing thoughts from Raccine et al., Agar, and Ferrari et al. Raccine et al. argue that the assumptions behind emerging technologies and in particular cognitive enhancements need to be unearthed and examined—and specifically conceptual assumptions harbor a tendency to avoid explicit definitions—of which a remedy can be sought within interdisciplinary inquiry. They continue to argue that the very nature of enhancement inquiry requires broadening one’s horizons beyond the academic foundations in which they feel the most comfortable by integrating assessment from multiple disciplines. The real antidote for dealing with the sting of the speculation problem is to start to think seriously about, what they term as, “the ethics of doing ethics” from an interdisciplinary perspective when it comes to assessing the availability of new technologies and their speculative application.144

In discussing the work of Bostrom who is pro-radical-enhancement, Agar expresses the concern that Bostrom and presumably other transhumanists may be suffering from a cognitive bias. According to Agar, Bostrom might suffer from focalism or the tendency for “people to think of their lives in a vacuum” so that whatever the nature of the event (either good or bad by our immediate estimation), we have a tendency to exaggerate the high of the good or the low of the bad. This also tends to be magnified the further we are from the proposed enhancement. It is worth wondering in what sense defenders of the speculation problem may be susceptible to this when valuing the distraction they believe enhancements cause or when prioritizing justice concerns.145

Finally, Ferrari et al. argue that what is needed is to shift enhancement inquiry toward contextualized questions of acceptability and desirability of cognitive enhancers, for example, and away from the principled questions of violations of self-directedness.146 Enhancements
pursuits are products of what Ferrari et al. refer to as a technological vision that are contingent, constructed, and historical. Taking this seriously means moving past abstract analysis of the plausibility and moral permissibility or impermissibly of enhancements and towards contextualized assessments that relate what pursing this type of enhancement means in the context of healthcare and political citizenship within a particular community. Ferrari et al. suggests reframing the issue as a matter of focusing on the compatibility of the technological vision as a matter of a pursuit to be appropriately judged at the confluence of individual pursuits, communal fit, and overlapping values. If this is to be taken seriously, it is difficult to imagine doing so without embracing some form of speculative and anticipatory ethics.

4.2.2) The Justice Problem

The justice problem is a complex problem that will be segmented here into three subpoints as the objections from individualism, inequality of access, and disparities. Although Dickenson seems fairly convinced by her analysis of the “me” focus of enhancements, the adaptability argument also encourages recreating enhancement pursuits in the “we” category as biomedical technologies and practices that can be harnessed to serve communal interests. While there is clearly a line of enhancements that focus solely on what Dickenson would surely consider individualistic, to assume that this raises a conclusive objection against enhancement given the ground covered in the adaptably argument would be to commit a parts to whole fallacy. Arguing that it creates a prima facie reason to dismiss enhancement would seem to sacrifice the potential good enhancements could do from a social perspective. While the focus of this part of the argument is on biomedical enhancements in particular, it is worth noting that several proponents of social enhancements have made arguments in support of the enhancement project.
in general. Daar et al. identified what their expert panel determined to be the top ten biotechnologies that could be used to help developing nations. Arguably, all ten of the identified biotechnologies fall outside of the traditional enhancement (as beyond health) umbrella. However, this does not rule out enhancement technologies as unjust per se. Rather, it provides evidence to support a prioritization claim. Also, each of these ten biotechnologies falls into potential problem territory, that is, if enhancements can help us develop and apply these technologies, then there is an argument to be made that some enhancements should be prioritized over these ten non-enhancement biotechnologies. Notice though, that if one adopts an organizational approach to enhancements, then these biotechnologies can be properly integrated as social enhancements. As examined earlier, Cabrera argues that not only does it make sense to talk of social enhancements, but she argues that one should prioritize the social paradigm of enhancement pursuits over the biomedical. The argument that public health ethics can adopt certain enhancements has been put forth by Lucke and Partridge who have defended non-invasive attempts to encourage the cognitive enhancement of populations by stressing and developing infrastructures that augment the following areas that help determine optimal cognitive operation: enough sleep, physical exercise, healthy diet, and promoting mental health. Finally, a third problem for proponents of the individualism objection is how to make sense of the extended mind thesis that suggests, when applied to the enhancement debate, that there is no real distinction between internal versus external enhancements. So, if internal enhancements, from pharmaceutical enhancements for example, affect the biological domain of its user, they could also function as environmental enhancers of those surrounding the user. An objection from inequality of access has also been raised against enhancements that holds because of the assumed prohibitive cost of enhancement technologies, only the well-off in
society will be able to benefit from them and this will increase inequality in society. Cakic examines the use of nootropic drugs as means for those in the academy to attain an unfair advantage, which he finds to be not very compelling. For example, if the objection is that nootropics create an unleveled playing field, then the logical implication of this is that at one point there was a level playing field, which is unlikely given the varied backgrounds of most students, economic resources, quality of prior training, etc. Also, the argument from adaptability justifies the acceptance of a minority that can provide a great benefit through the accumulation of a knowledge base that increases adaptability, and as Buchanan has argued—both as a response to the individualism and the inequality-of-access problems—one can think of some enhancements as non-zero sum products where the enhancement of a few if harnessed correctly is capable of benefiting the many (i.e. productivity, intelligence, etc.). This is arguably one of the dominant assumptions of the criticism. Zero-sum games at the most basic level assume there is a limited good that is being competed over by two individuals meaning that the result of the game requires a one to nothing outcome. However, several categories of enhancements examined under the survival heuristic are not necessarily committed to such an assumption. In a similar manner, Bostrom argues that there are several different types of non-positional goods that do not lose their value because someone else has them. Height is often argued to be a positional good that loses its value if others possess it too, but increases in empathy or an augmented awareness of human rights and climate change threats, among many others, escape this justice charge. In particular, it is worth noting the diffusion of technological advancement in general sometimes requires an uneven distribution that is typically followed by the lowering of prices (and a raising of access) and eventually a more just distribution.
However, with so much suffering in the world that could be at least partially mitigated with resources that enhancement pursuits will consume, is it justifiable to pursue enhancements—biomedical pursuits designed to promote well-being beyond normal health—while so many are struggling to attain normal health? Life expectancy is in the 70s in some developed countries and in the 30s in other countries. When some enhancement research project’s budgets are in the millions of dollars and basic antibiotics that could save the life of a child are in the pennies, is not this a gross violation of justice, or in the least suggest that there is a better use of the resources spent on enhancement pursuits, especially as UNICEF reported in 2014 that over half a million children under the age of five in 2013 died of diarrhea. As a preliminary balancing point, it is important to remember that justice concerns are pressing, but theoretically imply or presuppose survival and in turn adaptability, and potential threats that rise to the threshold of catastrophic and are capable of eliminating or greatly decreasing the probability of global survival or the viability of future generations deserve a voice at the bioethics discussion table. However, there are plenty of reasons to qualify the justifiability of enhancement pursuits, yet concerns that effect adaptability at least deserve resource allocation also; this is not to say that gross disparities in global health do not, but it is to say that an enhancement allocation agenda should not be dismissed just because it is an enhancement agenda (ultimately it might be considered only praiseworthy but not a duty).

Importantly, this holds regardless of the scope of justice defended; for example, Hume is the classical statist theorist and argues that the scope of justice claims is bound by local concerns and underwritten by sympathy as determined by relations with a locale or society. Rawls is the dominant contemporary theorist that endorsed a statist theory as a matter of distributive justice and argues that the principles of justice are limited to the bounds of a nation; the
application of the Rawlsian difference principle—it is justifiable to accept disparities in
distribution if such disparities benefit all including the worst off—to enhancement technologies
has produced a largely favorable but mixed review, and some egalitarian objections.\textsuperscript{161}
Unfortunately, the discussion has been overly focused on genetic avenues. Buchanan et al.
articulate the classic Rawlsian and Statist justice theory of the acceptance of enhancement based
on the difference principles that demonstrates a Statist theory compatibility with the adaptability
argument.\textsuperscript{162} The enhancements examined under the survival heuristic represent potential
categories that can be harnessed by a few for the benefit of populations deemed the worst off.
The same would seem to apply to a global justice theorist since the claims of equality, fairness,
and justice that must be distributed on a global scale would still imply a survival value that is
compatible with the argument from adaptability; however, this leaves open the question of what
extent such resources allocation is appropriate.\textsuperscript{163} In particular, Nam’s analysis harnesses a
capabilities approach that not only argues it is permissible to use enhancement technologies to
address capability challenges, but that it is a moral obligation.\textsuperscript{164} The justice problem raises
concerns that are important and need to be taken into account as we prioritize distribution, but in
itself it does not render a conclusive objection to all enhancements.

\textit{Concluding Thoughts on the Adaptability Argument:} The chapter defended the claim that
some enhancements ought to be permissible. The justification for this claim rested on the
defense of two premises (premise 1: biomedical pursuits that promote or augment one’s ability to
adapt ought to be permissible, and premise 2: some enhancements do promote one’s ability to
adapt). This section’s turn toward establishing a constructive argument that justifies some
enhancements establishes a central component to the \textit{de jure} aspect of a healthcare
organizational approach to enhancements. The specific focus on promoting the ability of
individuals and communities to change in response to their environments helped to generate numerous categories for identifying relevant enhancement pursuits from the value lens of the global, the transgenerational, and the local. Integrating these normative frameworks with technological developments helped to generate a fairly comprehensive, yet not exhaustive, grouping of enhancements pursuits: Brain-computer Interfaces for Disabled, Enhancing and Dis-enhancing Love for Conflict Prevention and Domestic Violence, Pharmaceutical Cognitive Enhancement Use by Doctors and Medical Students, Modafinil for Occupational Hazards, Use of Nootropics in Academia, Memory Enhancement for Cognitive Dysfunction and Augmentation, Memory Blockers for PTSD in Soldiers, First Responders, and Trauma Victims, Motivational Enhancement, Enhancements for Civic Virtue, Enhancements for Moral Agency, Cognitive Enhancements for the Promotion of Religious Virtues, Enhancing Empathetic Responses, Enhancement of Human Rights Awareness and Acceptance, Brain-Machine Interfaces for Cognitive Warning Systems, Genetic Enhancement for Combatting Suboptimal Design, Addiction Treatment and Prevention, Hypoxic Air Machines for Fitness, Enhancements for Problem Solving, Cognitive Enhancement Retention and Working Memory for Pilots and Surgeons, Therapeutic Enhancement for the Sense Impaired or Injured Veteran, Enhancements Through Smart-ware and Bio-ware, Enhancements for Climate Change Recognition. While these examples are meant to help justify the conclusion, they are not necessarily conclusive in themselves for as the speculation problem and justice problem showed, there may be other concerns that could mitigate the force of the adaptability argument for healthcare organizations.


7 John Harris, “‘Ethics is for bad guys!’ Putting the ‘moral’ into moral enhancement,” *Bioethics* 27, 3 (2013): 169-173.


94 Wim Dekkers and Marcel Olde Rikkert, “Memory enhancing drugs and Alzheimer’s Disease: Enhancing the self or preventing the loss of it?,” Medicine, Health Care and Philosophy 10 (2007): 141-151.


Chapter 5) Healthcare Organizations as a Platform for Coping with Enhancement Pursuits

Over the next two chapters, the aim will be to move toward operationalizing adaptability in healthcare organizations. First, however, there needs to be some foundational work done to help make sense of how a charge to promoting adaptability can find a home in healthcare organizations. This will require leaving adaptability aside for the moment while turning to competing platforms for coping with enhancements and an introduction to the current state of healthcare organizational ethics. Thinking back to the introduction metaphor of silos and how there exists two yet unintegrated silos of inquiry that this work aims to integrate (one philosophical and the other organizational), up to this point the argument has pieced together a conceptual bridge in terms of an Organizational Approach to enhancements (Chapter 2) and a normative bridge in terms of the Argument from Adaptability for enhancements (Chapter 3 and 4). In this chapter, the strategy of this latter half of the argument shifts from 1) building a bridge from the philosophical silo of the enhancement debate toward the organizational silo to 2) building the bridge from the organizational silo toward the philosophical silo. As this is a complicated process, this chapter will focus primarily on integrating the conceptual bridge in terms of an Organizational Approach to enhancements and formulates a pragmatic justification accepting such an approach. The next chapter will continue this conceptual bridge building and also include integration of the normative bridge in terms of the Argument from Adaptability for enhancements. With that said, the first step in this shift is to sketch out an argument for why healthcare organizations matter in the enhancement debate and why healthcare organizations ought to care about enhancements.

The chapter constructs and defends four theses. Thesis one: Non-organizational platforms face certain challenges in coping with enhancements and these challenges suggest that
it is worthwhile to investigate other potential platforms. Given the logical structure of the category, organizational approaches are a fitting candidate. Thesis two: Healthcare organizations in particular should be aware of enhancements because 1) healthcare organizations are potentially strong platforms for coping with enhancements and 2) the speculative argument for the inevitability of enhancements suggests enhancements will be a factor that affects the delivery of healthcare. Thesis three: Moral agency of healthcare organizations needs to be reconfigured so that healthcare organizations, as ideal learning environments for coping with enhancements, can be viewed as active operators in the enhancement debate that are always in the process of constructing a conception of enhancements. Thesis four: Those successfully coping with enhancements need to take into account the context of healthcare organizations and the shifting landscape they operate within, especially common expectations of healthcare, factors of mistrust and uncertainty in patient populations, and the shifting economic and technological landscape.

The chapter divides into two sections. The first section examines and assesses the limitations of non-organizational platforms on its way to constructing a positive assessment of healthcare organizations as a platform for coping with enhancements. The second section begins to construct the foundation for an organizational approach to enhancements.

5.1) Limitations of Non-Organizational Platforms

By framing the limitations of non-organizational platforms, this section facilitates further inquiry into thinking about the challenge of enhancements from an organizational platform and more broadly from an Organizational Approach. In particular, the focus on non-organizational platforms will involve taking a closer look at a representative sampling of such platforms under
the labels of clinical, national, and global platforms. While not an exhaustive assessment, the problems raised as a matter of 1) the theoretical challenges each platform faces and 2) a particular example generated from each dysfunctional platform, are presented as a justification for taking an organizational platform seriously. Ultimately establishing how serious one should take the organizational platform will be reserved for the next chapter. In preparation, the next step here will be to take that impetus for exploring options outside of non-organizational platforms as a cue to begin to makes sense out of why healthcare organizations should care about enhancements.

5.1.1) The Limitations of Clinical, National, and Global Platforms

The basic idea that will be defended here is that there is a power vacuum around enhancement technologies. The nature of this vacuum and what we can do about it is something that will be explored in more detail. The argument for this thesis will unfold in two parts. First, by making the somewhat artificial yet instructive distinction between organizational and non-organizational platforms, this chapter defends the claim that the non-organizational platforms have some significant outstanding challenges in terms of their capacity to serve as a platform for coping with enhancements. This is simply to claim that non-organizational platforms face certain challenges in coping with enhancements, and that in their current form, these challenges suggest that it is worthwhile to investigate other potential platforms. Second, it takes this negative argument to be a presumptive reason in favor of exploring the feasibility of promoting an organizational platform; however, substantiating this will take the remainder of this chapter and the next to fully articulate and defend. As an organizational approach to dealing with enhancements is absent from debate, it, in the least, presents a topic of interest. The starting point for this defense will be to begin to conceive of integrating an organizational ethics
framework into the enhancement debate. The formal argument for this can be structured as a disjunctive syllogism that follows:

- **Premise 1**: Either non-organizational platforms or organizational platforms are preferable platforms for coping with enhancements.
- **Premise 2**: Non-organizational platforms face some significant challenges in the feasibility of their capacity to regulate or promote enhancements.
- **Conclusion**: Therefore, organizational platforms are preferable and in the least worth exploring.

Logically, it is safe to assume that Premise 1 is uncontroversial. The main criticism of it would most likely be the artificiality of the distinction or rather something along the lines of asking: is the distinction an accurate assessment of platforms? This is set aside as the logical structure of the premise covers the horizon of possible responses granted to the interpretive starting point.

Premise 2 focuses on and examines ‘non-organizational platforms’ as a matter of the following three categories: individual/clinical, national, and global. Granted this is not an exhaustive assessment, but it does represent the major categories of enhancement engagement. The takeaway being that it is unlikely that there will be significant leadership on enhancement issues from these fractured non-organizational platforms and that means healthcare organizations have an important role to play in the enhancement debate. Below, each platform is examined in terms of both a sketch of the flavor of theoretical problem the platforms faces followed by a particular concrete example that is derivate of that theoretical dynamic.

