TALK ABOUT A NEW BREED OF OUR SPECIES
THE GENETICALLY ENGINEERED HUMAN

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April 23, 2010
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Acknowledgments

Whether or not this page gets read does not bother me, but if it does, then that will be nice. First, I send my thanks to Dr. Macbeth and Dr. Yurdin for taking time out to help me try and make my thesis something into something that I can be proud of by the end of its evolution. Yes, I know that it is a professor’s job to help his/her students, but still, I thank you both. I would also like to thank Dr. Gangadean. Although during my time as a philosophy major I have not had much contact with you, I would like to extend my gratitude to you because it was your class that gave birth to my interest in philosophy.

I also thank Dora, Mr. Gulick and my friends for helping me gather information, whether it was searching through long lists of books, articles and journals to find relevant information for my topic, or just sitting down and talking about it until midnight.

Outside of the Philosophy Department, I would like to thank Jeff T-F, Raisa, Jenni, Judy, Karin, and any other professors who encouraged me to do my best and continued to support me after I was no longer their student, advisee or never even had me as their student but knew me.

I would also like to thank Dean Bean! Without you, I do not think I would have been able to get back into shape after my unknown health issue manifested itself in the final week of my freshman year. Thank you for putting up with my stubbornness and believing in me.

Last, but most importantly, I would like to thank my mother and sister. Thank you for always being behind me and reassuring me that I will be able to rebuild myself. And thanks again mom for telling me on the phone last week that you were proud of me.

Arigato Gozaimasu!

Ὕ Nadine Karen Giwa
INTRODUCTION

WHAT IT WOULD MEAN TO UNDERGO GENETIC ENHANCEMENT

The developing adolescent will one day be able to take responsibility for her own life history; she will be able to take possession of what she is. That is, she can relate to her process of development reflectively, work out a *revisionary* self-understanding, and in a probing manner retrospectively restore the balance to the asymmetrical responsibility that parents have for their children’s upbringing. This possibility of a self-critical appropriation of one’s own developmental history is not available in regard to genetically manipulated dispositions. Rather, the adult would remain blindly dependent on the non-revisable decision of another person without any opportunity to establish the symmetrical responsibility required if one is to enter into a retroactive ethical self-reflection as a process among *peers*. For this poor soul there are only two alternatives, fatalism and resentment. (Habermas, 2003, p. 14)

The quotation above is a very reference to a particular issue that involves people and obliges them to take part in this discussion concerning the future of humans. Genetic intervention, a currently scientifically unfeasible process, is now being evaluated before its possible employment within our society. This discussion, specifically, is about genetic enhancement, a type of genetic intervention, or genetic engineering process, that has the power to either collectively boost human potential, assisting humanity, or effectively injure individuals and populations, corrupting our species and, perhaps, shattering it.

Genetic engineering itself has been present for approximately twenty-five years. It has also been the focus of many hot debates since the 1970s. This science of indirectly manipulating genes to alter the structure and nature of genes has proven to be very beneficial. Genetic engineering has been used on microorganisms to help create new pharmaceuticals that cannot be produced in any other way. It continues to be implemented in the improvement of the environment through bioremediation in which particular living organisms are designed to clean up waste and pollution. Crops, such as tomato, corn and potato, are genetically engineered to
generate new strains that are hardier, give greater yield, improve their nutritional value, and maybe taste better.

However, genetic enhancement in plants has also shown to have a downside. Undesirable genetic mutations have led to allergies in crops. Take Starlink corn as an example. Starlink was genetically engineered for pest control. Contained in its genome is a modified sequence of a bacterial gene that codes for toxin crystals. Ingestion of these crystals by insects activates the toxin, resulting in their eventual death. Although this type of genetic pesticide is regarded as environmentally friendly, with little to no effect on humans and other wildlife, U.S. Environmental Protection Agency had restricted its use to animal feed due to concern about the potential for allergenicity. (Bucchini and Goldman, 2002, p.1) However, Starlink corn was later detected in a variety of corn containing food products, including taco shells. What followed was a catastrophe of epic proportions for consumer confidence, government regulators, the corn farmers, the food industry, and the biotechnological industry. (Bucchini and Goldman, 2002, p.10)

This discussion is neither about genetic engineering in plants nor is it about genetic engineering in animals. Its focus is on humans and potential impacts genetic engineering can have on individuals.

THE SOCIAL BENEFITS AND COSTS

But using the examples of the benefits and costs that have been noted from the genetic engineering of plants and animals, we are able to use them as parallel cases to assess what consequences biotechnological intervention on the human body could occur. In humans, genetic

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1 The gene that codes for the toxin was isolated from the soil dwelling bacterium Bacillus thuringiensis. As an interesting not, this organism is the cousin of B. anthracis, the microorganism that is the cause of anthrax.
engineering is used to treat genetic disorders and cancer. Although yet to be done, genetic engineering has the potential to create new types of human beings with many advantageous traits. They might be able to live longer, lead healthier lives and be immune to most diseases. There are cons as well, such as in the case of Starlink corn. Professor Bucchini and Professor Goldman from Johns Hopkins Bloomberg School of Public Health state, “Numerous questions remain unanswered about Starlink corn. These are due to gaps in our knowledge about areas such as food allergies. Inherent in the risk assessment process is a great deal of uncertainty.” (Bucchini and Goldman, 2002, p.11) There is a great deal of uncertainty in what can happen if humans were to ever be genetically engineered. It is possible that while treating one defect, gene therapy might cause another. As each gene is responsible for multiple characteristics and functions, it would be very challenging to isolate a certain gene responsible for a single trait without affecting other genes. Another worry is genetic engineering can hamper diversity in human beings if every person goes after the same genes.

The overall risk or benefit assessment is very complicated, and there are more social consequences associated with genetic engineering.

**COMPARISON OF NON-GENETIC ENHANCEMENT AND NATURAL ENHANCEMENT**

And yet people go through enhancements each day. Some include education and vaccinations. With education, we are capable of extending our knowledge. Vaccinations boost a body’s immune system so that it can defend against pathogens. People are also already capable of extending their life expectancy. Through proper exercising, healthy dieting and leading active lives, people are able to extend their life span. Plastic surgeries can be described as enhancements as well. Even contact lenses and eyeglasses can be considered enhancements, but if we did have genetic enhancement, these things would not be necessary for a person to see.
Plus, enhancements have occurred naturally in human genomes that have given people abilities that are greater than the average person, and later I will provide an example. So then, genetic enhancement should probably not be treated as a huge dilemma. As a matter of fact, we might simply be assisting nature in the evolutionary progression of our species. Therefore, this discussion might be deemed unnecessary and trivial.

**THE DIFFERENCE IT MAKES IN DECIDING FOR AND AGAINST ENHANCEMENT**

Nonetheless, it still makes a difference to have this discussion because this matter is relevant to all people since it will have, without a doubt, a significant impact on our race. In this moment, whether or not we plan to accept genetic enhancement is not important. What is important is an open discourse about how this may affect an individual’s well-being and how he may come to understand himself if we ever become capable of genetically enhancing people.

In his book, *The Future of Human Nature*, Jürgen Habermas analyzes how genetic manipulation may prove to be restrictive for the choice of an individual’s way of life. He questions what genetic enhancement will do to our species as follows:

> May we consider the genetic self-transformation and self-optimization of the species as a way of increasing the autonomy of the individual? Or will it undermine our normative self-understanding as persons leading their own lives and showing one another equal respect? (Habermas, 2003, p. 29)

To Habermas, technologies that bear on the future of human nature pose species-wide ethical issues. Such issues concern how we should understand our basic human dignity. In his view, the core of human dignity rests in the capacity of humans being autonomous and capable of self-determination. Genetic enhancement engineering should be forbidden because it would take away the moral value of an individual. According to Habermas, moral individuals construct and support a society that treats others with respect because of the kind of thing they acknowledge themselves to be: self-creating and autonomous, self-individuating. (Rorty, 2003, p.3) Moral
humans respect the humanity and autonomy of others and recognize them as persons of equal birth. If we genetically engineer humans, then we are denying their right to be the authors of their own lives.

However, Habermas aside, it is also possible that a person’s autonomy might not be crippled absolute. Genetic enhancement might bestow individuals with capacities that could augment their ability to be the author of their own lives, increase their self-understanding and help them realize their conception of the good life in their own individual terms.

**NO DEFINITIVE ANSWER**

Although, Habermas provides a well thought-out philosophical examination of genetic enhancement, he only evaluates the negative effects. This essay is constructed on three parts. In the first part, I will give a clearer definition of what I believe genetic enhancement to be. The second and third parts will analyze how genetic enhancement influences one’s own autonomy. In the second part, I will discuss the idea of ‘being-for-oneself’. In the second part, I will discuss the intrumentalizaing of human nature and what it would mean to be human. Throughout this essay, I will present Habermas’s arguments and provide examples to show that it is possible that genetic enhancement may not totally damage a person’s autonomy. Unlike the boy who appeared doomed to live a fatalistic life in contempt due to his genetically engineered nature in the beginning quote of this discussion, I believe it is possible for a genetically enhanced individual to live that same self-determining life like the unenhanced girl. However, we must take precautions to make sure that Habermas’s imagination of a world with morally agency does not become reality.

By no means am I trying to be an authority on this subject and provide a definitive answer on what is right and what is wrong about genetic enhancement. I merely wish to develop
a deeper understanding of the many ways genetic engineering can change a person’s well-being, whether or not that change is good or bad. Each person has their own answer to what constitutes human autonomy and integrity. All I wish is for both sides to remain open to the other.

**Clarification Between Genetic Enhancement and Gene Therapy**

Before discussing the two main strands of this essay, I will define genetic enhancement. Also, I want to make a distinction between it and another type of genetic engineering. Genetic enhancement and gene therapy always seem to undergo a conflation that leads to a misunderstanding of the two, thus I would like to draw a sharp line to distinguish them.

**Gene Therapy: Helping People to Live Ill-Free Lives**

Gene therapy is a form of treatment that uses gene transfer of genetic material to the cell of a patient to cure a disease or illness. The goal is to correct the genetic information in the cell of a patient that is responsible for the disease and return that cell to normal condition. The transfer of genetic material is done through bio-vectors that use their own biological capacities to enter cells and deposit the genetic material. Gene therapy allows for the replacement of a damaged gene with a proper functioning one. Certain diseases, such as Huntington’s disease, amyotrophic lateral sclerosis (also referred to as Lou Gehrig’s disease) and cystic fibrosis. An aim of gene therapy is to eliminate genetic diseases that are known to be fatal.