*Challenges Facing Clinical Platforms*: The first grouping of platforms can be characterized as being composed of a plurality of methodologies. Healthcare ethics methods are varied and this variation is rooted in the historical development of healthcare ethics as a multidisciplinary field. Arguably, healthcare ethics methods are as varied as the number of disciplines that contribute to addressing normative healthcare questions. That is, there is no
over-arching and universally accepted methodology of healthcare ethics; rather, there are many normative methodologies that have been applied to healthcare ethics problems. Historically, normative methodologies developed as the result of the integration of different disciplines, and these disciplines, such as philosophy, theology, medicine, law, and social sciences have each contributed distinct methods of analysis on a single area of healthcare ethics.\textsuperscript{1} Awareness of this history helps explain the value of normative methodological pluralism at play in the enhancement debate. Historically, the development of normative methods in healthcare ethics can be divided between an early formative phase and a late formative phase. The early phase in the development of normative methods in healthcare ethics is characterized by the search for more substantial and powerful ways for addressing the ethical issues of medicine. This search can be historically mapped according to the arenas where this search took place; that is, the initial expression of ethical concern developed in the clinic, then evolved at conferences, and finally landed in academic centers. The beginning of healthcare ethics, and indirectly the normative methods of healthcare ethics, is rooted in medical ethics. As such, the beginning of normative methods in healthcare ethics is rooted in the search for normative methods to respond to issues in medical ethics. Medical ethics, in this phase, was dominated by professional codes of conduct (the \textit{Hippocratic Oath} and the \textit{American Medical Association’s Code of Medical Ethics}). The inadequacies of these frameworks, and indirectly methodologies, in addressing certain ethical issues created the impetus for exploring new modes of inquiry and normative methods.\textsuperscript{2} It is this internal unrest within the medical community that eventually finds expression in conferences as medical professionals gathered to voice their concerns about ethical issues associated with medical practice, medical research, and advancements in technology. The invitation of those outside of the medical community introduced unfamiliar normative
methodologies to the dialogue on ethical issues. Finally, the formation of centers—such as The Hastings Center and The Kennedy Institute—formalized the exploration of ethical issues expressed at conferences and helped introduce the application of methodologically diverse research on ethical issues.³

The late formative phase is characterized by sustained analysis of healthcare ethics issues by the distinct methodologies provided by theology, philosophy, and practical-focused inquiry into healthcare ethics questions. This sustained analysis is the fruit of structures put in place in the early formative phase. As such, some theologians, and in particular Catholic and Protestant theologians, approached ethical issues in medicine from the perspective of their religious traditions. As such, many theologians imported the methodologies from their theological inquiry into healthcare ethics inquiry.⁴ Likewise, some philosophers, after moving beyond the theoretical focus of metaethical inquiry that dominated moral philosophy for a large part of the twentieth century, began turning to more practical healthcare ethics issues. Those that did brought with them a drive for conceptual clarity, for unearthing assumptions, and for foundational analysis of ethical issues.⁵ Besides methodologies characteristic of the discipline of philosophy, philosophers also contributed and continue to contribute to the development of methodology in healthcare ethics by applying the ideas of ethical theorists to healthcare ethics debates. For example, philosophers have helped to shape methodological considerations by offering consequentialist, deontological, and virtue theory analysis of healthcare ethics problems.⁶

Arguably, government’s role in the healthcare ethics debate has shaped healthcare ethics methodology. The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and The President’s Commission for the Study of Ethical Problems in
Medicine and Biomedical and Behavioral Research both stimulated ethical debate in the following ways. First, the commissions infused the sometimes abstract and speculative nature of healthcare ethics inquiry with a spirit of practicality and urgency as the commissions’ mandates required concrete policy formulations. Second, the commissions provided sustained inquiry into issues in an open and public forum. Third, the commissions were inclusive in that the commissions included medical professionals, academics from diverse disciplines, and, most notably, lay people.

As the field of healthcare ethics has developed and matured, diverse goals and aims have influenced the development of normative methodology. Like governmental inquiry, clinical medicine and law have contributed a concern for practicality and decision making to normative methodology. The practical demands of the clinic required medical professionals to move beyond the abstract analysis of healthcare ethics issues and focus on the practical application of healthcare ethics policy. This practice encouraged the formation of a decision-making framework for answering healthcare ethics questions. Likewise, some lawyers engaged healthcare ethics issues and contributed to the methodology of the field by using a rights framework and case-based precedence driven analysis to answer practical healthcare ethics problems and to make public policy and legislation. This practical-focused inquiry, along with theology and philosophy, has contributed to forming the many methodologies of healthcare ethics.

With this history in mind, the distinction between value pluralism as a metaethical thesis and value pluralism as a descriptive thesis can help us to sort out the challenge facing this type of platform. As a metaethical thesis, value pluralism holds that there is not a single foundation that justifies a monistic status for moral values, and, as a metaethical theory, value pluralism can be
formulated and justified metaphysically, epistemologically, or logically. As a descriptive thesis, value pluralism remains neutral on these metaethical issues. Descriptive theses about value have traditionally belonged to the domain of anthropologists. While some anthropologists seem to refrain as much as possible from moral judgments in their work in order to present an objective representation of the moral life of the subjects of study, others seem to formulate moral judgments and conclusions based on their findings. The sense of value pluralism relative here makes no normative or metaethical judgment but rather is a descriptive statement. Value pluralism is meant here as a merely descriptive thesis. However, as distinct from this anthropological framework, this paper formulates a special type of descriptive thesis that is meant to encompass actual plurality in value and the appearance of value plurality under the term ‘value pluralism.’ That is, this conception of ‘value pluralism’ also assumes the descriptive appearance of separate yet equally valid moral judgments about a situation regardless of whether there actually are such things. As such, value pluralism encompasses both the reality and the appearance of value pluralism, while remaining neutral on any metaethical commitment.

The appearance of value plurality could be the result of several factors depending on one’s metaethical framework. It could be the result of actual moral disagreement however it is the moral disagreement is defined. It could be the result of disagreement about the facts of a case such as determining whether or not the prognosis of a patient’s case is accurate. It could also be the result of intractable ethical problems such as hermeneutical or application disagreements about moral judgments while supporting a notion of common morality. It could be the result of intractable problems due to the lack of any foundational (that is, metaethical) justification for moral theory. Finally, it could be the result of errors by the agent formulating the moral judgment, such as some rationality failure of an agent effecting their understanding of
what morality means and entails. All of which potentially add layers of complexity onto enhancement assessment.

One concrete strategy from this platform, which was briefly engaged earlier, for dealing with enhancements is to leave them in the hands of doctors, yet again Veatch’s argument on the lack of an internal morality in medicine seems to suggest that a more robust response will be required. Also, Pellegrino warns that consumer and economic pressures may unwillingly or unethically cajole doctors to provide enhancements. A few studies have assessed some empirical data on medical professionals’ views on enhancements that on the one hand presented agreement on economic issues but a lack of consensus on when to give enhancements and confused intuitions by others, suggesting in light of Pellegrino’s comments above that some doctors might not need the cajoling. On the other hand, Scripko has argued that enhancements have a proper role in medicine as matter of health promotion. In contrast in aim at least, Miller and Brody have argued that enhancements threaten physician integrity insofar as they fall outside the agreed upon goals of medicine, yet they hedge their claim rather quickly by acknowledging that the grayed lines between medicine and practices, pursuits, and technologies often conceived of as enhancements leaving one to wonder how much of an affront enhancements really are. Also, professional ethics statements have tended to be light on advice about such issues. A limited exception to this is the American Medical Association's brief statement on nootropics, which suggests that physicians should refuse requests to issue smart drugs to healthy individuals. Vogelstein has been critical of professional organizations for, among other concerns, ostracizing members by issuing statements for which there exists genuine moral controversy, as in when reasonable people on both sides of an issue hold defensible, well-argued, and conflicting positions. The controversy stemming from theoretical dialogue among diverse
methodologies and the controversy over what is controversial and how it should be addressed simply leave the platform challenged to say the least. It is valuable to keep in mind the absence of communal assessment, and in this regard, it is worthwhile to think of Capps' assessment of intrinsic arguments for or against enhancements that come from this type of platform. As Capps has pointed out, when enhancements are accepted as good in and of themselves, this is in conflict with the communal processing and either acceptance or rejection of the given enhancement that will result from such processing. Just like medicine has been wielded maliciously, so can enhancements. The point being that regulation or promotion structures that rely on the intrinsic value or disvalue of what they aim to regulate or promote, in Capps' words, "disenfranchise" the very individuals who are supposed to be integrated into a community. Not only does one's sense of well-being not have a role in the communal dialogue, the very value of communal dialogue is put into question.\(^{21}\)

**Challenges Facing National Platforms:** From a national platform, the American liberal political climate has led some to argue that the chances of regulation coming from national authorities is unlikely and perhaps unjustifiable.\(^{22}\) The classical position, laid out by Mill, conceives of citizens of a liberal society as charged with the greatest amount of freedom and liberty in action that is compatible with the similar freedoms of others in society. If we imagine citizens as existing in spheres of non-inference, then those spheres, for Mill, need to be as big as possible until they begin to bump into the spheres of other members of the society.\(^ {23}\) As a matter of the implications of liberalism, both Agar and Blackford have offered substantial sketches of liberal ideologies and its positive implications for the pursuit of enhancements.\(^ {24}\)

For example, according to Chan and in his investigation of brain-computer interface enhancements, the FDA currently exhibits a broad concern over devices that will effect human
health and well-being including the expansion of regulatory oversight into cosmetic areas. Therefore, it seem logical that the FDA would be interested in expanding the scope of their regulatory reach beyond the confines of medicine and treatment; however unclear those lines are to draw. While the extension of a regulatory framework from the already established FDA model seems plausible and even desirable to Chan, he points out several issues that will need to be adapted beyond simply assessing the risk and potential harm of enhancements. In particular, there is the issue of assessing that harm in balance with a notion of benefit that for Chan is a benefit is beyond health and will require a recalibration of the scale of justification. Next, there is the issue of extending the oversight reach of the FDA beyond merely its pre-application framework to one that follows and monitors long-term use of enhancements. While at least theoretically compatible with the current apparatus, these are substantial and unrealized to date expansions of current capacities. None of this is to suggest that societies do not have multiple means to promote or thwart the adoption of enhancements. Cohen offers the most extensive set of tools: an outright legislative ban, disincentive through tax, subsidizing cost, and moral approbation, for example. Clarke and Roache have explored and defended the idea of using nudges to promote the integration of the enhancements into societies that may be reluctant to accept new and unfamiliar technologies. The question of whether or not a given society will formulate explicit responses to enhancements, and if so how, remains. This being a mix of political will and facilitation of arguments and expressions about enhancements. If nothing else, the waters seem murky to expect anticipatory regulation of any comprehensive scale or magnitude without the empirically verifiable documentation of harm that would trigger a classic liberal justification for restraining liberty. That is, the biggest and most compelling justification for engagement (for regulation or promotion) from this platform will most likely be merely
reactive and this is before one takes into account disagreements about the proper direction of engagement stemming from the political will regarding enhancement technologies.

**Challenges Facing Global Platforms:** From a global platform, Engelhardt is skeptical of the possibility of global bioethics to facilitate a consensus, and surely some sort of consensus about global framework for regulation will be required within this paradigm.\(^{28}\) There are also some conceptual arguments over the metaethics of global frameworks (i.e. universal, descriptive, and collectivist theories) that would cause limitations on the effectiveness of a global regulative framework.\(^{29}\) While modeling bioethics discourse on international law discourse may be useful, such a modeling recapitulates a similar struggle within the international discourse, namely a lack of means for enforcement limits effectiveness.\(^{30}\) A substantive approach to global bioethics is sometimes justified according to the following arguments: a beneficence justification that supports normative claims according to the pursuit of goodness or wellness, a justice/harm justification that supports normative claims according to minimizing inequity, inequality, and/or harm, and a cosmopolitanism justification that justifies normative claims from considerations stemming from global citizenship.\(^{31}\) However, this sort of bioethics justification project has been strongly criticized as suspect and fruitless.\(^{32}\) While this dialogue continues, the proposal here is to table it for now with an attempt to structure a ‘foundationless’ lens from which to frame a compelling and coherent framework for understanding how to best cope with enhancements.

In particular, theories of global regulation also face defector objections, especially when the condition of a single defector could jeopardize the regulation. In this regard, pursuing enhancements will most likely involve medical tourism or ‘the act of people traveling out of country for medical procedures’ that fall on a tourism-travel spectrum.\(^{33}\) The common definition of medical tourism as ‘the act of people traveling out of country for medical procedures’ can be
misleading in its simplicity. As such, medical procedures had out of country conceptually fall on a tourism-travel spectrum with some pursuing care coupled with recreation and others traveling simply for healthcare services. The “decision spaces” of those pursuing such out of country procedures range from elective procedures that are more affordable or only economically feasible out of country, to necessary procedures that must be waited for at home because of long patient queues and/or shortages of medical professionals, to procedures that are unavailable in one’s home country, to procedures that are illegal in one’s home country. Also, some have mentioned a medical tourist’s potential need of privacy and confidentiality as a reason for procuring care overseas. Kinds of medical tourism can be categorized by patient population, type of procedure sought, and ethical issue raised. And so, these can range from cosmetic surgery, to transplant surgery, to less evasive procedures, to stem cell therapy, and even to death tourism. Regardless of the above formulations, there still is some concern that medical tourism is not homogenous enough of a phenomena to make the use of a single label coherent. Finally, there is concern that the phenomena of medical tourism is not well understood and that there is a need for more information about the effect of medical tourism on sending and receiving healthcare systems. Medical tourism is sometimes promoted as a way to mitigate the cost of healthcare by outsourcing medical procedures to other countries, for example India. In the UK, a country that suffers from understaffing issues, long waits for care, and refusals of care for resource allocation measures, traveling to other countries for such care becomes desirable. This sort of phenomena is characteristic of the reversal of others coming to wealthy countries for the latest procedure or specialized care to others going for basic care to developing countries. Supporting this dynamic, government and insurance companies offer financial incentives to patients that encourage them to receive medical procedures out of country in order to help reduce
medical costs. One report from 2010 that compared the cost of heart valve surgery between India and the United States of America placed the discrepancy of cost at approximately $150,000. Economically, cheaper air travel, economic growth, increase in health services in certain countries, and the rising cost of healthcare in certain countries all contribute to creating and sustaining the medical tourism market. Ideologically, neoliberalism principles of privatization, deregulation, and commodification are driving the creation and sustaining the market of medical tourism. There is no reason to think that enhancement tourism wouldn’t thrive in this environment. As such, some argue that countries should let market forces set healthcare economics like with food prices, and that countries should protect such markets by reducing regulations like in the food market by reducing subsidies on food production, which attract foreign investment. The challenge for enhancement regulation here is driven by the economic market and an inability to foster of an appealing global regulation structure that would travel for enhancements, not considering the importing of drugs from other countries and the creation of black markets to facilitate enhancement pursuits. With such a substantial defector objection, it seems unlikely that this platform will be promising any time soon.

5.1.2) Enhancement and Healthcare Organizations

With the initial charge against the non-organizational platform laid out, it is time to turn toward getting a sense of why healthcare organizations in particular should be aware of enhancements. The argument for the inevitability of enhancements is here used as the starting impetus for why one should care about enhancements and as a means of anticipating what should be done about them. The argument is defended by illustrating the dynamics that are fueling the inevitability of enhancements and highlighting the insurmountable nature of enhancement
technologies. The following two theses compose the inevitability dynamic. First, Buchanan stresses that the arrival of enhancements (and the technologies that they presuppose) is inseparable from the institutions that have created them and will have “to cope” with them now and in the future. That is, enhancements by and large, Buchanan argues, were formed within medical institutions designed for treatment, and again it will be these same sorts of institutions that will have to cope with them.  49 Second, Baylis and Robert speculate that the drives that fuel enhancement pursuits will be unstoppable in the face of regulation designed to thwart enhancement pursuits.  50 This section assumes the first thesis is uncontroversial and focuses on defending the second thesis by examining the drivers—social, psychological, economic, governmental, and medical—that are at the center of this inevitability dynamic.

There are a number of drivers that strongly suggest enhancements will be a growing factor for healthcare organizations. There is the treatment milieu of contemporary medical technology that is integrating advancements from the areas of gene therapy, synthetic biology, and nanotechnology, and the convergence of these technologies is radically changing the landscape of healthcare.  51 Khushf, reflecting on the ethics of convergence technologies, argues that relying on dealing with problems after the problems have already arrived is not going to work in a reality that is marked by a quickening pace of technology development and the emergence of types of problems for which our analogical reasoning is ill equipped.  52 Makridis’ research into the stake holders that are pursuing cognitive enhancements ranges from universities, academic centers, military, government (NIH and Pentagon), consultant businesses, and pharmaceutical companies, a vast and impressive horizon of which healthcare organizations remain absent.  53 Granted the categories of stakeholders outlined are not always exclusive of
healthcare organizations, but it raises the question of what healthcare organizations should do in such an environment; that is, how should they cope.

The argument that such technologies can save hospitals money is no longer speculative, the question is how much and how to best integrate these into institutional thinking, although arguably the inclusion of some means of enhancement in the argument is questionable depending on the conception of enhancement adopted. The relationship between the academy and business is a crucial one, but is plagued with potential biases and pitfalls that can result in crippling conflicts of interest. The current relationship between pharma and the academy suggests that these sorts of mutually beneficial relationships will continue and grow. The economic markets pharmaceutical and biotechnology companies compete within have generated a medicalization and disease mongering atmosphere that some argue is striving to fold more and more aims into the fold of medical care. There is no denying that healthcare in America is big business—with trillions of dollars in the marketplace—and the role of media and the rhetoric of selling enhancements to the public arguably aims to capture more and more of that market share for the businesses that develop enhancements, rather than offering a balanced assessment of risks and benefits.

In particular, the American government/military complex is one of the largest supporters of enhancement research and development. This forges the following expectation conditional: if the military can use cognitive enhancements, then why not civilians. FDA regulative efforts aim at a disease response model and assume a disease baseline for potentially regulating enhancement technologies that seems hopelessly confused. The question of how to regulate off label use of new technologies and medications might fall beyond the reach of any FDA restructuring anyway, especially if the question is one of enforcement. The spirit of capitalism
and the belief in the economic power of deregulated markets will most likely drive and increase the availability of enhancements, and this coupled with the increased demand for enhancement—and likely increasing demand—will generate a growing enhancement complex.  

Elliot argues the quest for enhancements is deeply rooted in the American psyche; it is a quest to look inside ourselves and find what it means for us to live a good life and a better life, and it is the quest to harness what is outside of ourselves in order to do it. Even if enhancements are regulated and stopped through the “front door” of the medical establishment, enhancements will most likely be snuck in through the “backdoor,” and there seems to be at least four interpretations of this metaphor: the first where enhancements are just conceptually smuggled in, another where they are smuggled in by doctors who define the goals of medicine as what doctors decide it is, another where, for example, pharmaceuticals are prescribed under the guise of treatment and used by patients for off-label enhancement purposes, and finally in a black-market manner.  