**Genetic Enhancement: Breaking One’s Own Limitations**

Genetic enhancement is the transfer of genes with the intention of modifying non-pathological human characteristics. (Hanna, 2006) The term is frequently used to refer to the attempt at not making an individual well, but better than well. It raises an individual’s standard level of capabilities and performance to greater optimum levels, essentially breaking a person’s
limitations. Enhancement acts as a supplement to normal, healthy genes already existing inside the body, or it introduces engineered genes that were produced for the intended enhancement.

**EVA: THE TRIATHLON ATHLETE**

Take Eva as an example. Eva dreams of becoming a great triathlete. She is healthy, physically fit, and trains almost every day. However both her endurance and physical strength are low, preventing her from competing successfully and on the same level as other players. Although she constantly works out, for some strange reason, she is not able to increase her level of performance. Before she decides to abandon her childhood dream, she is told that she might be able to increase her performance through genetic enhancement. As a final attempt, she chooses to visit a genetics doctor and undergo the procedure. After receiving her enhancement, Eva’s athletic abilities are better than ever. She is able to surpass her limit thanks to her genetically enhanced muscles. Eva feels better now that she is faster and stronger. Now whenever she competes in the triathlons, she wins a medal.

    To give it a more strict and simple definition, genetic enhancement is the improvement and amplification of some skill, ability or talent belonging to an individual. It will also be portrayed as an irreversible process.

**BEING-FOR-ONESELF**

**SOME ENHANCEMENTS OCCUR NATURALLY: EERO MÄNTYRANTA’S SECRET**

It is possible for enhancements to occur naturally. Mutations are a common occurrence that can be found among organisms. Alterations in the DNA sequence of an organism’s genome can be induced by several causes, such as DNA replication or in the formation of gametes – cells that carry the unique genetic “blueprint” that will help generate genetically distinct individuals. Mutations can create variations in a genome of a species. The changes that occur in the DNA
sequence can either have no significant affect on the individual or prevent the gene from functioning normally. In either case, the mutation can be beneficial or deleterious. If the former, then the following real life case is an example of how these natural enhancements can have a positive impact on an individual.

Eero Antero Mäntyranta is a former Finnish skier and a multiple Olympic Champion. In the 1964 Winter Olympics at Innsbruck, he won gold in the 15- and 30-kilometer events. Mäntyranta went on to participate in four more Winter Olympic competition and won a total of seven medals. In 1993, scientists reported that he came from a family with a long history of polycythemia vera, a condition resulting in an over production of red blood cells. He also carried a mutation for the gene encoding the EPO receptor. EPO, or erythropoietin, is a peptide hormone responsible for the manufacturing of red blood cells through the stimulation of the developing precursor cells in the bone marrow.

EPO functions by binding to and activating a receptor called the EPO receptor (EPOR). Mäntyranta’s mutation caused the development of abnormal EPORs. His EPORs were very sensitive to low levels of EPO in the blood, so, even though the body’s feedback mechanism was trying to decrease the amount of EPO in the blood, they kept demanding the production of more and more red blood cell progenitor cells. It was of no consequence if Mäntyranta’s EPO levels were low. His EPORs were behaving as though there were large amounts of EPO in his body. As a result, his red blood cell levels were constantly high – up to fifty percent above average – and his oxygen carrying capacity increased – up to fifty percent. Because he had all this oxygen in his body being delivered to his muscles, his endurance increased, he was able to do very well when competing in the endurance trials.
THE DIFFERENCE IT MAKES WHEN A PERSON INTERFERES

Using genetic enhancement, it is possible to give other people Mäntyranta’s ability. But it may be the case that people who are being genetically enhanced to have this ability may not want it. As a matter of fact, they might think that they have been violated because someone else had taken what was theirs, manipulated it in a way to receive some desired outcome that the persons who are engineered do not want and has made an unalterable and irreversible decision that the engineered beings would have to live with for the rest of their lives. Just the mere fact that having something so drastic done to you without your understanding why, and realizing that it is a permanent change is enough to make a person feel as if he has lost some part of his freedom to be for himself in some way.

Nonetheless the person who is behind the genetic enhancement might have had the best of intentions and thought that he was doing something good by giving you traits that he believes you would need in life. For instance, look at the relationship between children and parents. Parents want to do what is best for their children. They want to give their children tools and offer guidance in order for their children to be successful and live a good life. Some parents move house so that their child can live in a safer environment. They choose to send their children to one of the best schools in their area so that they can receive a well-rounded education. Other parents either encourage (or force) their children to take up an instrument, play a sport and/or read books so that they can remain active, not become lazy and be exposed to a variety of things from which they will eventually decide what they would like to do in life. Parents give their children advantages so that they can be productive and compete well in society. So then, if genetic enhancement has the potential to help parents raise their children to be the best that they
can be, then why does Habermas not like genetic enhancement, and how can it negatively affect a person’s autonomy?