Advancements in the treatment of Alzheimer’s disease and the application of such pharmaceutical avenues to off-label aims is becoming more common. Wade et al. have highlighted an “expectation cycle” of promises, hoped for solutions, and hyped rhetoric that represent hoped for (and inflated outcomes) without significant evidence. Concepts matter in this debate. Stressing the ambiguity of the key concepts ‘enhancement’ and ‘memory’, Dekkers and Rikkert argue that the overlap of memory enhancement pursuits and anti-dementia treatment is problematic given the vulnerable nature of a patient that is “losing oneself” in comparison to those that are seeking to “better oneself.” Bottom-line, the expansion of therapy into enhancement will have repercussions that need special attention, and this suggests a need for some form of robust regulation or at least guidance principles.
Although this point is assumed in the strategy of this paper, it is worth making it explicit that the argument here attempts to offer a pragmatic justification for adopting certain approaches to enhancements over others. The inevitability argument gets subsumed under this heuristic. As such, it is indebted to James’ theory of truth and knowledge that focuses the meaning of a concept in terms of its practical consequences, which stresses that the meaning of our terms might be ambiguous or misleading without a firm understanding of the context of their use or roles of their users. For example, understanding the meaning of the claim that the man circles the squirrel can be understood as true or false depending on the context and roles of those involved in the conversation and analysis. If Johnny stands on one side of the tree and the squirrel on the other, and if the squirrel circles clockwise and Johnny circles clockwise, then the claim “the man circles the squirrel” is true in one sense and false in another. It is true if by “the man circles the squirrel” one means the man is in position of being north, east, south, west of the squirrel. It is false if by “the man circles the squirrel” one means that the man ever sees the squirrel’s back. The point being that the problem and context gives force to the meaning, and the meaning of the concept effects the type of conversations had. Allowing for such a framework could potentially encourage a future directed approach that allows the scope, magnitude, and severity of the problem to inform what justifications are acceptable and what tools—such as enhancements and the concepts used to understand them—will be deemed morally appropriate. Insofar as this theory of truth is controversial, so is the argument below. However, it is important to note that this argument merely adopts a pragmatic approach to justify preferring one conceptual approach over another.

The argument above gives one a good presumptive reason to prefer an Organizational Approach; however, justifying the Organizational Approach as a useful conceptual tool requires
understanding the roles of those using this tool in the construction of arguments, policies, and ideas about enhancements as well as the communities and institutions in which such tools will be used. It is reasonable to assume that those within the clinic that will face the inevitability dynamic will be those within healthcare organizations recognized as ethics experts. Adopting the pragmatic strategy of conception formation provides another mode of operating as an ethics expert within a healthcare organization, and one that can help to deal with a common objection against moral experts from moral authority concerns. Such a shift will be crucial to harnessing the usefulness of an Organizational Approach for coping with the inevitably of enhancements.

5.2) The Foundations of an Organizational Ethics Approach to Enhancements in Healthcare

It is time to start transitioning toward the positive argument for an Organizational Approach to enhancements by exploring the concept and history of organizational ethics from which such an approach will rely. Of particular importance will be making sense of the moral agency of healthcare organizations, both historically and with an aim of challenging current conceptions of moral agency so that they will be revaluated in light of the conceptual challenges of the enhancement debate. With a pragmatic justification for an Organizational Approach to enhancements in mind, the argument here concludes with highlighting the importance of context for making sense out of enhancements, why healthcare organizations are well-suited for this, and a theoretical sketch of the major dynamics of the landscape, or context, from which healthcare organizations will need to do this.

5.2.1) On the Concept and History of Organizational Ethics

The impetus for organizational ethics can be construed as a matter of the need for some framework to respond to the emergent needs of healthcare institutions. As such, changing
standards of care in healthcare and the nature of healthcare delivery systems will be correlated, and they will need to inform what it means for a given organizational ethics framework to be appropriate. The power of culture and/or a system to influence an individual within that given culture and/or system has been getting growing recognition; consequently, it has motivated some to recognize the potential difficulty (or for some helplessness) of individuals to act morally in a corrupt culture.69 This, coupled with the concern that a standard clinical ethics approach—one that focuses solely on relations between individuals—will not be enough, hinges on the “imbedded” nature of certain ethics problems that are framed and constituted by the systems in which the problem is realized, and which renders non-system-based approaches obsolete.70 Accordingly, an early wave of conceptual work in organizational ethics focused heavily on the boundaries between clinical and organizational realms of ethical analysis in healthcare organizations.71 This distinguishing project framed much of the early efforts to get at the meaning of organizational ethics.

Three veins of this distinguishing project are present in nascent investigations into healthcare organizational ethics: the first being more theoretical, the second more a matter of practical operation, and the third a matter of formulating foundations for normativity. The theoretical vein focused on the reconciliation of divergent viewpoints and disciplines within healthcare organizations, and, for example, attempted to develop conceptual frameworks that could relate such divergent views. One such attempt, formulated by, Andre has argued business ethics and medical ethics are viewed as necessarily incompatible only if one has an over simplified dichotomy of what the inherent logic of business is (to make a profit at all cost) and the inherent logic of medical ethics (to do what is right for the patient regardless of cost).72 Assuming their compatibility, this vein of inquiry was complemented by a concern to integrate a
horizontal orientation into healthcare ethics by encouraging that organizational ethics must move beyond individual vs. individual considerations towards thinking about systems and structures. According to Thurber, organizational ethics needs to cover business concerns, patient concerns, and professional concerns, while integrating quality assessment into a healthcare organization’s delivery of care. This highlights the need for some normative framework, or meta-framework, beyond what business ethics, professional ethics, and clinical ethics can offer. One that harnesses the strengths of each, while downplaying or mitigating the limitations inherent to each.

The second vein of inquiry focused on how to integrate these conceptual concerns into concrete practice; that is, how to operationalize them. The practical concern of where and how to integrate organizational ethics into a healthcare organization has proven descriptively to be a matter of selecting some strategy from the following: 1) allowing one’s already established clinical ethics structure to expand into the realm of organizational ethics, 2) developing a separate organizational ethics faculty, or 3) dividing an ethics committee into two subgroups where one focuses on clinical aspects and the other on organizational aspects of the larger ethics committee’s work. A suggested model of integration rests on the insight that there is not a clean divide between clinical and organizational ethics issues requiring a hybrid model of sorts in which a primacy orientation is attached to a particular case as more organizational than clinical or vice versa, consequently identifying the case as organizational, for example, with a clinical shadow, or vice versa. There has been some argument that organizational ethics committees would do well to maintain a “critical distance” from the organizations that they oversee and advise because such distance is necessary to avoid the biases, conflicts of interest, etc. that encumber those organizational ethics programs that are highly integrated into the infrastructure of the organizations they serve. The question of how to protect and promote an organizational
ethics committee has led some theorists to argue that integrating organizational ethics committees into healthcare institutions may threaten their objectivity and independence by generating unnecessary conflicts of interests.\textsuperscript{79}

The following categories of the third vein sketch a sampling of the potential sources for normativity in organizational healthcare ethics. Arguably, the most significant impetus for organizational ethics in American healthcare comes from the category of governance/regulation and originated in the Joint Commissions' (JCAHO) requirement that healthcare organizations have an organizational ethics component as JCAHO began to apply the concept of “ethical responsibility” to an “organization.”\textsuperscript{80} While an impetus and a sustaining cause of organizational ethics inquiry and operation, it remains a rather vague starting point and one formulated without much content for guidance. A second source comes from those that argue medicine is normative in and of itself, which was examined earlier.\textsuperscript{81} Another source category is that of professional ethics and codes of ethics generated from such professional organizations.\textsuperscript{82} While important aspects of the normative discourse, the limitations of professional formulations are exactly what spurned the initial inquiry in organizational ethics; that is, the need to process ethical problems as imbedded and arising from the interaction of divergent perspectives. Although professional ethics is part of the “embedded-ness” of healthcare ethics decision making, its ethical charges are necessarily limited to the conceptual horizon of each profession and sometimes merely prudential in nature. A legal category of influence has received criticism from organizational ethics theorists both highlighting its influence as a source category and its limitations; for example, Spielman has argued, the hope is that organizational ethics will produce a response that is mindful of the law yet not necessarily limited by it or simply a matter of mere “rule following”.\textsuperscript{83} As Ilitis has argued, in order to escape the confines of minimalistic legalism, moral
responsibility must mean something beyond mere compliance. \footnote{84} Aside from source concerns and analysis, some aspects of the literature have emphasized procedural and process decision making as crucial to what it means to function as an ethical organization. \footnote{85} The focus is sometimes formulated as a concern over how choices are made and not necessarily about what choices are made, the weakness of this being a potential failure to attain normative assessment for the sake of instrumental assessment, and the potential benefit being an opening for creative discernment and normative assessment of the very mission in question. \footnote{86} There is a tendency by some to conflate compliance, ethics, and the services provided by a healthcare institution as solely a matter of reflecting the mission of the institution, arguably begging the question as to the normativity of such coherentist accounts. \footnote{87} While the first and second vein of inquiry are evolving, the tentative conclusion here is that this normative vein is in need of the most development; however, this is not to imply the lack of vein interconnectedness.

The concept of moral agency has played an important role in the discussion of organizational ethics. These three distinguishing project veins—the theoretical, practical, normative—are often merged under the conception of the ‘moral agency’ of healthcare organizations. There is a dominant tendency to think of organizations as moral agents in and of themselves, that is, as an entity that acts as such and is responsible for the rightness and wrongness of its actions. \footnote{88} However parasitic such a notion may be on the individuals that compose or are constitutive of an organization and limitations that might arise from the personification of organizations, it has remained a dominant notion. \footnote{89} Spencer’s guiding idea in this regard is that organizations must move toward a “comprehensive ethical vision” that is both internal and external. \footnote{90} Spencer’s claim is that the limits of thinking of organizations as persons as such mean that one needs to consider organizations as opened systems (as opposed to closed
systems), and accordingly ethical organizations are always in the making in the context of what role they serve, where they serve it, how they serve it, and with whom.  For this argument, the notion of an open system capable of a comprehensive vision that is both internal and external is a crucial aspect of what an ethical organization is, or what a healthcare organization that acts ethically looks like.

Contributing to the normative vein of inquiry, a number of integrating conceptual and ethical frameworks have been offered that attempt to relate internal to external focuses of organizational activity, awareness, and behavior. Some have been more internally reliant, for example, purporting that organizational ethics and efforts to bolster such a framework not only must consider how the structure of an organization effects one’s ethical options and pursuits, but also what purpose—latent and active—that those structures represent. In another more robust example, Magill bridges the internal with external by integrating virtue theory, as an overarching heuristic for how to think about healthcare organizations as ideally virtuous institutions that serve. Such efforts harvest from the classical Greek strategy to move from the individual to the collective using the metaphysical premises about human beings to inform and provide a framework for philosophizing about the body politic, or in this case healthcare organizations. Magill bolsters virtue theory by yoking the internal and anthropomorphic tendency of virtue theorizing to a communal context as a matter of a covenant; that is, a defined relationship with mutual benefits and correlative responsibilities. This need to couple a normative framework—in this case virtue ethics—with something that is orientated toward others in a robust manner has been echoed recently by two thinkers. Selgelid argues in his assessment of enhancement technologies that navigating this shifting landscape requires the injection of political philosophy. In a similar spirit, Emanuel argues in his assessment of the shifting economic
landscape that the healthcare ethics dialogue needs to embrace and allow itself to be informed by political science, as opposed to just philosophy, in an effort to build “institutional structures” that will ensure the ethical behavior of those that operate within it. All three of these thinkers, though with some substantial differences, seem to echo the need for an open system approach that envelops both an internal and an external vision and tethers it to some normative framework that integrates communal concerns.

Arguably, one the most important charges of healthcare organizations as moral agents is the need to adapt, respond, and to act in an ethically responsible manner. The press for learning healthcare organizations makes this sort of internal/external bridging strategy from above compelling. The ideal being to develop a “community of care” that equates to a community of “ethical discourse.” That is, there is a need for normative bolstering from some communal framework more robust (from theological notions of covenant, or something harvested from political science and/or political philosophy) than our customary formulations of normative ethics so far. Successfully negotiating and facilitating a discourse requires a sense of the moral/ethical climate of a healthcare organization; that is, the descriptive ethics or historical development of ethical commitment within an organization, as well as the structures of an organization that may nudge its members toward acting in certain ways. Recently the idea that successful healthcare organizations must be learning organizations has been championed by some prominent voices in the American medical community. This raises the questions: “What do healthcare organizations as open systems striving for a comprehensive internal and external vision need to learn about?” and “From where are and will they be doing their learning?” Two questions for which suggestions will be forged below. With this in mind, the three veins of inquiry in the first section that were subsumed under the concept of moral agency
need to be analyzed in relation to a meta-theory of learning organizations. In doing so below, this chapter adopts the coupling strategy endorsed by Magill, Emanuel, and Selgelid above, and attempts to add to it in the next chapter by constructing a conception of vulnerability suited to the landscape of contemporary American healthcare.

5.2.2) The Meaning of Moral Agency for Healthcare Organizations

Adapting and learning as a healthcare organization means empowering operators to facilitate communal learning and one of the most significant and most underestimated tool in healthcare organizations is language. Ethicists within healthcare organizations are uniquely positioned to contribute value to the communities they serve by promoting conceptual coping and anticipating ethical challenges; however, this is not without some objections that need to be addressed. An ethicist's role in healthcare organizations is arguably controversial when an ethicist is considered an authority that is the final word on an issue. Adopting an Organizational Approach provides one with a response to such a charge in that adopting an Organizational Approach to enhancements requires healthcare organizations to always be constructing a conception of enhancements, which conflicts with ethicists being a final word on a matter. The hybrid approach shines light on a new role for ethicists in healthcare and one that points out what is confused about arguments that ethicists as ethicists necessarily infringe on the autonomy of patients.

A collection of arguments forms a backdrop for the current inquiry into the meaning, existence, and ramifications of the role of ethicists in the clinic and moral expertise in healthcare. The following is a selection of such arguments that forge a presumptive argument in support of moral expertise. Singer argues that moral philosophers tend to have what he deems as “advantages” for making moral decisions such as familiarity with logical fallacies, normative
theory, metaethical analysis and because their professions afford them the time to do so. As Jonsen points out in relation to the luxury of time to examine ethics cases, seeing, experiencing, and studying many ethics cases strengthens and widens the set from which analogical analysis and judgments can originate. Beauchamp also champions a defense of moral expertise that depends on analytic skills, knowledge of theory, and the luxury of time to think about moral issues. The above defenses all highlight the Russellian value of studying philosophy in the academy: that it can help broaden one’s horizons and shake one free from “dogmatic stubbornness.” A more analytic role has also been championed for philosophers as moral experts; namely, that of clarifying concepts, raising moral questions, and unearthing assumptions. Again, this is not to say that moral philosophers have the corner on the market for other disciplines study the subject matter also, but just that the study of logic, moral theory, metaethics, and applied ethics are of value according to these authors, and can contribute something of value to healthcare in the clinic, a claim supported by the ASBH’s Core Competencies document. Likewise, Moreno has highlighted the creative aspect of being an outsider to the medical professions and the ability to serve as an advocate for patient concerns, both of which seem to be essential to constructing a valuable contribution to healthcare. Ultimately, those that defend moral expertise have been associated with the idea that experts are those with knowledge of what should be done in cases of moral conflict in the clinic, particularly from a stance of impartiality and with the aim of determining correct moral answers.

In America, perhaps the biggest initial impetus for the growth of healthcare ethics beyond the academy can be found in the need for a buffer area between the court systems and the healthcare delivery apparatus. A number of legal cases can be cited as examples of medical decision making that were pushed into the court system, but arguably none were more influential
than *In Re Quinlan.*\(^{110}\) The government sanctioned Presidential Committee charged hospitals to develop an internal way of working through ethical conflict that arises in the delivery of care within the hospitals' own walls.\(^ {111}\) This was followed by guidelines from the Joint Commission for the Accreditations of Healthcare Organizations requiring hospitals to embrace an “ethics mechanism.”\(^ {112}\) This coupled with the concurrent growth in the healthcare ethics infrastructure of the academy such as the creation of academic centers dedicated to healthcare ethics issues and the entrance of diverse non-medical disciplines into the fray generated a dynamic environment that continues to inform medical decision making and policy formation.\(^ {113}\) The reasons why healthcare ethics consultation became important in American healthcare over the last few decades are arguably the same reasons why the questions of ethics expertise are important now.

Ultimately, moral judgments are likely to be more defensible after having been through an examination process conducted by someone that has studied logic, moral theory, metaethics, and applied ethics. Is there value added to a deliberation process when an argument is exposed to its strongest counter argument? The answer is yes, and it is a procedure that is used in many other proceedings (courts, advisory councils, etc.).\(^ {114}\) One should want their ideas in front of their harshest critics. Rasmussen’s argument and central to her conception of a clinical ethicist is that an ethicist does not produce, construct, or discover normatively binding judgments.\(^ {115}\) However, she seems to be missing a distinction between normatively binding and the construction of normative judgments. This is where an Organizational Approach to enhancements fit in. Are judgments of clinical ethicists normative in and of themselves? Not necessarily. Are they an integral or useful part of a normative process? Yes, and so is the construction of concepts. Casarett et al. argue that moral authority is only derivable from consensus, and so the favored methodology ought to be some derivative of discourse ethics.\(^ {116}\)
Organizational Approaches encourage ethicists to build a conception of enhancement in the communities in which they operate, it is a role that serves a normative purpose yet requires integrating the perspectives on individuals effected by the promotion or regulation of the enhancement techniques in question. Before addressing the objection from autonomy and democracy against ethicists in healthcare, it will be useful to examine an initial conception of moral expertise. In more detail, a moral expert is an individual that because of some training, possesses knowledge, and/or a skill set and is deemed to be in a position that makes him or her capable of rendering moral judgments that are 1) reliably accurate and 2) should be adhered to and/or agreed with in relation to a particular moral problem. The objection from autonomy is concerned with the latter condition—should be adhered to and/or agreed with in relation to a particular moral problem. This concern can be expressed as a deference criterion for ethicists and its conflict with the autonomy of others involved in a case in healthcare in which there is value conflict. Respect for autonomy in this sense refers to the right of each individual to self-determine the course of their lives and actions. Taken as a prima facie principle, it has inherent value all things being equal. In this light, Cowley argues that moral judgments are deeply personal, and as such anything beyond this personal component is not sufficient. The problem arises if moral experts are understood as those that are supposed to be deferred to in times of value conflict.

The objections from autonomy and democracy are reminiscent of the critical thinking fallacy from authority; that is, the fallacy of reasoning that a claim is justified because it was issued by a figure that is not a legitimate authority on the subject matter of the claim in question. Tarizian et al. argue that although clinical ethics consultants do have ethical expertise, they are not moral authorities. In contrast, Adams argues that there is a necessary connection between
having ethical expertise and being a moral authority and that separating ethics expertise from moral authority is conceptually confused and inconsistent. He defends the following conditional: If healthcare consultants are moral experts, then healthcare consultants have moral authority. The justification of this conditional is a matter of avoiding the conclusion of the following argument:

**MA1:** If healthcare ethicists are not moral experts, then healthcare consultants do not have moral authority;
**MA2:** If healthcare ethicists do not have moral authority, then one does not have a good reason to care about their moral judgements;
**MA3:** If healthcare ethicists are not moral experts, then one does not have a good reason to care about their moral judgements.

Nussbaum's comments about ethical expertise are framed by apprehension at so called “moral experts” being called as such to participate in a trial proceeding. Ultimately, Nussbaum’s concern about ethical expertise is that it will generate a level of deference that is not respectful of other’s moral statuses in ethical inquiry or moral deliberations. She argues that knowledge of the moral landscape and a familiarity with the arguments and objections commonly raised on a given topic is valuable; however, the status of an ethical expert as one that should be deferred to in times of ethical conflict or uncertainty is threatening. Whether it is or not is one matter, but the fact that it might be could be reason enough for one not to be comfortable with the expertise designation. Dietrich warns of the potential quasi-legislative function of ethics committees and moral experts that sit on them within healthcare settings in that a moral expert should only contribute procedural value to a deliberation about a moral problem. Anything beyond this is to usurp the democratic value of the representation of the people or at least in the people’s ability to elect the officials that make the laws as legislators.

There is good reason to purge deference and dismiss MA3 for an organizational ethics formulation of ethics expertise offers a solution that actually supports autonomy and democracy.
Realizing such a role is crucial to seeing how organizational hybrid conceptions of enhancements can be useful to how healthcare institutions can successfully cope with enhancements. Consider the deference thesis and the third premise of the objection from moral authority: Deferece to the moral judgments of ethics experts threatens the value of autonomy, and **MA3**: If healthcare consultants are not moral experts, then one does not have a good reason to care about their moral judgments. Cowley’s argument is compelling when he claims that morality is deeply personal, but mistaken when he assumes this means that no one else can participate either by invitation or by facilitating dialogue in the moral judgments of others. This does not necessarily need to be an abusive exercise, in fact, one would hope it is exactly the opposite. It is important to note that the authority at play here is not necessarily brute force authority; that is, it is not a matter of command-obedience or oppressive power dynamics. Agich brings this out with his focus on “social role authority” that is derived from the embedded nature of ethicists’ role in a larger community and whose authority is derivative on an invitation in the case of a specific case consult. There is always the concern of an abuse of power insofar as the expert in question is empowered by the community in which they serve. The distinction between *in authority* and *an authority* can separate a political approach from a non-political approach, as both Agich and Rasmussen have highlighted. There is a false dichotomy between honoring autonomy and accepting that moral experts are capable and should be making normative judgments about cases in question. The issue is a matter of being sensitive to how those judgements are heard in the community in which they are offered. Are there times when an ethics expert should refrain from engaging in a normative analysis of a case? Sure there are, being socially charged with a role does not mean that one has to discharge every function that that individual serves.
especially the case when more harm could be done by the presentation or argument of the normative analysis; that is, when the dialogue aimed at convincing faces something invincible.

The objection from autonomy and democracy would be problematic under conditions of there being no appeal process or a healthcare context that did not contain healthcare organizations with a variety of institutional “lifestyles” from which a patient could choose.\textsuperscript{125} The communal lens above suggests that expanding beyond these limits might not be so troubling after all. Doesn’t recognizing moral pluralism mean recognizing the moral pluralism of organizations themselves? Maybe organizations should be activists about ethical issues as it would most likely facilitate a plethora of cultural and normative lifestyles for patients to choose from for healthcare. Vogelstein and Rasmussen both formulate notions of expertise, yet missing from both their analyses is a context that would make “superior familiarity with the context of healthcare” coherent insofar as both their formulations of reliable and useful need to be understood within the healthcare organizations they are framed by. This is not meant as a failure of their arguments over superior familiarity with context and relieving moral misconceptions, only as a potential way to bolster them. Another way of putting this is that their analysis seems to be formatted at the clinical healthcare level and not at the organizational level. Approaching the concept of ethics expertise as such highlights the embedded nature of ethics expertise, something that Rasmussen highlights, but just not at the right level. The process of facilitating an ethics consult can be a part of the nature of rendering a normative judgment within a healthcare organization. The activity of an ethics consultant and their expertise is a premise generator in the organization’s argument or justification for a given moral judgment. That is, what makes it a matter of expertise or ‘special’ is the activity of premise generating, argument forming, and conception building—not conclusion enforcing. It is not that the ethicist makes
normatively binding declarations, but that they play a role in meaning making within the healthcare organization that can help to produce normatively binding claims and judgments from and for the healthcare organization—a role crucial to constructing a conception of enhancement from an Organizational Approach.

Several comparisons have been employed in an effort for making sense out of ethical expertise in the clinic ranging from car mechanic, mountain climbing guide, engineer, scientist, counselor, medical doctor, and academic teacher. However useful these might be as foils or entry points into thinking about the concept of expertise, they all seem to ignore the context of American healthcare (the inevitability concerns in particular). Ilitis argues that the conceptions of ethics expertise can vary and most likely ought to vary based on the goals of the healthcare institutions and the roles ethicists play within those institutions. The conceptual framework that began this inquiry should be modified so as to account for this communal dynamic that makes room for a hybrid Organizational Approach. The issue under investigation here is what to do about the Adherence Criteria: moral judgments of ethicists should be adhered to and/or agreed with in relation to a particular moral problem. The Adherence Criteria should be replaced by one of the following or a combination of the following criteria:

**Reflective Criteria:** the moral judgments of moral experts should be used in communities as tools for building better moral judgments or foils for making positions defensible.

**Edification Criteria:** the moral judgment of moral experts should be used in communities as tools for instruction and improvement.

**Infallibility Criteria:** the moral judgments of moral experts should be used in communities as approximations that are open to potential revision.

These are by no means an exhaustive or thorough set of criteria, but merely suggestions for what might replace the Adherence Criteria, and they mean thinking of ethicists as those that can help one cope. The Reflective Criteria represents the value of the instrumental use of arguing and
investigating one’s beliefs and the beliefs of others. The Edification Criteria highlights the instrumental value of education and the value of quality in healthcare and making better decisions. The Infallibility Criteria is simply highlights the values of humility, flexibility, and keeping an open mind. Each brackets the impact of potential normative judgments of moral experts by highlighting the communal nature of what they contribute. If the concept of deference has to be kept, then the above shift is meant to move away from deference as a matter of surrendering judgment to deference as a matter of being open to dialogue and to being persuaded. An ethics expert is trained to present an analysis of the options, the ethics issue, what is at stake, and what theories or frameworks may justify a proposed judgement. Their job in some sense is to exhaust analysis by trying to continue the conversation. While this approach needs to be tempered to the setting of the clinic, a dialectical expertise that clarifies normative issues, clears up conceptual confusion, and points out errors in reasoning is valuable.\textsuperscript{128} Cutter argues that clinical ethics expertise is non-relative (as experts integrate objective criteria into the process of ethical analysis), localized (as cultural, legal, medical, professional factors suggest how problems are approached), and falls short of access to moral truth as a matter of justification ignorance and uncertainty because without access to ‘ultimate justification foundations’ there can be no privileged access to moral truth.\textsuperscript{129} One challenge with moral questions, as Rhees points out, the moral question is never really answered unless it is answered in the first person.\textsuperscript{130}

Forging a conception of enhancements is something that is the charge of healthcare organizations as the conceptual framework of well-being will need to accommodate social values as well as perspective values, and the clinical setting of healthcare organizations—embedded in the social context of the society with the first person concerns of its patients—is the ideal arena from which to construct the concept of enhancement and justifications or limitations of
enhancements pursuits. This conceptual work will entail efforts to fuse adaptability with vulnerability in meaningful ways on the conceptual horizon formed by well-being, social values, and the individual perspectives of enhancements. This may require expanding the role of adaptability to accommodate other heuristics beyond survival and coping, or at least may require exploring frameworks for informed sources outside of medicine, for example, by cultural or religious sources.\textsuperscript{131} Securing financial support for such explorations will be paramount as they will need to be speculative, empirical, and conversational. Assuming a narrative ethics and a discourse ethics framework of such inquiry both at the level of healthcare organization and on an individual level seems appropriate.\textsuperscript{132}

Returning to Rasmussen’s point that clinical ethics expertise is a superior familiarity with the context of healthcare.\textsuperscript{133} Unfortunately summaries of this context for clinical ethics education have not focused extensively on the shifting borders of the healthcare context.\textsuperscript{134} If the enhancement conceptual analysis and assessment of this argument above holds, then Vogelstein’s articulation of clinical ethics expertise as requiring the relief of moral misconceptions in bioethical debate frames a charge of encouraging the enhancement debate as a matter of a well-being pursuit that is informed by social and perspective values as well as integrated into an organizational ethics approach.\textsuperscript{135} Engelhardt has been one of the most dominant voices in the importance of moral pluralism for healthcare.\textsuperscript{136} Taking moral pluralism seriously means embracing political structures that permit divergent values from being expressed and pursued.\textsuperscript{137} The issue is not whether healthcare ethicists or the contemporary medical community are taking pluralism seriously; the question is whether the moral agency of healthcare organizations is being taken seriously and how that agency can be bolstered by adopting an Organizational Approach.
So what if this brings ethicists to activism as part of the normative visions of the organizations and communities in which they operate. Wear is refreshingly and unabashedly descriptive about the political role he personally plays and claims that other ethicists play as consensus formers or decision organizers in the clinic.\textsuperscript{138} Isaiah Berlin made the famous distinction between categories of philosophers; namely that philosophers are either hedgehogs—thinkers that view the world through a single monistic concept and build systems—or foxes—thinkers who reject such a monism.\textsuperscript{139} After perusing the varied competencies of the ASBH \textit{Core Competencies} report for ethics consultation, it would seem that clinical ethics experts will be forever foxes.\textsuperscript{140} But there may be a time for delivering hedgehog like analysis, for such analysis does not need to end the conversation for the interaction of normative judgments can be crucial for continuing the conversation. Arguing like a hedgehog once in while might not be so bad, and it might even be useful for there is normative analysis on the Fox side too. But it means having the courage to adopt a revisionist view of ethical expertise—one that is willing to argue for a creative vision within a healthcare organization not as a matter of what care is but as a matter of what it can become, while the cultivating the wisdom for future orientated anticipatory ethics. A hybrid approach based on organizational categories does more to foster respect for autonomy (from integrating a Perception Approach), the obligation to beneficence/non-maleficence (from integrating a Welfarist Approach), and the importance of justice (from integrating a Social-Pragmatic Approach) than a non-hybrid approach. As such, it is better suited for conversation and arguments about promotion and regulation. However, adopting it means rethinking the role healthcare organizations serve in society: it means thinking of healthcare organizations as learning environments in the sense of the Agora and consensus.
formation as a means of coping.\textsuperscript{141} It means thinking of hospitals as a place where our concepts can mature.\textsuperscript{142}

5.2.3) Healthcare Organizations on a Shifting Landscape

The development of bioethics as a discipline in America happened in the shadow of scandal, a desire for regulation and intervention, and a reorganization of healthcare infrastructure fueled by economic pressures. The establishment of many of the most dominant medical research protocols in the 1900’s originated from scandalous happenings.\textsuperscript{143} Following Henry Beecher’s illumination of such instances, several cases of troubling medical research spurned a desire for protocols to rein in the ethically problematic imperatives of medical research.\textsuperscript{144} Historically the list of ethical protocol generating research cases—the Nazi war experiments, the Willowbrook case, and the Tuskegee experiments—forms a backdrop that can be used to assess the fall of medicine from its pedestal of trust and faith.\textsuperscript{145} The resulting protocols—the Nuremburg Code, the Declaration of Helsinki, the Belmont Report, and the International Ethical Guidelines from the Council for International Organizations of Medical Sciences (CIOMS)—are the residue of this fall.\textsuperscript{146}

As a matter of bioethical inquiry, the history of the development of bioethics in America is saturated with outside interventions effecting the delivery of healthcare.\textsuperscript{147} The integration of divergent mythologies—philosophy, theology, law, social sciences, etc.—into bioethics and the healthcare delivery arena and the application of such a plurality on ethical issues in healthcare arguably contributed to the complexity of healthcare decision making.\textsuperscript{148} This diverse methodology and sometimes divergent approaches are further complicated by the milieu in which they are forced to operate. Aulisio articulates this complexity as a matter of the dynamics
that may impede ethical decision making, including: technological advances in medicine, an increase in the number of treatment options, financial sustainability concerns, and the time pressures of a busy medical delivery apparatus. O’Neill has characterized this as giving rise to a sense of mistrust stemming from self-interested actions taken by medical professionals assumed to be altruistic or other serving, but also by the rise and dominance of autonomy language, argument, and the tethering of autonomy to rights initiatives. This concern is echoed in the prevalence of patient’s rights language and patient rights premises in arguments in the healthcare literature in the last sixty years. The logical consequence of which, Veatch argues, is that we ultimately are asking patients—alienated by mistrust and autonomy from the benefits and wisdom of centuries of medical knowledge and the wisdom that doctors, nurses, and other medical professionals may have to offer—to heal themselves.

As a matter of conflict of interest, the creation of a competition protected market for the exchange of medical care and services that placed the doctors as those who diagnosed and those who benefited financially from diagnoses generated a system riddled with conflict of interest and increased the potential for exploitation of patients. Also, the alignment of the medical profession, medical associations, medical education with pharmaceutical profit interests, and the entrance of insurance companies into the landscape as they funnel money through the medical marketplace, coupled with cost containment theories of managed healthcare sustained these conflicts of interest. Joint ventures between those that made medical decisions (doctors) and those that profited from such decisions (pharmaceuticals, insurance, etc.) and the infrastructure that returns those benefits from the latter to the former continues as a conflict of interest generating dynamic today. This sense of mistrust is bolstered by the categories of medical error that range from medication mistakes, surgical errors, diagnostic mistakes, to failures of
communication. The modern conception of patient safety and quality control has integrated the complexity of healthcare and healthcare systems, with the iterative nature of medical error and the adaptive nature of healthcare delivery framing a healthcare horizon that is overwhelmingly dynamic. Even such a focus on safety and quality error reduction may be hedged or limited by economic concerns raising the old question of whether business is compatible with healthcare.

As argued, the development of bioethics as a discipline in America happened in the shadow of scandal, a desire for regulation and intervention, and to this one can add 1) an influx of and intensifying pursuit of medical technology and 2) the reorganization of healthcare infrastructure fueled by economic pressures. The healthcare landscape sketched above has changed, is in flux now, and will most likely continue to change because of the introduction of more powerful and plentiful technology coupled with the need to remain economically viable. After World War II, hospitals became, because of the influx of new technologies and the increased training and specialization of doctors, places where, as Emanuel phrases it, “miracles happened”; that is, with the establishment and saturation of private employer-based insurance, intensive care units with breathing machines, dialysis machines, and surgical innovations, medicine became more powerful and more expensive than ever before. What Callahan has termed a sort of neurosis has emerged as a result; that is, the success of medical research and the application of technology to health pursuits and the increase in America’s population health has spurned the desire for even greater advancements. This coupled with a tremendously complicated financial subsistence system and a redundant delivery mechanism has spurned among other issues, a lack of transparency and a lack of economic sustainably. This has led Emanuel to speculate that the coming decade or so will bring the following landscape changes to
medical care in America: insurance companies will cease to exist, hospitals will decrease in number as more non-traditional ways of delivering care are embraced, and medical education will move away from specialization, away from being hospital based, and away from doctor dependent decision making and more toward integrated care teams.\textsuperscript{162} If nothing else, this economic shift will put allocation issues regarding enhancements more directly under the purview of healthcare organizations. While some of these claims may seem unlikely or perhaps unthinkable now, even if one of them happens, it will mean a significant change in the delivery of healthcare in this country. If the financial and historical context of the clinic has shaped medical care and this in turn has shaped medical ethics, then the shifting nature of the current context of the clinic will necessitate assessing the adequacy of the medical ethics frameworks in place.\textsuperscript{163} The distinction between events that are internal and events that change the landscape will be an important guiding idea for organizing and processing relevant factors that need to inform organizational ethics, and the internal/external comprehensive vision of an open system will need to be able to track these changes and redefine itself in order to deliver healthcare.\textsuperscript{164}

The drive to integrate business ethics and the development of managed healthcare has required healthcare institutions to negotiate the competing interests of stakeholder theory and the delivery of patient centered care.\textsuperscript{165} For some hospitals with social justice orientations, attempting to balance profiting in the marketplace with promoting social justice and preferential treatment of the poor has become a daunting if not impossible task.\textsuperscript{166} For organizational ethics, the importance of managing change at the cultural level and the ethical level is crucial for negotiating the complex landscape of healthcare.\textsuperscript{167} An important way of establishing trust between a collective institution and the individuals that compose that collective is to develop and maintain effective exchanges of information on the topic of improvement that will in itself
generate transparency.\textsuperscript{168} If the charge is to develop trust between patients and medical professionals, then an organization’s responsibility is to foster the trustworthiness of medical professionals that operate within it and the trustworthiness of the organization as a whole.\textsuperscript{169} The nature of such mapping has led some to formulate a framework for understanding the new landscape as the four P’s (place, power, process, and people).\textsuperscript{170} This suggests a framework for what a learning healthcare organization should be concerned with as it organizes and develops its organizational curriculum about what, for whom, from where it will operate as a moral agent delivering healthcare. In some sense the division between the above technological and economic categories is artificial. The sketch of mistrust/uncertainty coupled with the shifting economic and technological landscape feed each other creating a dynamic venue from which to deliver healthcare. While this section began to address the ‘what’ and ‘where’ of learning in terms of the milieu of healthcare delivery, the next chapter sharpens these questions under the conception of vulnerability with the aim to formulate and introduce a ‘who’ into the healthcare organizational ethics learning questions under investigation.