**HABERMAS’S ARGUMENT**

Habermas sees genetic enhancement as a problematic agent in a child’s developing life. In his opinion, people become individuals through socialization. Growth, particularly adolescence, marks the transition to authentic personhood, where a person will be able to interpret the world from his own point of view according to his own motives, and he will be the source of his own interests and aspirations. (Rorty, 2003, p.5) Habermas believes that this transition to moral autonomy – the ability to self-create and self-individuate – is threatened by genetic intervention. He states the following:

The programming intentions of parents who are ambitious and given to experimentation, or of parents who are merely concerned, have the peculiar status of a one-sided and unchallengeable expectation. In the life history of the person concerned, the transformed expectations turn up as a normal element of interactions, and yet elude the conditions of reciprocity required for communication proper. In making their choice, the parents were only looking to their own preferences, as if disposing over an object. But since the object evolves to be a person, the egocentric intervention takes on the meaning of a communicative action which *might* have existential consequences for the adolescent. But genetically fixed demands cannot, strictly speaking, be responded to. (Habermas 51)

When a person is born, he will have the chance to interact with many forms of social enhancements and influences, such as parental expectations, opportunities, education, and even social inequalities, which will all factor into what he chooses to become. However, genetic manipulation, done by the parents, encodes what he *should* become, and he will not have the chance to enter that sphere of socialization where one grows to become a self-reflective, self-creating, autonomous individual. Parents who choose to genetically engineer their children would be effectively doing more harm than good.
The restraints put on a person by the designer are different than those found in the social sphere because genetic enhancement is irreversible. The program inserted into the genome constitutes a *co-determinant* of the person’s actions. (Rorty, 2003, p.5) A person who is autonomous can be certain that he is making a decision for himself through his own judgments, but a person who is genetically engineered will not be able to recognize whether or not he is making decisions for himself without the coercion of another because he may think that the program embedded into his genes will be influencing his actions. Habermas make the claim that follows:

If we see ourselves as moral persons, we intuitively assume that since we are inexchangeable, we act and judge *in propria persona* – that it is our own voice speaking and no other. It is for this “capacity of being oneself” that the “intention of another person” intruding upon our life history through the genetic program might primarily turn out to be disruptive. (Habermas, 2003, p.57)

The phrase “capacity of being oneself” can be briefly described as the ability for a person to take possession of herself. He is able to take responsibility for and shape his own life history. If it is true that genetic re-programming strips a person’s awareness of his freedom, then a genetically engineered person does not have the ability for ‘being oneself”. And yet, there is always the chance that a genetically engineered human would have just as much autonomy as an unenhanced human. So, we will examine two cases and compare the actions of designer baby Xander to natural baby Thea.

**DESIGNER BABY XANDER: REACTION TO THE SOCIAL OR GENETIC ENHANCEMENT**

Mr. Stiles and Mrs. Stiles want to have a baby. They schedule an appointment at a fertility clinic so that they can get help. When they arrive, Mr. Stiles announces, “We want a boy! We want a boy with black hair and green eyes. We want him to be about seven feet tall, great athletic abilities, and a genius at the piano.” The doctor responds, “No problem.” Nine
months later, baby Xander is born. He has everything his parents desired of him made real through genetic engineering. Unfortunately for Mr. Stiles and Mrs. Stiles not everything goes according to plan. Despite his excellent athletic skill, Xander has no interest whatsoever in sports. Instead he prefers writing poetry and prose. As for music, yes, his genes have seen to it that he has the ability to be an outstanding and talented pianist. And yet misfortune continues to befall Xander’s parents. Instead of using his spare time composing concertos, Xander builds model ships and paper airplanes. Xander’s parents are upset and furious that their son is not doing what they want him to do. Plus he dyes his hair pink.

What is wrong with Xander? Why is he acting this way and not doing what he was designed to do? Nothing went wrong in the process of making Xander. He has everything coded within him that his parents requested from the doctor. Xander has already demonstrated his exceptional skills on the athletic field and in the concert hall. Habermas claims that having genetic engineering as a part of one’s nature “intrudes upon one’s subjective mode of existence”. (Habermas, 2003, p. 53-54) He believes that due to this awareness of one’s genetically enhanced state, he will feel bound by his already determined existence and will be less capable of making rational decisions and actions because they are genetically determined. But Xander does in fact seem to be making decisions for himself. He neither cares to be an athlete and a musician nor does he have any desire to even do them; and so, he is does not do them. What is wrong with him? Before trying to answer that question, let us look at Thea.

**NATURALLY TALENTED THEA: SELF-EXPRESSION OR REACTION TO SOCIAL ENHANCEMENT**

Thea is the daughter of Xander’s neighbors. She has all the abilities that were genetically enhanced in Xander by Xander’s parents. Thea performs well in the musical arts and is a great athlete, and competes on a level equal to Xander. The only difference between the two of them is
Thea was not genetically enhanced to have those abilities. Instead, her parents coached her and developed her natural talents so that she would be able to perform well, and so she does.

As Thea continues to grow, she is exposed to a variety of other things that interests her. Against her parents’ wishes, she rebels and decides she no longer wants to play the piano and play sports. Instead she starts sculpting.

The two stories of Xander and Thea could be proof that there is not much of a difference between someone who is genetically enhanced and someone who is natural. However, it seems Habermas would disagree.

ANY SIGNIFICANT DIFFERENCE AS MATURED, AUTONOMOUS ADULTS

Habermas’s argument on how genetic intervention endangers a person’s standing as a moral agent and hampers a person from ‘being oneself’ is summarized as the following:

1. Moral agents are capable of forming intentions for their life plan, have the freedom to choose a life of their own. They can contest their parents’ expectations given them through their socialization.

2. Genetic alteration genetically encodes parental (or social) expectations, beyond the reach of critical reappraisal or revisionary attitudes and entails a prejudgment of specific life projects.

3. So genetic alteration imperils a person’s autonomy and standing as a moral agent. (Rorty, 2003, p.5)

Let us examine and compare Xander’s and Thea’s behaviors with Habermas’s three main points as a measure of his autonomy.

According to Habermas, moral agents are free to live their own lives and can challenge what their parents want them to do. Thea rebelled against her parents. For years she had done something that they wanted her to do, but as she went through socialization, she was able to reflect and judge whether or not she wanted to play an instrument or play sports. She decided
that she did not want to do either of those things that did not interest her as much as it interested her parents, and stopped doing them.

What about Xander? Habermas believes that genetically enhanced humans cannot be moral agents because their autonomy has been compromised. Thus they are not able to carry out their own life plan. But Xander succeeded in his rebellion. According to Habermas, genetic intervention compromises a person’s autonomy because it places into their genome a permanent unalterable program that will be a co-determinant of his actions. Xander’s parents had him programmed to be a great athlete and excellent at playing the piano. Xander is a great athlete and is excellent at playing the piano, but that does not mean he would do them. Habermas says that individuation takes place through socialization. It seems as if Xander was able to enter that sphere of socialization like Thea. He was able to enter a self-reflective, self-determination state, and decided he no longer wanted to do what his parents wanted him to do, too.

Habermas might beg to differ and say that Xander still does not have autonomy. He is reacting to his genetic enhancement. Because Xander is genetically enhanced, he cannot live the life that he wants to live, and he might not know what life is the true life he wants to live if there is something else influencing his actions. But I say that Xander *can* live his own life. The only thing that genetic manipulation did to Xander was amplify his athletic abilities and his musical talent. Enhancements neither make decisions for nor do they interfere with the decisions of a person. They especially do not prevent a person from undergoing socialization.

From another perspective, the genome is not a program much more than it is a resource for development. It along with other influencers and the environment will help to shape the person. The final outcome, the individual, is a result of the interaction among and between these forces, including one’s own genetic material. People are not determined by their genes.
Habermas realizes this claim, but for some reason he still argues that genetic enhancement is more constraining than socialization just because it is irreversible. People can reject their social enhancements, but they cannot reject genetic enhancements.

It might be the case that genetic enhancement can be understood as just another form of parental pressure/influence, which is also a social enhancement. When parents raise their children, they cultivate habits within them that can become so deep-rooted and, almost if not completely, ineradicable, that it seems a part of their nature. They are always inclined to do it, and it would not matter if the parent is or is not present to enforce the habit because it will always be in the person’s nature. However, just because someone has an inclination to do something does not mean that you have to do it. For example, ever since she was a child, Carla’s mother told her every day that she must shower every day. Right now Carla lives on the other side of the country and has not had her mother remind her for years, but Carla continues to shower every day. Even when it would make her late for her job or an appointment, she showers. It does not matter if she is too tired to do it; she will still shower. She cannot remember why she showers every day, nor does she give any though to it, but she does it anyway. But one day, Carla is running late for her flight to her mother’s home, and she decides not to shower for the day so that she can make it.

Now, while people do have certain genetic tendencies, those impulses are not set in stone. They can be influenced by the environment and the person’s decisions. So, although it appears that genetics play a key role in human behavior, environment contributes just as much to an individual’s persona.

After this examination of Xander and Thea, it seems as if it does not matter whether or not a person undergoes genetic enhancement. As humans age, their ability to reason increases.
Since genetically enhanced humans are still humans, they maintain their ability to reason just like their unenhanced counterparts. The individual who has been genetically enhanced is still able to take control of his own life and has the capacity to be oneself. Despite someone’s intervention into your genetic make-up in order to make sure you succeed in specific tasks, you can claim those achievements as your own because it was still you who did them. In defense of genetic enhancement, Holland makes an argument for it out of an example as follows:

Imagine you achieve something you value intellectually. You write a book, say. Suppose you subsequently find out you had been genetically engineered for intelligence. Let’s say you come to believe that, had you not been genetically modified, you would have been unable to make that contribution to your subject. The book would have been beyond you. Should you be distressed? It’s hard to see why. It was still you who wrote the book. And if you feel the achievement was undeserved because the ‘real’ you (you unenhanced) couldn’t have written a book, you can always prove yourself and go on to write harder stuff. You could work on a book at the limit of your current (engineered) intellectual range. So, rationally speaking, it’s hard to see why you should be distressed. (Holland 182)

Holland seems to imply that it is far from necessary for a person to think that genetic enhancement dictates what he does in life and to conclude that genetic enhancement has weakened his autonomy. However, Holland continues with the following:

But the interesting, contingent fact of our psychology is that this might well not hold. There is this subtle irrationality. Were you to know about the genetic modification, not only past ‘achievements’ but all future projects might seem tarnished. You would always be tempted to think, ‘Whatever I do, it’s down to my genetic endowment. I can’t take the credit.’ (Holland 182)

If we recall Xander’s case, a genetically enhanced person who reasons that he cannot claim any of his achievements would appear to be reasonably incorrect. Xander was able to make his own decisions. It did not matter that he had the genetic enhancement. Xander was essentially able to ‘be-for-himself.’ The decisions he made he was behind. It is true that his parents gave him genetically enhanced abilities, but that is as far as they go. After the genetic enhancements, it is up to Xander to choose what he wants to do with it. He will be the one to do those projects, not
his parents. The advantages of technologically endowing someone with desirable, genetic traits ought to mitigate or remove any traces of grief due to his amplified ability to be oneself and the contribution it makes in his journey to live a good life. And yet, this is an argument that should be taken into deep consideration.

In submitting to and acknowledging the apprehension of those who are concerned with how the interference by biotechnology on an individual’s body may have negative connotations on the person’s well being, it might be more beneficial to recognize that not everyone has the same the reaction to everything. Think about what it would mean to be genetically altered for a particular individual. Collectively, humans neither rationalize the same nor do they have the same mentality. Each individual is unique. People have different opinions on the same matters. It may be the case that when individuals are told that they were genetically enhanced, some may like it and think that it is great; others may be indifferent, not caring either way, and just take it as they are; unfortunately, the rest might become traumatized that their parents would do such a thing and go to such great lengths to make sure that they do what they would like them to do.

In Habermas’ opinion, the manipulation of a person’s genome by another is something that should, perhaps, only be done to things, not humans. Habermas’ idea of the parental intervention upon a child is as follows:

For as soon as adults treat the desirable genetic traits of their descendants as a product they can shape according to a design of their own liking, they are exercising a kind of control over their genetically manipulated offspring that intervenes in the somatic bases of another person’s spontaneous relation-to-self and ethical freedom. (Habermas 13)

Habermas, as mentioned above, claims that when parents design their children, they are taking away their autonomy that they gain as they grow older. They are disrupting the child’s humanity and are possibly denying them their right to be viewed as autonomous, morally equally
individuals. Nonetheless, it is a fact that people are not determined by their genes. Habermas thinks things change when it is not a matter of chance that someone receives a certain set of traits but by someone’s decisions. However, people are always doing things that contradict their ‘programming’. It is possible for a person to deny them just by doing certain things to control them. For example, people who are born with phenylketonuria can combat the illness by adhering to a special diet so that they do not die. People who are genetically susceptible to obesity can use a healthy diet and exercise to help them prevent excessive weight gain.

When it comes to people who are genetically engineered, they do not have to feel tied down by the truth of their genetic manipulation. It is possible that if a person is genetically enhanced, he may have an impulse to do certain things that either do or do not attract him. It is also true that when parental pressure is placed on a child who is not genetically enhanced, she too may grow to have an impulse to do something that does not attract her, and it may stay with her when she becomes an adult. Their actions are due to the sake of doing it for the sake of other things instead of doing it of their own volition. They may also constantly remind themselves that they are doing it because of their genes or because someone else has forced them to do it and eventually they keep doing it without the enforcer constantly being present. But if you are doing something because of your own volition, and you are able to do it because you genuinely enjoy doing it then you are good. Being able to do something does not mean that you have to do it. As long as you are in control and are responsive, you are pretty much living an autonomous live, and you are conflict free because you want to do it – whether you have or have not been genetically manipulated does not matter, and you keep your status as a moral agent.
**INSTRUMENTALIZING HUMAN NATURE**

Habermas claims that “instrumentalization of human nature changes the ethical self-understanding of the species in such a way that we may no longer see ourselves as ethically free and morally equal beings guided by norms and reasons.” (Habermas, 2003, p.40-41) He believes that if genetic enhancement is normalized and accepted as a social practice, then that would mean the abdication of morality as we have come to understand it: a liberal idea that considers people to be the authors of their own lives. Genetic manipulation would cause a social disempowerment and jeopardize a pre-condition for the moral self-understanding as the autonomous actor. (Habernas, 2003, p.63) No person will be guaranteed equal freedom.

For the programmers who wish to impose upon another a decision about his genetic composition according to their own preferences is to treat a person as a creature of their own preferences, and to constrain that person’s ability to self-actualize. This is what it is to adopt an attitude of domination and of instrumentalizing. (Rorty, 2003, p.4) But what are these “norms and reasons” that supposedly guide morally equal beings? Habermas, unfortunately, provides neither answer nor clue to help us identify these normative principles that help in our self-understanding.