\textit{Concluding Thoughts on Healthcare Organizations as a Platform for Coping with Enhancement Pursuits}: This is probably one of the most demanding chapters of the argument as it begins to integrate as directly as possible two diverse silos of inquiry (the philosophical analysis of enhancements and an organizational ethics framework). The argument of this chapter examined the limitations of non-organizational platforms and constructed 1) a positive assessment of healthcare organizations as a platform for coping with enhancements, 2) the foundation for an organizational approach to enhancements after examining the history of organizational ethics, 3) an enhancement friendly conception of moral agency for healthcare organizations within the ever changing landscape of healthcare. All of this was in an effort to
defend the following four claims: 1) non-organizational platforms face certain challenges that suggest it is worthwhile to investigate other potential platforms; 2) healthcare organizations in particular should be aware of enhancements because healthcare organizations are potentially strong platforms for coping with enhancements and the speculative argument for the inevitability of enhancements suggests enhancements will be a factor that affects the delivery of healthcare; 3) the moral agency of healthcare organizations needs to be reconfigured so that healthcare organizations can be viewed as active operators in the enhancement debate who are always in the process of constructing a conception of enhancement; and 4) successfully coping with enhancements means taking into account the context of healthcare organizations and the shifting landscape they operate within. With the beginnings of the conceptual bridge in place, the next chapter continues to develop the conceptual bridge and finally turns toward constructing the normative bridge in establishing an organizational ethics approach to enhancements.


67 Wim Dekkers and Marcel O. Rikkert, "Memory Enhancing Drugs and Alzheimer's Disease: Enhancing the Self or Preventing the Loss of It?,” *Medicine, Health Care and Philosophy* 10, 2 (2007): 141-151.


Chapter 6) Preparing Healthcare Organizations for Enhancements on the Horizon

The Argument from Adaptability needs to be grounded in a sketch of enhancement expectations as well as other contextual issues pertaining to healthcare delivery. This does not mean that coping with enhancements requires starting from scratch. It does mean getting a sense of what evidence is out there for understanding some common enhancement expectations as well thinking about how to keep that conversation going. The important aspect of this chapter will be to harvest what structures that are already in place while pointing the way forward by outlining areas of development that will need to be addressed. Using the idea of managing transitions is a useful starting point for gearing up for dealing with the challenge of enhancements. The bulk of this chapter constructs a sense of transition in light of the Argument from Adaptability by reformulating vulnerability as a complementary concept to adaptability. The reason for this is twofold: first, there is an intuitive resemblance between adaptability and vulnerability that will be sketched below and second, vulnerability is already a concept that for which there is some level of comfort within the healthcare community, particularly within research ethics. Assessing the relationship between adaptability and vulnerability is essentially about understanding and scoping out what it means to cope. Insofar as enhancements can be used to cope, it requires that coping be grounded in our vulnerabilities. Therefore, most of the heavy lifting of this chapter will be done to develop a notion of vulnerability in transition, where transition aims to account for the particular enhancement challenges that healthcare organizations and those grappling with enhancements face. Within the context of healthcare and the idea of a shifting landscape particular to contemporary healthcare, this chapter presents a formulation of the particular challenge of healthcare that enhancements pose using the Organizational Approach and the operative distinction between *de facto* and *de jure* aspects of that approach.
The second half of this chapter changes gears and constructs a toolbox to help healthcare organizations cope with enhancements. In particular, the aim is to offer a framework for thinking about the challenge enhancements pose and integrates the residue of normative analysis from chapters 3 and 4. This is not meant to defend a particular response to enhancements, but rather to simply import the meta-argument from earlier chapters that a balanced approach to enhancements is reasonable. With developing a balanced approach, seven categories of inquiry are offered with the hope of preparing healthcare organizations for enhancements on the horizon.

The chapter is divided into two sections. The first develops and assesses a health organizations ethical responsibility toward patients in transition. The second formulates an ethical framework for healthcare organizations.

6.1) A Healthcare Organization’s Ethical Responsibility Toward Patients in Transition

Making sense out of a healthcare organization’s ethical responsibility within the enhancement debate means constructing a theoretical foundation for thinking about coping with enhancements. This sections makes a conceptual link between healthcare and enhancement expectations on the one hand and the ideas of what it means to be a patient in transition in a literal sense as well as a figurative sense. Here, the concept of vulnerability can help ground an ethical framework for how to deal with enhancements as a healthcare organization. This requires stretching our conception of vulnerability in order to accommodate the context of healthcare as well as the shifting landscape the patients and clients have to navigate. The section proceeds by examining the relationship between healthcare, vulnerability, and enhancement expectations insofar as any adequate assessment needs to integrate the anthropological reality and any evidence that substantiates it. The next step in developing this framework is to integrate the
concept of vulnerability and transition, and finally to bolster this literal sense of transition with a larger sense of what it means to be vulnerable on the shifting landscape of healthcare.

6.1.1) Healthcare, Vulnerability, and Enhancement Expectations

After World War II, hospitals became, because of the influx of new technologies and the increased training and specialization of doctors, places where, as Emanuel phrases it, “miracles happened;” that is, with the establishment and saturation of private employer-based insurance, intensive care units with breathing machines, dialysis machines, and surgical innovations, medicine became more powerful and more expensive than ever before.¹ What Callahan has termed a sort of neurosis has emerged as a result; that is, the success of medical research, the application of technology to health pursuits, and the increase in America’s population health has spurned the desire for even greater advancements.² This coupled with a tremendously complicated financial system and a redundant delivery mechanism has spurned a lack of transparency and a lack of economic sustainably.³ The nature of such mapping has led some to formulate a framework for understanding this new landscape from the perspective of the four P’s (place, power, process, and people).⁴ Emanuel speculates that the coming decade or so will bring the following landscape changes to medical care in America: insurance companies will cease to exist (at least in their current form), hospitals will decrease in number as more non-traditional ways of delivering care are embraced, and medical education will move away from specialization, away from being hospital based, and away from doctor dependent decision making and more toward integrated care teams.⁵ If the financial and historical context of the clinic has shaped medical care and this in turn has shaped medical ethics, then the shifting nature of the current context of the clinic will necessitate assessing the adequacy of the current clinical ethics and organizational ethics frameworks.⁶ The distinction between events that are internal to
healthcare organizations and events that change the landscape that healthcare organizations operate within will be an important guiding idea for organizing and processing relevant factors that are needed to inform organizational ethics. Likewise, forging a comprehensive vision that holds together both internal and external realms of a healthcare system will need to be able to track changes on the horizon and redefine itself in order to deliver healthcare. The drive to integrate business ethics and the development of managed healthcare has required healthcare institutions to negotiate the competing interests of stakeholder theory and the delivery of patient centered care. For some hospitals with social justice orientations, attempting to balance profiting in the marketplace with promoting social justice has become a daunting if not impossible task. Any hope of reconciling this tension requires adopting a both/and framework that accepts the business realities of delivering healthcare as well as accommodating the appropriate ethical sensibilities. For organizational ethics, the importance of managing change at the cultural level and the ethical level is crucial for negotiating the complex landscape of healthcare. An important way of establishing trust between the collective institution and the individuals that compose that collective is to develop and maintain effective exchanges of information on the topic of improvement, which will in itself generate at least some level of transparency. If the charge is to develop trust between patients and medical professionals, then an organization’s responsibility is to foster the trustworthiness of medical professionals that operate within it and the trustworthiness of the organization as a whole.

Any attempt to do this accurately will require assessing the expectations of the stakeholders involved. This collection of expectations and public opinion provide a useful platform to ground assessments of adaptability. Sorenson has adaptably and succinctly phrased the argument for why expectations matter; that is, because expectations are directly connected
with autonomy. A literature review of studies that assessed public opinion about enhancements found safety, coercion, and fairness as the dominant issues at hand, however beyond this basic analysis there is a variety of dynamics at play in terms of expectations influencing the debate. A focus group study conducted in the Netherlands that categorized enhancements as wish-fulfilling procedures noted the importance and prevalence of autonomy justifications used by those in the group, but also in response to some cases, a classic paternalistic responses for doctors in terms of safety, for example. Generally speaking, the greater familiarity with a suggested procedure, the greater the defense of autonomy. Another theme stressed by the focus group included the need for the subject of the enhancement to pay for it themselves. Of note, also, were concerns about promoting unjust, and perceived as implicitly racist, uses of skin lightening cream under the guise of enhancement and biases the group expressed that overestimated the risk of medication while championing the benefit of prevention.15

Another small focus group study invited parents of disabled children to offer their thoughts on the use of cognitive enhancements for their children. The studied group provided a number of potential areas of interest including that the parents in question saw medical personnel as the best outlet for safety information, while in general there is some data to suggest that physicians, for example, are uncomfortable with claiming that they have an expertise in this area sufficient enough to meet such a need. Also, there was an interesting and unacknowledged tension between a reliance on medicine for safety and risk assessment, the belief that enhancements prescribed by doctors should not be pursued, and a belief that using cognitive enhancements to empower their child to overcome or at least manage their disability was an acceptable use of cognitive enhancements (even if not for “normal” children). One further thing of interest is that many of the parents in the study did not use or make reference to self-reported
or identified normative judgments in their analysis, per se. This juxtaposed with the normative framework presented in the ethical codes of three major associations of rehabilitation professionals that seem to include responding to the types of problems these parents use to justify the use of enhancements. Apparently, it is an normative assessment for some and not for others, suggesting perhaps there is a confusion about normative ethics in general, or suggesting that if nothing else, there are two separate vocabularies perceived as incommensurable (one saying it is a normative issue and the other deny this claim) that are concerned with the same outcome (benefiting the disabled patient/child).16

A small qualitative study of Australian university students presented a mix of intuitions about cognitive enhancements citing on the one hand that they largely viewed such enhancements as unethical due to perceived cheating concerns and that on the other hand that they should not be banned.17 A Swedish quantitative study using a questionnaire format showed a general acceptance of enhancements derived from natural remedies with only a small group willing to accept pharmaceutical use. However, the study showed a greater acceptance for enhancements aimed at perceived altruistic ends.18 There has also been an interesting discussion over the ethics of enhancements from the perspective of wish-fulfilling and the difficulty of assessing such pursuits from the standard guise of medical practice.19 A study of a sampling of American and Canadian citizens around their assessment of a case study involving the use of an enhancement and the categorization of responses showed almost half of the participants justified a claim of not being comfortable with the enhancement pursuit in question because it represented a situation for which there was no genuine need being met, while concerns about safety and using pills ranked as the next highest categories respectively. Justifications for comfortableness where shared by roughly a quarter of those in the set for 1) enhancement being acceptable if they
are perceived as safe and 2) if the intervention has a positive outcome. The study concluded that the domain of what is enhanced played a significant role in determining comfort levels, with a preference toward creativity, empathy, and narrative memory enhancements ranking the highest.\textsuperscript{20} An interesting study conducted by Fitz et al. concluded that the best way to categorize the public opinion behind their data was to label the public as moderate in the their assessment of cognitive enhancement, in particular. They weighed four areas of concern in their study: safety, pressure, fairness, and authenticity. After examining the weight of each concern, there was not a detectable blanket objection to cognitive enhancement per se. The need to weigh these concerns with prospects of achievement and usefulness suggest, according to the authors of the study, that policy and attempts at societal regulation should mirror this balanced approached as much as possible.\textsuperscript{21}

Turning toward some clinician intuitions, the Hotze study showed that there is “considerable ambivalence” on the question of whether physicians in the United States should be prescribing enhancements. Some of this is due to genuine moral disagreement and some is due to different conceptual schemes for identifying what is an enhancement. The study also suggests that most physicians in the study reported receiving requests for enhancements only some of which are granted; however, most were willing to prescribe enhancements under the right circumstances. As a call for further action, the study concluded that addressing the conceptual confusion that seems to plague the assessment and understanding of enhancements as well as a need for concrete “best practices” regarding responding to such requests ranks as the most important issues needing to be addressed.\textsuperscript{22} In a reply to commentary on their study, Hotze et al. highlighted the need for physicians to embrace the roll of advocate and enter into dialogue over the role of physicians in medicine as well as the influence of enhancement on their practice.\textsuperscript{23} A
study looking at the assessment of radical life extension also showed an ambivalence among the participants. There was not an unconditional acceptance of such a pursuit, although there was not a significant grouping of outright dismissal. Population issues and resources limitations ranked as a notable concern in the study as did requirement for a healthy as well as long life capturing some of the participant’s desire to maintain a certain quality of life as a necessary complement to an extended quantity of life. Concerns about equitable distribution of such life extending pursuits also registered as a standard concern.24 One way to begin to make sense of this as a healthcare organization is to frame the issue in terms of the vulnerabilities each patient, client, and/or customer bring to the table.

6.1.2) The Concept of Vulnerability and Transition

A prominent framework in the vulnerability literature has been to analyze vulnerability as a matter of exploitation and in terms of designating special populations.25 As such, the concept of vulnerability can be understood as reactive in the sense that it has been applied to and generated in the face of consent-based, harm-based, and/or a comprehensive accounts of phenomena that are worthy of the label vulnerability.26 For example, this means that exploitation of a special population can be designated if the group is deficient in informed consent or informed consent protections or suffering harms based on healthcare interventions or the lack thereof. Solbakk has pointed out the following three strands within inquiry into vulnerability: 1) a minimalist strand that attempts to categorize people into special populations with particular challenges, 2) a more robust form of vulnerability that highlights the need for environmental and social engagement, and 3) a global framework that emphasizes the universal and anthropological statement of vulnerability as a matter of human identity.27 One criticism of the work on
vulnerability has been that vulnerability analysis has been too focused on vulnerability as a population concept and not focused enough on the context or the situational aspects of where such a concern arises. This sort of criticism highlights the need to develop the latter two strands of Solbakk’s concept map of vulnerability—the environmental/social component to vulnerability and the anthropological/identity sense of vulnerability.

Tavaglione et al. have argued that the operative assumed definitional notion of vulnerability and the consideration it deserves will only become operationalized by substantiating its legitimacy as a claim on others. There is disagreement in the literature over the normativity of vulnerability, with some arguing that such a concept or fact in the world is not normative in and of itself, but requires some normative framework beyond the instance in question. While others argue that vulnerability and recognized vulnerability in others does necessarily motivate or compel an ethical response. While only approaching organizational ethics as a matter of a coupling strategy, this argument can bypass this issue for now. The point being that vulnerability as specified according to the environmental/social and anthropological/identity lenses allows for a specific concept of and articulation of what it potentially means to be a patient on the healthcare landscape outlined earlier. A notion that has primarily and loosely been explored under the guise of patient safety.

The rise of the hospital as a primary place for the delivery of care and harms (infections, surgical errors, iatrogenic harms, etc.) that are particular to such a setting has focused initiatives on bettering healthcare on matters of patient safety. The prevalence of intensive studies on such harms coupled with a litigation saturated healthcare practice environment have done much to emphasize the pursuit of safety measures in healthcare. Patient safety has been a dominant framework for assessing these types of issues, and transitional issues in healthcare systems have
focused on the nature of dysfunctional interfaces, namely intra or inter institution. The scope of vulnerability assessment limited to interface matters highlights the transitional vulnerability determined by hand-offs within clinical settings, such as transferring patients from the ED to the ICU, or between different shifts on a particular unit. In some sense, the POLST (Physicians Order for Life Sustaining Treatment) is a tool meant to help communicate in an efficient and accurate way the treatment wishes of a patient as a medical order that travels with the patient in an effort to mitigate treatment that may be against the wishes of the patient. This tool recognizes the vulnerability of a patient being sent between facilities or units of care due to economic restructuring or efficient delivery practice and attempts to address the information vacuum such transitions may generate. This represents a sense of transition that is internally focused in terms of, for example, transitions within a healthcare organization, and externally focused if, for example, the transitions are between healthcare organizations. If a healthcare organizations’ comprehensive vision is going to take into account the face of American healthcare as a matter of uncertainty, technological, and economic factors within the landscape of American healthcare, a more robust sense of transition is required. One that encompasses the internal and external vision of transition within the shifting landscape of American healthcare coupled with a sense of vulnerability that captures the nature of transition informed by such a landscape.