As it follows, it is time to figure out what is a “normal” human and how genetic enhancement, if it does, diminishes it. Specifically, we need a definition for the natural. In truth, however, humans are not as ‘natural’ as many of them may take themselves to be. Also, an independent definition of ‘natural’ must be used in order to eliminate as much bias (such as the ones you get from religious belief and secularism) as possible.
Holland takes his definition of the natural from philosopher Richard Norman, who suggests why there exists such a strong appeal to nature for explanation of things humans do not understand. Holland states the following:

[The] key premise is that we want significance and meaning in our lives. In other words, we want to make choices, act and pursue projects in a way that gives our lives a sense of purpose, of being worthwhile. But suppose there were no limits on what we could choose to do, no constraints on our undertakings. Then there could be no achievement, no sense of accomplishment. So there’s a necessary condition for our choosing and acting significantly, namely a certain kind of background or backdrop against which we choose and act. This comprises ‘given’ conditions, inflexible facts or parameters to our choices and actions. What makes up this backdrop is illustrated by various kinds of ‘threshold effects’... such threshold effects (...) indicate the background of given conditions necessary for meaningful choice and significant actions. (Holland, 2003, p.154)

So then, the choices we make and the actions we take show their importance when we make them in accordance to some normative rule, or rules, set in place. The rules themselves can come from anywhere, such as religion, society, science, or culture. These rules are made known through what is normally conceived as being right and what is normally thought of as being wrong within a community. Any actions, behaviors or practices that appear to deviate from this backdrop apparently place these backdrop conditions in a state of jeopardy. As a consequence, people become aggressive towards the deviant actions, behaviors or practices, which is understandable because that backdrop has the role as a necessary condition for the forming of significant choices. Some people may express their protest of the deviant by saying, ‘That is unnatural’. So when something is seen as deviating from the norm, it is perceived as a threat to the backdrop conditions, which are seen as natural facts, making the hostile reaction is considered rational.
THE INFLUENCE OF GENETIC ENHANCEMENT AND ITS CONSEQUENCES

This definition of the natural seems to connect well with Habermas’s worrying over genetic enhancement, so now it is time to fit it within the context of autonomy. For Habermas, genetic enhancement is the deviant that threatens the backdrop of how people come to be moral agents capable of being the author of their own lives. That backdrop contains the conditions set for what Habermas believes to be the way in which a person comes into being. Humans are born with the natural fate of meeting socialization so that the person can mature to become an autonomous adult. Habermas expresses doubt that a person with genetic enhancement as part of his nature will be able to see himself as of equal birth and may not know how to identify with others. If he is unable to identify with others, then he might not consider himself an inclusive member of a community where he can gain a self-understanding of himself while being nourished and protected from other factors that may try to disrupt his growth. So the definition of what is a human, especially a ‘normal’ human, is a more complex issue with a psychological element to it. However, let us put into perspective this idea of what it means to be human in the following example.

COMPARING FALLING DOWN AND BEING THROWN DOWN THE STAIRS

You are a person who excels in both sports and intellectual activities. I think it would be a great idea for you to pursue a lifestyle that would allow you to pursue scholarly activities in order to help advance society. However, you want to have a career as a sprinter. And yet, I think it is best for you to be a scholar. So, I decide to help you out and show you that you were meant to have a career as a scholar. One day I see you at the top of a tall staircase, and I push you off. Unfortunately, you fall and become paralyzed, but at least you will now be able to pursue the wonderful career as a scholar. You cry and feel distressed how you will no longer be able to live
your life’s dream as a sprinter, but you will eventually get over it and move on toward your new future.\textsuperscript{2}

Although this is an extreme example, it still shows how a person’s autonomy can be taken away. When a person is instrumentalized, he is not allowed to enter a communicative deliberation with the person who wishes to instrumentalize him. Ultimately, his life is drastically changed in a way that might prove to be unfavorable. I am forcing you to make a decision that you might have not chosen for yourself. There was the chance that you might have chosen to pursue intellectual activities as a career, but now you might not want to because you were placed into an irreversible situation.

It would be a different situation, however, if you were to break your own legs. In this case, even if you unwillingly become an intellectual, it is by your choice. You are fully behind that decision, and can rightfully say that you chose to be an intellectual instead of a runner without being forced by someone or something else.

\textbf{HABERMAS’S ARGUMENT}

This is Habermas’s attitude on how the normalization of the instrumentalizing of human nature can undercut what it means to be human summarized as follows:

1. Moral agents are members of a moral community who owe duties to each other of reciprocity, mutuality and equality.

2. But: the alteration of the genetic identity of another requires a diminution in this presupposition of equality, and cannot be reciprocal or mutual.

3. So such an act is not a moral act, of the sort we would want done to us without our explicit informed consent. We would consider it inappropriate if we did it to adults. It is not an interpersonal act of mutual respect. So it is not a moral act. (Rorty, 2003, p.4)

\textsuperscript{2} I thank Professor Macbeth for giving me this example.
With the normative principles governing moral agents, people recognize themselves as being equal members of a community where they can self-actualize as well as help other maturing persons with individuation by providing a nourishing and protective environment, which will give them the freedom to create a revisionary, self-determined them. Genetic manipulation negatively influences the identity of a person, which may become weakened as time progresses. Especially if it is deemed normal to break people’s legs so that they will do what you believe is best for them, our society might become corrupted in a way in which there is no equality. In addition, unless you have consent from the other who is fully aware of what you plan to do with him, whether or not the plan contains genetic enhancement, you should, by all means, make certain that you do not take any action that is contradictory to his own.