6.1.3) The Patient in Transition as Vulnerable on the Shifting Landscape of Healthcare

A missing part of patient safety assessment has been an accurate sense of patient expectations and how such a lens affects or contributes a phenomenological component to safety perception and in turn vulnerability and trust. Any acceptable account of patient expectation will need to take into account goals of care, a patient’s estimation of the capacity of the
healthcare delivery system, an estimation of the abilities of the medical professionals that act within that healthcare system and their ability to deliver healthcare. Capacity will be determined at least by the technological and economic resources available, not only locally but also potentially regionally, nationally, and globally. It will also be determined by the conceptual confusions, biases, and ideological agendas that stakeholders bring with them. With the formulation of transitions between healthcare facilities framed and the preceding analysis of economic and technological landscapes coupled with the idea of vulnerability and patient expectation, one can begin to sketch a different type of transition. The nature of this transition inducing landscape is composed, as illustrated above, by not only intra-trust issues between 1) providers and other providers and 2) consumers and providers within healthcare institutions, but also inter-trust issues among those within healthcare organizations, the organizations themselves and society, insurers, religious groups, professional organizations, and governments. The two most potentially prevalent forces on this new sense of transition are an insatiable drive for technological interventions and development coupled with miracle-inspired expectations of patients. The correlation between medical cost and technology makes this a potentially deadly combination for individual patients. It also is potentially lethal for the financial viability of the healthcare organizations charged with delivering care, suggesting that there is a need to explore not only the vulnerability of patients but also the vulnerability of the healthcare organizations themselves. This adds another layer to a system’s internal/external comprehensive vision, one that needs to account for self-reflective assessment of an organization's survival as it projects itself into the future.

This healthcare landscape illustrated above clearly places decision making in the third transition matrix that follows: 1) individual changes requiring environment to compensate, 2)
individual remains same environment changes, 3) individual changes and environment changes.

An historical argument on vulnerability posits: if health is environmentally determined, then profit motives and free markets are more likely to harm those in vulnerable populations such that these populations have less resources and are more susceptible to such changes and redistributions of capital. But now talk of populations—a staple of vulnerability analysis—must be thought of as more than statically identifiable, but also created by the very organizations that are serving them. Returning to the notion of trust in healthcare, Roberts argues that trust is constituted by competence and conscience, and that the complexity of decision making negatively influences the conscience side of the equation and the conflicting roles of consumer and seller negatively influences the competence side of the equation. If competence is determined by standards of care, technological advancement and options, as well as patient expectation, an institution’s ability to cope and respond to its patient’s vulnerability in transition from current health status to future health status will be inextricably linked to other such healthcare organizations. This leaves the need for some sort of communication and perhaps regulatory apparatus that spans healthcare organizations. It also raises the question of appropriate conscience development of the community and of the healthcare organization within such a setting.

Arguably, “operationalizing” one’s value laden mission statement has designated the next stage of organizational ethics development, moving such activities toward an ethics infrastructure that infuses such values into the culture of an institution. In particular a central question of organizational ethics is formulated as “how to operationalize” in a concrete manner the abstract value laden statements of mission? The central argument of this paper has been the need to integrate a notion of vulnerability into organizational ethics, and in particular to
integrate a notion of vulnerability that is informed by the shifting landscape detailed above. But, are there limits to what can be operationalized? If one assumes the anthropocentric model of healthcare organizations and couples it with a virtue theory model, then operationalizing becomes a matter of instilling good habits that will shape the ethical character of an institution and those within it. Hirsch has argued that the difference between clinical and organizational ethics is that organizational ethics forces one to think and potentially operate beyond the confines of the institution proper, and this means that one can acknowledge the familial similarity of clinical and organizational ethics, but not at the expense of their differences. However, integrating and allowing a notion of vulnerability in transition would seem to require a more expansive vision and perhaps modes of operating outside the confines of the institution proper.

Historically, the pressures of cost containment fueled by profit motives of economic sustainability concerns coupled with JCAHO guidelines for ethics mechanisms spurned clinical ethics structures and practice. It may take more than a regulatory impetus to encourage healthcare organizations to integrate such a notion of vulnerability, let alone form their healthcare practice in light of it. So if clinical, business, and professional ethics can provide useful arenas to work out and inform organizational issues, their limited scope means that such realms of inquiry need to be complimented by something else. Operationalizing an ethical and political/communal normative framework is a problem that is still present; however, the need to do so in terms of a notion of vulnerability in transition within the shifting economic and technological factors influencing healthcare delivery is the point. The limitations of such a conception of operationalizing become apparent when the mode of operation and the factors effecting operation are beyond the power, place, people, process mapping of a given institution. And it is here that a new plateau of the ‘organizational ethics of organizations’ emerges, not as
particular unitary identities but rather as a collective of organizations that recognize their interdependent nature and how the collective contributes to the generation of vulnerability in transition of the people they serve. Only from this plateau will a normative ethical and political theory be robust enough to engage and mitigate such vulnerabilities. The specific nature of this collective, the manner in which it is constructed, the power it is infused with, and the enforce mechanisms (if any) it uses will be crucial areas of inquiry if one wants to take this notion of vulnerability in transition seriously and for the next wave of organizational ethics.

In particular, Coeckelbergh’s work on vulnerability and enhancements is required reading for anyone that is interested in integrating these two ideas, and this is central to the organizational approach defended in this argument. With that being said, it is worth taking a close and detailed look at Coeckelbergh’s work before turning to the categories mentioned above. Before looking at the details of his analysis, it is worth noting that Coeckelbergh is concerned with radical enhancement and in particular arguments posed by transhumanists. However, if one assumes the Organizational Approach to the concept of enhancement outlined earlier, the distinction between radical and non-radical is less important for our argument in this chapter. Let’s sketch out some basic assumptions of Coeckelbergh’s work. First, for Coeckelbergh, technology is not something that is external to who we are as human beings, and is something that helps us not only cope with the world and the challenges we find around us but also helps us make sense of who we are as human beings in such a powerful way that it deserves to be a part of our identity. In this sense, technology not only helps us to cope with our vulnerabilities as we counter, for example, the effects of aging, lack of sleep, repercussion of trauma, environmental threats, etc., but technology also creates vulnerabilities for us. Making sense out of how technology creates vulnerabilities for us means making sense out of the
subjective and objective understandings of vulnerability in that the risks, and more specifically the probability of risks, that each of us views our own vulnerabilities from is informed by 1) the particular perceptions of what these risks mean for us including their emotional impact on our sense of well-being, and 2) the factual assessment of the biological impact of the risks in question. Getting a sense of how to integrate this into a common framework is essential for answering the question of “which vulnerability transformations we really want?” There are certain limitations we face in wrestling with the challenge of enhancements and attempting to answer this fundamental question, for Coeckelbergh, means remembering and accepting that completely escaping our vulnerability is impossible, and insofar as transhumanists assume this, their project is doomed to fail. It also means remembering and accepting that we are always changing and evolving. This includes being aware that technology, along with biological forces and historical forces, are crucial aspects of the change we face as human beings. Coeckelbergh spends a good part of his argument laying an existential/phenomenological foundation for integrating these insights and constructing a philosophical anthropology that is useful but too detailed for what we need at this point. The major takeaway from his argument is that we need to start thinking of ourselves as relational beings and making sense of the risks we face as a matter of being intimately in relation with technology. What is particularly useful about Coeckelbergh's work in this regard is the framing of the challenge enhancements pose to us in terms of understanding how we can think about enhancements in such a way that helps us to bridge and connect the ideas of 1) change and stability, 2) the individual with the social, and 3) the technological with the cultural and biological.

The notion of vulnerability that this line of thought leads us to is one that requires us to make sense of vulnerability as an active dynamic best constituted by an assessment of actions.
These need to be informed, for Coeckelbergh, by the planes in which we operate (the religious, economic, social, political, and self-shaping). Not only does this have implications for biomedical technology but also for information technology as technological developments along these lines contribute to transformations of vulnerability. The point being, for Coeckelbergh, is that the meaning of ethics and enhancement is more about designing our vulnerabilities than it is about applying abstract principles to technological cases.

The next section builds on this charge by formulating several categories of analysis for healthcare organizations as they face such a challenge. In one sense these categories present a non-exhaustive set of implications for development, if one assumes the notion of vulnerability in transition is worth responding to as a healthcare organization. These are offered as a heuristic through the lens of vulnerability in transition and what taking it seriously might mean for healthcare organizations.

6.2) Responding to the Challenges of Enhancements: An Ethical Framework for Healthcare Organizations

The de facto and de jure distinctions allow us to construct a framework for assessing the challenge enhancements pose for organizations (as either type or token). The following categories map the conceptual space of the resulting integration of the de facto and de jure distinction:

- Category 1: De Jure and De Facto: It is justified according to organizational standards and it is practiced in the organization.

- Category 2: De Jure and Not De Facto: It is justified according to organizational standards and it is not practiced in the organization.

- Category 3: Not De Jure and De Facto: It is not justified according to organizational standards and it is practiced in the organization.
Category 4: Not De Jure and Not De Facto: It is not justified according to organizational standards and it is not practiced in the organization.

Developing robust structures to account for *de jure* and *de facto* aspects of an organization’s practice is key, and categorizing the pursuit in question into the relevant category (1, 2, 3, or 4) allows us to identify whether or not the pursuit is integral or non-integral, and deserving of further attention. This conceptual framework is still capable of supporting the normative arguments about specific pursuits without the conceptual and argumentative burden of other approaches to defining enhancement. It also helps us to highlight particular issues involving the integration of enhancement pursuits. Notice that Category 1 and Category 4 frame integral categories that show the *de facto* aspect of scope is in line with the *de jure* aspect of scope. However, Category 2 and Category 3 represent areas of inquiry that are bound to be a challenge for organizations because of their non-integral status. Namely, the *de facto* and *de jure* aspects of scope are out of line. If an Organizational Approach as outlined here is accepted, enhancements end up being a Category 2 issue and a non-integral challenge. However, the particular pursuit in question, for example, cognitive enhancements for combat pilots to allow them to stay awake and alert for long flights, could be a Category 2 issue, as an enhancement pursuit, and then become a Category 1 issue as the particular practice becomes accepted, justified, and integrated. This does invite healthcare organizations into a realm of inquiry that traditional formulations of organizational ethics are not necessarily accustomed to making: concept formation. It is clearly beyond the formulation of organizational ethics by the major texts in the field.60

In light of the foundations sketched in the first section and this challenge designation, this section aims to frame a toolkit for areas of development and conceptual categories that can help

6.2.1) Recognizing Vulnerability in Transition as Identity Defining

It is important to highlight that healthcare organizations are dependent on the communities they serve: as a measure of service and advocacy the organization provides and as a matter of market in which the organization provides. This notion of communities needs to be stretched to include other healthcare organizations. The complexity of the healthcare landscape and the interconnectedness of healthcare organizations means that such healthcare organizations will need to be aware of their roles as both generators of vulnerabilities and alleviators of vulnerabilities. Efforts to organize an ethical moral agency in itself may create vulnerability generating dynamics forcing organizations to generate vulnerability while at the same time charges them with responding to the vulnerable. With limited resources to dedicate to such organizational ethics activities, especially in rural areas, the hope of developing a robust enough ethics infrastructure to handle ethics issues with organizational impact will be challenging.

Here, it may be helpful to think about the initial impulse toward promoting adaptability in terms of medicalization and the idea of treatment creep. Schermer offers what he considers to be the three problems of medicalization that can serve as a framework for assessing the state of current practice within a healthcare organization. The first issue is to remember that harm-benefit ratios are a key metric for assessing the implementation of any intervention and this
should include enhancements. When the seriousness of a problem that the patient presents with differs drastically from the initial design of the intervention in question, Schermer argues that there needs to be a proportionate adjustment in the harm-benefit ratio. The important thing to note is being aware of who the appropriate stakeholders are when determining the scope of ‘seriousness’ and having engaged this question beforehand can be a useful strategy for coping with enhancements. The second issue is relying on or rather over-relying on enhancements interventions, under the problem of medicalization, to solve the complex issue at hand without considering the rest of the organization’s resources. In particular, a toolbox with a broader scope can create the tendency or encourage the bias of overreliance on the enhancement intervention, while ignoring the complexity of social determinants, for example, that are most likely fueling the problem being addressed. Finally, the third problem of medicalization that enhancements pursuit may fall prey to is disease mongering and the effort of creating problems designed for the solution enhancements could offer. Here current preventive framework appears to make preventing this difficult as, for example, certain categories of drugs are not deemed regulate-able under current FDA standards.63 The idea of being responsible for a patient beyond the walls of the organization and the drive to facilitate so called wrap-around service synergize well with this concern and should be a topic of interest for healthcare organizations concerned with coping with enhancements.

6.2.2) Learning Opportunities from and for Vulnerability in Transition

There is an important distinction to be made between retroactive learning events (those that involve processing of past mistakes or situations) and projective learning events (those that involve speculative forward looking analysis). One healthcare organization reflecting on their
practice in the wake of a bankruptcy champions such events in terms of the opportunity to scrutinize the entire organization and the need for transparency as integral aspects of organizational ethics. The charge of becoming a learning organization means the willingness to review and access one’s current state of operation; however, concerns of vulnerability in transition may mean that successfully negotiating changes will involve a comprehensive vision that is attentive to future complications. Myser has argued that mergers can be viewed as a unique window for assessing the organizational ethics infrastructure of an institution, arguably as a matter of comparison and ultimately guiding a smooth and effective integration. This idea of merging involves a complex environment and the realization that the situation being faced is potentially new for an organization; that is, something beyond the normal operations of the organization in question. Adopting a continual merger stance or restructuring from a viability threatening event arguably generates conditions that are ripe for learning. This supports the need to bolster ethical normative theories with some communal orientating framework that such a notion of merger forces one to capture. Static conceptions of character in organizational ethics will need to embrace moments of choice as educative in themselves, as well as products or learning outcomes; however, formulating them solely as matters of integrity is too limited to be able to deal with the vulnerability in transition issues that will transcend coherentist reflection. The next wave of organizational ethics will need to embrace, at least, an integrity plus model that embeds education agendas within the larger healthcare organizational community. Off label use of pharmaceuticals is a key area to begin this learning.

Our earlier assessment of the de jure components also lend themselves to a potential learning agenda for healthcare organizations coping with enhancements. In regard to the takeaway from the argument from bad character, it is worth being mindful of the allure of
enhancements and specifically what affects such an allure can have on individuals and communities especially as a matter of encouraging or discouraging certain types of resource allocation, individual behavior, and research. The allure to be totally free from vulnerability is something to protect against as a healthcare organization, especially if Coeckelbergh is right and it is inescapable. Here the operative learning agenda is to assess how the values and behaviors promoted by the organization’s structures and culture either embrace a transitional notion of vulnerability or promote adaptability. In regard to the takeaway from the argument from human nature, it is worth being skeptical about relying on concepts that import commitments into a debate that are not shared by the members of the community in which the concept does its normative work. This is not to say that such concepts do not have an important place in the debate. It is to say that one should be skeptical about such concepts wielded as trump cards that close the discussion. Lastly, more abstract and thinner conceptions of human nature could prove fruitful and are worth developing and exploring. A notion of vulnerability that takes into account the inescapability of vulnerability as well as its relational nature could be a useful replacement for a static notion of human nature. This requires studying the language used to operationalize values and the mission of an organization plus the latent assumptions that import static concepts that are incompatible with recognizing the vulnerability of patients and clients pursing adaptability. In regard to the takeaway from the argument from inequality and the protection of autonomy from manipulation, focus on first person assessments of enhancements and the distracting quality of moral enhancements have some traction, and the concern from social control stresses the concern that enhancement technologies may become instruments through which people may be abused or exploited is also worth considering further. Accounting for this requires being aware of how the practices of one’s organization and the structures that frame
such practice generate vulnerability as a matter of the technologies that are researched, developed, deployed, and regulated within its walls. This assessment does not need to be a negative activity, but would rather do well to accept its vulnerability generating capacity while focusing on discerning how these technologies aimed at adaptability will transform its patients and clients. In regard to the takeaway from the argument from human dignity, the impact and ubiquitous nature of the concept of human dignity justifies its value in the debate for no other reason than it represents a common conception that bridges diverse camps and could prove to be useful in reaching consensus, if possible. A conception of vulnerability in transition needs something to contribute stability to balance off the change that the shifting landscape of technology innovation gives rise to in healthcare. The conception of human dignity will need to be defined and defended within the society and confines of the organization in question. However, it can provide a tether for an initial threshold of permissibility; that is, it could help us answer whether or not the enhancement in question promotes or is a challenge for the promotion of adaptability. In regard to the takeaway from the argument from procreative beneficence, while above it was argued that reproductive matters are too contentious at this point, the larger argument from benefit to others escapes the objections leveled against the argument from procreative beneficence and is worth taking a closer look at. If we are really playing a non-zero sum game like Buchanan suggests we are, in at least some case, then not only does doing good for the patient/client in question have a value, but so does the possibility that pursuing the enhancement in question can have value in promoting the well-being of others. Here tracking and speculating on the implications of use (limited or widespread) for understanding how a healthcare organization can affect vulnerability in transition can be valuable. In regard to the takeaway from the argument from transhumanism, with such an abstract and idealized goal as
transhumanism holds, especially as an obligation to purse the posthuman, it is worth being concerned about what it means to extend ourselves and our inquiry beyond our local values. This requires 1) being aware of the organization's *de facto* and *de jure* components; 2) having regular, systematic, and recurring assessment of how they are changing, and 3) being aware of the other organizations that our organization is embedded among.

Hofmann has constructed a question scheme for assessing cognitive enhancement technologies that provides a useful set of questions and is a fitting addition to an organization's toolbox as well as a good place to conclude a section on learning opportunities for healthcare organizations. The collection of questions represents a fairly conclusive culling of potential learning opportunities parsed into the following categories of analysis for assessing an emerging technology: 1) "What is the characteristic of the technology? Function/purpose/intension;" 2) "What cognitive capacity/ability/characteristic is enhanced or modified? What is the capacity or the ability that is enhanced, and how is it valued?;" 3) “What kind of enhancement does this represent? Augmentation/improvement of existing performance/ability, new sense/ability/capacity, qualitative/quantitative;" 4) "What is the target group (users) of the technology? Group or subgroup;" 5) "Is the main target group (users) of technology? Vulnerable, high socioeconomic status or priority, low socioeconomic status or priority, subject to prejudice or discrimination;" 6) "Is the technology targeted towards healthy persons? Whether it is targeted towards healthy or diseased persons may implications for priority setting.;" 7) “Does the (widespread) use of this technology change the human condition? Does it alter basic conceptions, behaviors, life-styles, etc.?" 8) "Does the use of this technology potentially change any conceptions of: a) self(hood), b) agency, c) integrity, d) authenticity, e) equality, f) dignity?;" 9) "Can the implementation and use of the technology alter human morality or
responsibility? Does accountability change in any way?;" 10) "Does the technology change
human perception, experience, and/or conception of reality (virtualness)?;" 11) "Does the
implementation, use, or withdrawal of the technology challenge persons' a) autonomy, b)
privacy, c) confidentiality, d) human rights?;" 12) "Can the technology contribute to solving
important societal problems, tasks, or challenges? Do the functions, purposes, and intentions
solve societal challenges?;" 14) "Is there evidence that the technology challenges social, cultural,
or religious norms, values, institutions, arrangements or convictions? Are there barriers or
facilitators?;" 15) "How can the implementation, use, or withdrawal of the technology affect the
distribution of resources? (Justice in allocation, access, and distribution); 16) Will the
implementation and use of the technology create inequalities (e.g., due to difference in effect,
uptake, application, etc.)? Will only certain persons or groups be able to apply (and benefit)
from the technology?;" 17) "What are the main ethically relevant benefits and risks/harms/costs
of the implementation, use or withdrawal of the technology? (positive and negative
consequences) benefits/safety/risk;" 18) "Is it clear how risks arising from the implementation,
use or withdrawal of the technology should be handled?;" 19) "Is there consensus on how the
benefits balance the harms? Do risk benefit-analyses exist?;" 20) "Are there good existing
alternatives to this application? Do related technologies exist? Does it replace or extend an
existing technology?;" 21) "Are there any related technologies that have turned out to be
ethically challenging? (Are the same challenges relevant for this technology?) Are there relevant
analogues that give important information on ethical issues?;" 22) "Does the technology have
potential alternative or dual use? Could the technology be used for other purposes with
unintended consequences?;" 23) "Are these ethically relevant interests at stake for the following
stakeholders: users/consumers, producers, the environment, the society at large, other
stakeholders?;" 24) "Might third parties benefit from the enhancement? Do authorities, enterprises, employers, schools, family, members benefit? Does the enhancement imply a pressure on the individual user?;" 25) "Are there special difficulties with informing persons about the potential implications of using the application? Is the scope and consequences of using the technology easy to understand?;" 26) "Can the technology be used to mislead persons? Can the technology be used for deception?;" 27) "Are there ethically relevant third party agents involved in the production, implementation, or use of human cognitive enhancement (donors, relatives, research subjects, research animals, others)?;" 28) "Does the technology inherently contribute to or challenge the agency/autonomy/personhood of the other persons (who do not use the human cognitive enhancement)? With widespread use to the human cognitive enhancement how is the agency/autonomy/personhood of non-users affected?;" 29) "Are the users of the technology in the (case) studies presenting the application representative of the users that will apply it in general practice? Are the users in assessment typical users?;" 30) "Does the enhancement exist in a functional and testable version? At what stage of the development/implementation is the technology assessed?;" 31) "Are there (obvious) biases in the presentation and documentation of the technology (e.g., status quo bias, precautionary principle, high hope, automatic escalator, etc.)? Can specific framings be identified in the presentation of the human cognitive enhancement technology?;" 32) "Are there specific reasons that this technology has (not) obtained attention or is assessed? What are the reasons for attention or omissions of attention?;" 33) "If the technology is implemented, will other non-effective technologies be abandoned? Will the implementation affect the use of other technologies?;" 34) "Can the enhancement lead to (measurable) non-reversible changes in the human body or the human mind or lead to dependency? How may the technology change human beings (mind,
body, behavior)?;" 35) "Judging from media discussion or technology assessments, is there evidence that the application is socially controversial?;" 36) "Does the application fall under the following legislation: a) medical device legislation, b) research ethics legislation, c) pharmaceutical legislation, d) chemical legislation, e) food and nutrition legislation, f) consumer legislation, g) privacy legislation and data protection, h) environmental legislation, i) biotechnology legislation, and j) radiation legislation?;" 37) "Can the implementation, use, or withdrawal of the technology in any way conflict with existing law or regulations or pose a need for altered or new legislation?;" 38) "Does the technology change or create (the need for) social institutional or specific policies?;" 39) "Have users or members of the public been involved in the development and/or the assessment of the technology?;" 40) "For this application, is there a need for standardization of a) terminology, b) impact/efficacy measurements, c) side effect measurements, d) technical specifications?;" 41) "Are there sufficient risk assessment frameworks for this application?;" 42) "Are there sufficient risk management frameworks for this application?;" 43) "Are there other relevant ethical issues?" 68

6.2.3) Vulnerability in Transition and Organizational Adaptability

A framework that supports organizational ethics needs to be robust enough to accommodate what it means for an organization to structure itself and to operate in accord with its established mission statement, while generating strategies for dealing with potential future value conflicts. 69 Such a formulation requires that organizations are capable of supporting feedback loops that generate access to valuing conflicts within the institution. 70 Egan has pointed out the need to fold appeal processes and whistleblower protections into accounts of organizational ethics, especially for those in vulnerable positions—like trainees and students—
and subject to power structure inherent to organizations and professions. The need for information loops outside of the organization will be even more pressing for practicing with a shifting landscape that will give rise to vulnerability in transition issues. Suggesting that not only should adaptability be valued for its own sake, but that the quality of the sources of information used as a means of information to bolster adaptability also must be more expansive than mere internal whistleblowing mechanisms.

Racine and Forlini have warned that there will need to be more thought about the effect of widespread use of enhancements on existing organizational structure of healthcare. If enhancements become scaled up and integrated into the current delivery of healthcare services, some thought needs to be given about the affect this will have on the current bandwidth of care. Without more adequate safety and efficacy knowledge, fallout from usage due to adverse effects, abuse, addiction, or unforeseen results could cause severe strain on the healthcare system.

6.2.4) Vulnerability in Transition and Leadership

The importance of ethical leadership for healthcare organizations is well argued for in the healthcare organizational canon. This has led some to mainstream such leadership arguments and encourage those in the field not to dismiss the push for ethical leadership as a passing notion. The vulnerability in transition argument above suggests that organizational ethics and leadership within healthcare organizations may be placing too much reliance on the efficacy of structures, perhaps to the detriment of developing the ‘moral muscles’ capable of driving one and an organization through the shifting landscape of healthcare. A ship may function better or more efficiently if it is built to be sturdy and hydrodynamic, but navigation of the ship and the institution will still be more than a matter of mere infrastructure; this is, adequate infrastructure
is necessary but hardly sufficient. This highlights the importance of adopting an accurate model or metaphorical understanding of healthcare organizations from which leaders make decisions. Sources of mission are both the leaders and the directions that are chosen, and realizing that these leaders that will create the vulnerabilities of tomorrow is a new dynamic that needs to be recognized. Not only is organizational integrity important but developing a leader and bolstering an organization's leadership philosophy with something beyond stakeholder theory and principled based ethics will be crucial to successful leadership within a shifting landscape. Making choices within communities contributes to the meaning of moral agency within those communities, and as such operating as a moral agent will have vulnerability in transition implications.

One useful strategy for dealing with the need to constantly reassess the *de facto* and *de jure* components of their organization as well as discerning and formulating decisions in an ambiguous environment is to adopt the habit of thinking that Parens champions and that is referred to as binocularity. Parens starts his case for binocularity by highlighting what he thinks is a central dynamic in bioethics, or at least doing bioethics well, and that is, the need to hold together two opposing things. First, the drive to answer meaning questions—about what we should do and in particular what technologies we should pursue, use, and avoid—and that are in some sense unanswerable or at least they always need to be revisited and renegotiated from our particular points of view. Second, the requirement to offer answers to concrete and practical ethics question. For Parens this means accepting that there are not *final* answers to the meaning questions we face and committing to perpetually re-asking the questions, especially as our story and our community's story changes. This also means committing to searching for answers to those meaning questions.
This is where the notion of binocularity comes into play for Parens. The basic idea is that we need to embrace the idea of viewing the questions at hand from two lenses at the same time. That is, by accepting that there are no final answers to meaning questions and being willing to alternate the lens we use to assess the situation, we can approach our inquiry about meaning in our lives as an ongoing conversation as opposed to a definitive claim that we must defend. In particular for the enhancement question, Parens proposes and uses the two lenses of creativity and gratitude to alternate between when assessing meaning questions about shaping ourselves with new technology. It is the dialogical back and forth between these two lenses where Parens believes we do our best thinking and how leaders can contribute to building ongoing meaning in the communities they serve.

6.2.5) Balancing Internal/External Vision with a Decentralized Orientation

The vein of organizational ethics that encourages and emphasizes collapsing conceptual dichotomies (micro/macro, internal/external) and integrating these fragments into a whole could be useful in regard to addressing the concerns of vulnerability in transition. Also, there is a need to encourage discourse and also to direct discourse to counteract educational and professional “siloing,” that has the tendency to reduce a problem to its parts (or specializations) with little regard for the bigger picture, and one that an organizational ethics framework is well positioned to overcome. Responding to patient safety concerns, Vincent champions an adaptive, preventative, and decentralized orientation that encourages individuals to make local interventions. Also, Dickenson has been critical of the pursuit of “me” healthcare practice and the personalized healthcare practice that a capitalistic market, free enterprise, and the influx of new technologies to healthcare have created, and “Me” orientations is precisely what
organizational ethics is designed to counteract, the question is are they robust enough to do so especially in regard to the shifting landscape ahead of American healthcare delivery; importing Dickenson’s idea into organizational ethics, there needs to be some thought about what ‘we’ driven organizational ethics means on a horizontal plane that includes other organizations.  

Expanding that sense of ‘we’ beyond the walls of the organization will be needed to deal with the challenge that enhancements will pose. Turning to an argument about enhancement control and the regulation of medical technology, such a framework for assessing innovation and regulating it, according to Buchanan, generates three modes of engagement: “prohibition, creation, or diffusion”, and for Buchanan, this type of mode of operation requires a global structure of member states to adequately deal with the implementation of innovation regulation. The most robust proposal along these lines so far has been put forward by Buchanan in his formulation of an international platform called The Global Institute for Justice in Innovation (GIJI). The main aim of the GIJI is to help alleviate concerns about distributive justice that arise from general innovative changes in technology, of which enhancements would be a particular concern among many others. Buchanan is also keen on emphasizing that not only is identifying how an inability to access these emerging technologies would harm a community, but it is also necessary to keep in mind how even minimal and limited access to some technologies by even a small minority of a community could benefit the larger whole. Here, Buchanan points out a number of technologies that fit this mold such as, calculators, computers, cell phones, and internet access, that can be harnessed to help level an unequal playing field and can also be used to provide benefits to the surrounding communities. Take cell phones for instance, it functions as a basic tool of empowerment that allows people at the margins of society to participate in the economic and political realms of their communities. Buchanan suggests that
we view enhancements from this lens. For example, a cognitive enhancement could help someone who is cognitively disadvantaged cope with the challenges of competing in a marketplace for the goods a society has to offer in such a way that it empowers that individual at the margins of society to participate in the economic and political realms of their communities (perhaps at a lower cost than formal education would). For Buchanan, an institution needs to access its operations in this area in light of the following categories of operation: 1) prohibition: is the organization taking a stance and/or has it organized its structure to prohibit the development or application of this emerging technology; 2) creation: is the organization taking the lead in advocating, designing, and creating new technologies that can address the injustice in their respective communities; 3) diffusion: is the organization maximizing its efforts to increase access to this new technology in its communities. Buchanan is openly skeptical about taking a hardline prohibition stance at least insofar as an international (perhaps global) institution faces defector problems. While not necessarily having to have a global reach, healthcare organizations facing the challenge of enhancements could benefit from integrating these categories of operation into their assessment of emerging technologies, and insofar as healthcare organizations share a common pool of varied expectations, shifts in practices within these operational areas will affect the expectation pool within which other healthcare organizations operate. The point being the transcending a solely internal view and integrating an external view may require healthcare organizations to build a capital 'WE' structure (even loosely structured) to adequately cope with enhancements.
6.2.6) Meaning Making: Well-being, Perspective, and Social Approaches

Forging a conception of enhancements is something that is the charge of healthcare organizations as the conceptual framework of well-being will need to accommodate social values as well as perspective values, and the clinical setting of healthcare organizations—embedded in the social context of the society with the first person concerns of its patients—is the ideal arena from which to construct the concept of enhancement and justifications or limitations of enhancements pursuits. This conceptual work will entail efforts to fuse adaptability with vulnerability in transition in meaningful ways on the conceptual horizon formed by well-being, social values, and individual perspectives of enhancements. This may require expanding the role of adaptability to accommodate other heuristics beyond survival and coping, or at least may require exploring frameworks of informed sources outside of medicine, for example, by cultural or religious sources.\(^9^0\) Securing financial support for such explorations will be paramount as they will need to be speculative, empirical, and conversational. Assuming a narrative ethics and a discourse ethics framework of such inquiry both at the level of healthcare organization and on an individual level seems appropriate.\(^9^1\) In this regard, one of the major contributions of healthcare organizations is to contribute a missing and much needed bottom-up view of the enhancement debate as a facilitator of an anthropological study of the community within and around the institution.

It is important to acknowledge the role of imagination in this sort of anthropological work as well as recognizing that the meaning making required is something that can influence the enhancement debate as well as inquiry into the ethics of emerging technologies, while also being influenced by it. Coeckelbergh, while exploring a framework for thinking about posthuman ethics, examines several strategies for thinking about the role of imagination and emotion in
doing anticipatory ethics that has implications for this argument. For example, Coeckelbergh champions the idea of building mind gyms where members of a community can stretch and develop the imaginative capacity to process the implications and effects of new technologies. This needs to take into account, what Coeckelbergh thinks of as a "hands-on" experience that helps to bolster our imagination by enabling us to explore these emerging enhancement technologies in some virtual or artistic manner. If we are actually reshaping our experience through whatever technologies we are thinking of embracing, then being as concrete and even as prop driven as we can in our speculation may prove useful. Likewise, being mindful and concentrating our efforts on the immediate future seems more beneficial as distant future speculation, although important, seems to be less likely to meet the above "hands-on" aim. This project, Coeckelbargh notes, requires taking an honest assessment of the complexity and the resulting difficulty of doing ethics in this regard; that is, we should not expect more from the subject matter than can be reasonably expected and expectation management is an important part of the value that an ethicist can contribute to the issue. Finally, it is important to be mindful of how useful imaginative speculation can be as it is tethered to the conditioned and formed within the real life situations we have found ourselves in and will continue to find ourselves in, and if we can acknowledge that the technology we rely on in our lives is an essential part of who we are and not just peripheral, the more we can acknowledge the connection our imaginative faculty has with technology.92 Finally, Cabrera's argument about the connection between enhancements and communication serves as a reminder of the unforeseen effects of embracing technologies that begin to make us rethink what it means to be human. If significant changes in how we conceive of ourselves and the meaning of our lives is able to be forged under the hammer of enhancement, how we communicate with each other about our experiences is bound to be
influenced in one way or the other.\textsuperscript{93} It is also important to take into account that determining the meaning of enhancements from an anthropological approach means taking into account the history and cultural factors that affect meaning, both from those that are threatened by an organization's embrace of enhancements as well as those that revere the enhancement project.\textsuperscript{94} It also needs to take into account that meaning making can be a matter of emerging technologies generating new conceptions of health as they allow people to cope with more and more diseases and disabilities, which will in turn expand or shift the very meaning of health.\textsuperscript{95}

\textit{6.2.7) On Clinical Ethics and Research Ethics Expertise}

Rasmussen has defined clinical ethics expertise as a superior familiarly with the context of healthcare.\textsuperscript{96} Unfortunately summaries of this context for clinical ethics education have not focused extensively on the shifting borders of the healthcare context.\textsuperscript{97} If this conceptual analysis of enhancement and argument assessment of the enhancement debate holds, then Vogelstein’s articulation of clinical ethics expertise as requiring the relief of moral misconceptions in the bioethical debate frames a charge to encourage the enhancement debate as a matter of a well-being pursuit that is informed by social and perspective values as well as integrated into an organizational ethics approach.\textsuperscript{98} Some have deemed ethics consultation and by extension members of ethics committees as being part of an “impossible profession.”\textsuperscript{99} One interpretation of such a claim is that such individuals are charged with hopelessly complex and difficult task that might be impossible to do. Here, this section picks up this notion and attempts to express this internal conflict of functioning as an ethics committee in terms of integrating roles that may be in tension or conflict. Specifically, an effective ethics committee needs to find the balance among the following three polarities: 1) the role of patient advocate or impartial
analyzer, 2) being active and passive, and 3) providing answers and raising questions. These are not meant as an exhaustive list, but rather as a sample of potentially conflicting polarities.

Sometimes ethics committees may find themselves in situations where there is a need to provide advocacy for the patient in the decision making process in the clinic. For example, when a patient is having difficulty expressing or is unable to express wishes for care or when there are power imbalances in an institution or in a relationship that are infringing on a patient’s right to self-determination. Sometimes ethics committees may find themselves in situations where there is a need to provide impartial analysis of the case in the clinic. For example, when a family is having difficulty transitioning from a curing approach to patient care to a comforting or comfort-measures-only mode of care, it can be beneficial to have a neutral mediator that functions merely as a facilitator for a group discussion. And, sometime there is the need for an ethics committee to serve both roles.

Sometimes ethics committees may find themselves in situations or within institutions where there is a need to take on a more active role in terms of serving their function; that is, there may be times when it is necessary to be proactive in implementing preventive educational matters, or in reviewing case consultations for patterns that would suggest the need for some intervention. Sometimes ethics committees may find themselves in situations or within institutions where there is need of a more passive role in terms of serving their functions; that is, there may be times when it is necessary to let cases come to the committee, or to stress that the committee is open and a resource to the community without being intrusive or authoritarian. And, like in the previous polarity sometimes there is the need for an ethics committee to serve both roles.
Sometimes ethics committees may find themselves in situations or within institutions where there is an immediate need for guidance about an ethical problem in the clinic or an ethical question that requires an immediate answer. For example, in the case of someone refusing blood transfusion after a trauma when there is an ethical question about the individual’s decisional capacity or reasons for refusal. In these cases, the immediacy of the situation necessitates an answer. And, of course, a providing answers role is also appropriate for less immediate or theoretical ethical questions that are raised in the practice of medicine. Sometime ethics committees may find themselves in situations or within institutions where there is the need to raise questions about something as opposed to providing answers. That is, there may be times when an ethics committee best serves its function by introducing other points of view or other considerations into a case that pose further questions, and perhaps even leaves questions unanswered. And again, sometime there is the need for an ethics committee to serve both roles. Finally, sometimes there is a need for an ethics committee to alternate between gratitude and creativity.

The idea of making conversations more fruitful is a worthwhile goal that, for Rorty, is primarily a matter of recreating or redefining concepts so as to provide those involved in some sort of inquiry or conversation new tools for explaining one’s position or side. And the notion of the conversation, at least in this sense, is set against the notion of getting things right; that is, to be in conversation with someone about a topic is not a matter of getting it right but is a matter of, as Rorty puts it, re-describing the situation or concern. The result of such conversation should enlarge and expand our conceptual horizons and deepen our understanding of ourselves, our communities, and the problems that we face. The ultimate aim of this sort of inquiry is to find a way to engage those around us or those that we are in conversation with so as to find a
way to keep the conversation going. The charge to keep the conversation going seems to make
the most sense as a derivative of the desire and need to move beyond the impasses of inquiry.
That is, the moments when one feels that there is intractable disagreement between parties
involved in a conversation or inquiry. These are times when our conceptual frameworks seem
incommensurable with our conversation partners, and these are often times when conversations
become distressing and unfruitful resulting in people simply repeating the same claim over and
over again, or attempting to justify their claims with words like “surely,” or “obviously,” or “of
course it is true,” or “see,” etc. For Rorty, there seems to be a sense where the value of the
conversation comes from the process—and expanding our repertoire of concepts—more than the
destination or getting things right. The important thing about our concepts is that they are tools
for communication, for examining the problems we face, and for learning how to live better.

This is bound to raise a number of objections when applied to the function, roles, and
practice of ethics committees, one of the most pressing being that often times ethics committees
find themselves in situations that do not afford them the luxury of not getting it right. This
objection is sound if one adopts a continuing the conversation on the role or perhaps function
level, but the idea here is to think about continuing the conversation as a meta-theory or meta-
role for ethics committees. This is a way for the ethics committee to hold a coherent theory that
allows them to handle conflicting roles in a creative tension, and particularly, it is as a way for an
ethics committee to make sense out of times where it needs to bridge the following three
polarities: 1) the role of patient advocate or impartial analyzer, 2) being active and passive, and
3) providing answers and raising questions.

Across these three polarities the charge of an effective ethics committee is to judge where
a proposed action or mode of engagement needs to fall on the spectrum of, for example, patient
advocate or impartial analyzer, with an eye toward continuing the conversation among the diverse expectations and shifting landscape of healthcare. That is, it requires that the ethics committee have a grasp of the dynamics within the institution and members of those involved so as to ascertain an appropriate balancing response. Following up on the example, if the case in question or rather those involved in the case are making a strong patient advocate argument, it could be useful for the committee to adopt an impartial analyzer stance. The point being not to necessarily raise conflict, but to create an environment that can generate an interesting conversation about the issue at hand, with an aim for continuing the conversation. This is not to rule out a conclusion to the conversation or is it to rule out claims that the committee may want to argue for as right or appropriate; rather, the point is that the committee take a role in the inquiry that is creative, requires engaging as many diverse opinions as reasonable, that risks accepting its own fallibility, and communicates a willingness to revisit old points of conflict with the hope of recreating them in a new and useful way. A similar dynamic is relevant for the active/passive and answers/questions polarities. Both require an ethics committee to have a grasp on the institutional and individual factors that are influencing the case in question in the decisional/analytic propensities of the players involved, and to insert itself into conversation in a manner that encourages its continuation. There are certainly limits to such continuation and it is a matter of discerning the appropriate level of interaction; however, as a matter of prompting transparency and morale, the conversations over ethical issues that directly affect the clinical practice of a healthcare institutions should rarely be closed.

As a matter of research ethics expertise, if the above argument is compelling, and such global threats being unforeseen or perhaps unforeseeable are compelling also, then in the least research agendas designed to bolster the human species capacity to adapt or to cope with such
challenges through enhancement technologies is justifiable. The scope and commitment of such an agenda will need to be balanced against justice concerns, but as the argument above has shown, this can be a matter of balancing and not necessarily one of unnegotiable impermissibility. The role of research ethics committees will need to be reshaped in order to properly cope with the infiltration of enhancements into the organization's landscape and into the organization itself. In particular, conceptual issues of proper identification will be paramount. So will the need to re-conceptualize the boundaries of risk assessment and the standards needed for justifying research on those suffering from diseases and disabilities that may benefit those who are healthy, which is liable to be a part of treatment creep within which enhancement pursuits can flourish. Forlini et al. do an excellent job of sketching out a strength and weakness assessment matrix in light of aims to promote, remain neutral, or oppose research on enhancements. Interestingly, while remaining neutral in arguing for a specific stance through the piece, the authors do make a claim that given the need for "prevalence, safety, and efficacy" data means that a strict opposition stance to research is inappropriate. Likewise Lev et al. have made the argument that a total ban on enhancement research is unjustifiable as there is evidence that some research on enhancement technology is likely beneficial to the health of others, both as individuals involved in the research and as a larger public that could benefit for the outcomes of research. Also, insofar as enhancement research can be harnessed and put into the service of public health needs, then logically, the same justifications that support the public health need in question can be massaged to support the enhancement research in question. Given the potential for reframing current non-enhancement structures of research ethics to accommodate the protection of enhancement research subjects, adapting to at least a modest inclusion of enhancement research may be rather feasible at least in theory; however, the movement of a
federal regulative bodies may be more difficult insofar as there is justifiable worry they may prove to be not so nimble or accommodating. Finally, what is missing from this ethics picture is what it means to have the social ethics expertise and the neuroethics expertise that coping with enhancements will require.

Concluding Thoughts on Preparing Healthcare Organizations for Enhancements on the Horizon: It is a reasonable criticism of this chapter that it raises more questions than provides answers; however, the shifting nature of the landscape on which healthcare organizations operate, raising smarter questions might be the best one can expect in such a dynamic environment. This argument of this chapter connected the idea of adaptability with vulnerability in transition. By examining the relationship between healthcare, vulnerability, and enhancement expectations, the chapter developed a framework that along with integrating the concept of vulnerability and transition attempted to bolster a literal sense of transition with a larger sense of what it means to be vulnerable on the shifting landscape of healthcare. It then moved on to further articulate the challenge that enhancements form in terms of the Organizational Approach to the concept of enhancement and specifically along de facto and de jure lines. After doing so, it constructed an organizational framework for coping with enhancement pursuits that focused on seven categories of development. In particular, it focused on how a healthcare organization can use recognizing vulnerability in transition as identity defining, 2) how a healthcare organization can develop and cultivate learning opportunities from and for vulnerability in transition, 3) how a healthcare organization can begin to think of vulnerability in transition and organizational adaptability, 4) what vulnerability in transition can and needs to mean for the leadership of a healthcare organization coping with enhancements, 5) how to balance the internal and external vision of a healthcare organization with a decentralize orientation and competing organization on
the healthcare landscape, 6) what role meaning making plays in an organization around the central conceptual categories of well-being, individual perspective, and social approaches, and 7) how clinical ethics and research ethics needs to change to accommodate enhancement technologies as well as what are the next wave of ethics questions and expertise that need to be developed and explored.


17 Stephanie Bell et al., “Australian University Students’ Attitudes Towards the Acceptability and Regulation of Pharmaceuticals to Improve Academic Performance,” *Neuroethics* 6 (2013): 197-205.


Chapter 7) Conclusion

This work defended the thesis that an organizational ethics framework is needed to address the challenge for enhancement and adaptability in healthcare. It did so by approaching the enhancement debate from conceptual, normative, and institutional perspectives. The implication being that an adequate response to enhancements will require integrating all three lenses into a framework that highlights the organizational aspect of the particular challenge enhancements offer.

The conceptual strand of this argument focused on constructing an Organizational Approach to enhancements. After examining the five major approaches in the enhancement debate (the Negative-Comparative Approach, the Grouping-Resemblance Approach, the Social-Pragmatic Approach, the Perspective Approach, and the Welfarist Approach), it concluded that there is good reason to adopt an Organizational Approach to enhancements. The Organizational Approach is a hybrid formulation of explicit approaches and as such it is an explicit approach designed to avoid the major concerns facing implicit approaches in general, yet its real worth is determined by its usefulness for processing and in turn assessing enhancements. Specifically, the proposed definition of enhancement defended in chapter 2 was that enhancements are pursuits along biomedical avenues that are beyond the current scope of organizational practice (de facto) that in order to be justifiable (de jure) must aim at achieving values of well-being, social importance, individual perspective, and that are in line with the organizational mission in question. This approach offered a coherent conceptual foundation that set the stage for the rest of the argument.

The normative strand of this argument focused on examining the dominant arguments for and against enhancements. In the first part (chapter 3), this second normative strand examined
the Argument from Bad Character, the Argument from Human Nature, the Argument from Inequality and the Protection of Autonomy from Manipulation, the Argument from Human Dignity, the Argument from Procreative Beneficence, and the Argument from Transhumanism. While these arguments are not convincing in themselves and do not conclusively settle the enhancement debate, they do offer a useful set of concerns that can help inform an organizational ethics framework. In particular, the assessment of the debate can be instructive in helping to formulate and inform the *de jure* aspect of making sense out of what an organization should do about enhancement pursuits.

The second part of this normative strand (chapter 4) defended the claim that some enhancements ought to be permissible. This conclusion rested on two premises. First, biomedical pursuits that promote or augments one's ability to adapt ought to be permissible. Second, some enhancements do promote one's ability to adapt. However, this claim is not absolute; that is, there may be competing claims that trump its implications for healthcare organizations such as resource allocation issues, for example. Because healthcare organizations are in the position to best construct adaptability justifications from a conception of enhancement derived from well-being, social, and individual perspective approaches, they are in the best position to formulate answers to the ‘for whom’ and ‘what enhancements in particular’ questions that the conclusion of the adaptability argument generated. Previewing the “whoms” and “whats” that ought to be potential candidates for consideration led us to, among others, professions on the cutting edge of performance expectations—military, law enforcement, surgeons, disaster relief teams, first responders and unknown environmental risks, global threats, certain cognitive biases, etc. The specific focus on promoting the ability of individuals and communities to change in response to their environments helped to generate numerous categories
for identifying relevant enhancement pursuits from the value lens of the global, the transgenerational, and the local. Integrating these normative frameworks with technological developments helped to generate the following fairly comprehensive, yet nowhere near exhaustive, grouping of enhancements pursuits: Brain-computer Interfaces for Disabled, Enhancing and Dis-enhancing Love for Conflict Prevention and Domestic Violence, Pharmaceutical Cognitive Enhancement Use by Doctors and Medical Students, Modafinil for Occupational Hazards, Use of Nootropics in Academia, Memory Enhancement for Cognitive Dysfunction and Augmentation, Memory Blockers for PTSD in Soldiers, First Responders, and Trauma Victims, Motivational Enhancement, Enhancements for Civic Virtue, Enhancements for Moral Agency, Cognitive Enhancements for the Promotion of Religious Virtues, Enhancing Empathetic Responses, Enhancement of Human Rights Awareness and Acceptance, Brain-Machine Interfaces for Cognitive Warning Systems, Genetic Enhancement for Combatting Suboptimal Design, Addiction Treatment and Prevention, Hypoxic Air Machines for Fitness, Enhancements for Problem Solving, Cognitive Enhancement Retention and Working Memory for Pilots and Surgeons, Therapeutic Enhancement for the Sense Impaired or Injured Veteran, Enhancements Through Smart-ware and Bio-ware, Enhancements for Climate Change Recognition.

The institutional strand of the argument constructed a toolkit to help executives, leaders, board members, policy advisors, and politicians to begin to operationalize adaptability in healthcare organizations. In doing so, the first part of the institutional strand (chapter 5) defended the following four theses. Thesis one: Non-organizational platforms face certain challenges in coping with enhancements and these challenges suggest that it is worthwhile to investigate other potential platforms. Given the logical structure of the category, organizational
approaches are a fitting candidate. Thesis two: Healthcare organizations in particular should be aware of enhancements because 1) healthcare organizations are potentially strong platforms for coping with enhancements and 2) the speculative argument for the inevitability of enhancements suggests enhancements will be factor that affects the delivery of healthcare. Thesis three: Moral agency of healthcare organizations needs to be reconfigured so that healthcare organizations, as ideal learning environments for coping with enhancements, can be viewed as active operators in enhancement debate that are always in the process of constructing a conception of enhancements. Thesis four: Those successfully coping with enhancements need to take into account the context of healthcare organizations and the shifting landscape they operate within, especially common expectations of healthcare, factors of mistrust and uncertainty in patient populations, and the shifting economic and technological landscape.

The second part of this institutional strand (chapter 6) constructed a sense of transition in light of the Argument from Adaptability by reformulating vulnerability as a complementary concept to adaptability. It constructed an organizational framework for coping with enhancement pursuits that focused on seven categories of development. In particular, it focused on recognizing vulnerability in transition as identity defining, developed learning opportunities from and for vulnerability in transition, related vulnerability in transition and organizational adaptability, reflected on leading and vulnerability in transition, balanced the internal and external vision of a healthcare organization, constructed a meaning framework for understanding enhancements, and highlighted the need to bolster clinical and research ethics.

The study also highlighted several areas that suggest a future research agenda. While this list could potentially be another chapter in itself, here the work concludes with arguably the five clear list and most important categories of future research interest. First, the effort to construct a
framework from which an organization can begin to process enhancements by its nature needed to be abstract enough to accommodate the broad category of healthcare organization. As such, future work on the specific challenges facing particular types of healthcare organizations seems appropriate. How concrete this needs to be in order to be useful is an open question, but the question of forming a token level of analysis may prove to be needed to adequately deal with enhancements, especially if the communal nature of meaning making and the belief that enhancements are institutional products are taken seriously. Second, the need to be specific according to organization is paralleled by the need to specify according to enhancement pursuit. While a more theoretical stance and examination of the enhancement debate and organizational ethics has its place, the pace, variety, and magnitude of technological development suggests that the more specific future thinkers and administrators can be about the avenues of enhancements (genetic, pharmaceutical, surgical, etc.) the more useful the resulting analysis. Third, the current study, especially the last two chapters that focused on organizational ethics, were an effort to challenge the current conception of organizational ethics in the literature as well as various modes of operation that have grown from it. Failures to adequately recast the horizon of organizational ethics so that it is able to account for 1) expectation management, 2) communal educational aspects, and 3) the conceptual development role that healthcare organizations would be wise to embrace, could be the result of the limiting and arguably arbitrary designations of clinical and organizational ethics internal to the discipline of healthcare ethics. While these designations serve a purpose and historically are relevant to the development of the discipline, one could easily begin to recast the efforts of the last chapters as pointing to the need for a social ethics or even global ethics level beyond the clinical and organizational. If this holds, it suggests that the debate could benefit from more developed work on thinking about the
organization of organizations from a social and global perspective. Fourth, successfully managing ethical analysis in this shifting landscape suggests that organizational expertise and technological expertise have something important to contribute to the debate on moral expertise and the role of ethicists in healthcare organizations. Fifth, adequately constructing and renegotiating the concept on enhancements as well as efforts to operationalize coping strategies within a specific healthcare organization will require exploring and constructing an ongoing anthropological study of the history, language, social determinants, political ideologies, and economic factors that influence the \textit{de facto} pursuit of health within that a specific healthcare organization. Also, the fruits of this research will need to influence the pedagogical philosophy of the institution as well as its methods of communication. Future work that helps healthcare organizations conceptualize this and operationalize it in order to cope with enhancements would be useful.
Bibliography


Bell, Stephanie et al. “Australian University Students’ Attitudes Towards the Acceptability and Regulation of Pharmaceuticals to Improve Academic Performance.” *Neuroethics* 6 (2013): 197-205.


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Harris, John. "'Ethics is for bad guys!' Putting the 'moral' into moral enhancement." *Bioethics* 27, 3 (2013): 169-173.


Sanberg, Anders. “Morphological Freedom – Why We Not Just Want it, but Need It.” In *The Transhumanist Reader: Classic and Contemporary Essays on the Science, Technology,


The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. *The Belmont Report: Ethical Principles and Guidelines for the Protection of


Tonkens, Ryan. "Good parents would not fulfiıl their obligation to genetically enhance their unborn children." Journal of Medical Ethics 37, 10 (2011): 606-610.