However, what if there is a type of interference that can be made that does not limit a person’s autonomy. The example of a person’s legs being broken was to elaborate on Habermas’s claim on how instrumentalization would alter the norms and reasons that governing what it means to be human. Just because something is judged to be interference does not mean it will cause a negative chain of effects that will spring up. Let us examine a scenario in which I give you a ticket to Europe.

\[ \text{YOUR BIG TICKET TO EUROPE} \]

Let us say that you are a person who wants nothing to do with traveling. Specifically, you do not want anything to do with traveling abroad to difference countries. You would prefer to spend the rest of your days in the United States without going anywhere else because you believe it is unnecessary. You feel safe in the U.S. It is the place you grew up in and call your home.

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3 I would like to thank Professor Yurdin here for giving me this example to think about and to work with so that I could have a better understanding on what it means to instrumentalize humans and look at it in from a different viewpoint.
The communities and places you spent your time in helped nourish you mentally, physically and emotionally during the period of your individuation and as you were growing into an adult who would be able to reason on your own and make decisions for yourself. It is here you learned your life lessons that have helped you succeed thus far. In this place, you feel protected and have equal liberties with the people around you. Here in the United States, you know you have the opportunity to be yourself and live a good life, which you have thus succeeded in thus far. But all of that is about to change soon.

Let us say that I am your sister, and you plan to visit me for Easter. You have to take an airplane to get to where I live because I live across the country from you. I think that it is great that you have found a wonderful life for you. However, the fact that you have never left the country to explore and get to know other places and cultures is somewhat bothersome to me. Your life is boring and I want you to get out of this normal, regular routine life you have constructed for yourself. I want to expose you to different places so that you can see there is so much more out there that you might take interest in and that you will never find in the U.S. So, I come up with a plan. The day of your flight is April 1st, April Fools’ Day. I think it would be a splendid idea to have you take a surprise trip out the country. So I offer to buy you your ticket, but you do not know that it is destined for Europe.

On April 1st, the day of your flight, for some odd reason you do not look at where you are scheduled to go on the ticket and take the international flight as I planned for you. You go to sleep on your non-stop flight to Europe, and hours later, you find yourself in a place you are not familiar with. As it turns out, you are quick to realize that you are not in the United States and have no clue how you ended up in Great Britain. Fortunately for you, I have a friend meet you at the airport so that you can go on your tour of Europe. You refuse the tour and get in contact with
me, but our mom, who has taken a liking to my idea, forces you to go anyway; so you obey her and go on the tour.

Now at first you complain about how you do not want to be there and how unnatural the people of Europe act, but you come to like it. It interests you and you become excited whenever you see or learn about something new. Although you think it somewhat crooked of me to place you in such a comfortable position, you enjoyed your time in Europe and grateful that I have showed you something other than the United States. You were given the opportunity to see more of the world, and granted the opportunity to learn more about yourself as an indirect result. You were able to compare your life and experiences to the people of foreign countries. You were also able to learn from them the differences that exist between people and the similarities you share with people – such as values, motives and interests – and you was able to reflect on what makes you are as your own person. As a matter of fact, my plan was such a success that you now look forward to exploring Asia next year.

In his book, Habermas basically concludes that if genetic intervention were to be normalized and accepted as a social practice, then it would mean an abdication of morality as we understand it – which, if you can remember, Habermas defines moral individuals are people who construct and support a society that treats others with respect because of the kind of thing they acknowledge themselves to be: self-creating and autonomous, self-individuating; and moral humans respect the humanity and autonomy of others and recognize them as persons of equal birth. And it will be the end of the liberal ideal: the idea that we are autonomous individuals. (Rorty, 2003, p.5) But in truth, we do not know what will happen.

We will never be able to predict flawlessly what will happen in the future, much less when it comes to the consequences of actions in the long-term. The outcome of genetic
intervention can be similar to that as my surprise trip to Europe. It might turn out to be a great, life-changing experience that could increase a person’s understanding of himself as an autonomous agent. But on the downside, I could have damaged the trust you have in your community, a community that recognizes you as being equal to everyone and essentially harm your capacity to be yourself. How, specifically, I do not know, but it might be because of that normative, natural backdrop that exists. You expect me to respect you by recognizing what you want to do and acknowledging the judgments that you make to bring balance to your life.

**CONCLUSION**

**REVIEW ON BEING ONESELF AND THE INSTRUMENTALIZING HUMAN NATURE**

In general, Habermas claims that our knowledge of what it means to be a moral individual comes from the idea that we are beings who reserve the right to be the authors of our own lives and requires us to treat others as moral agents in a manner which characterizes them as beings like ourselves. Genetic intervention intervenes on one’s ethical freedom and ability to understand the self, ultimately preventing the person from being oneself. It prejudges the actions of a person, and a person born may feel that he ought to live up to those expectations if he was already made with them. The self-image that could have evolved through social enhancement is suffocated because he has already been determined, and therefore, cannot take part in a community with others as an equal member where he would have been able to undergo individuation: mature in his ability to reason, to make judgments and to follow his own aspirations and interests.

However, as we saw with Xander, a person who is genetically engineered is still able to reason on his own. It is true that his parents manipulated his genome, but that is all they were able to do. Genetic engineering and designing babies does not come with a satisfaction
The only thing that genetic enhancement can do is optimize a person’s abilities. You have environmental and social factors that will influence a person, whether or not he has been genetically enhanced. Through social enhancement, people come to discover what they truly value and what is worthwhile. Even if a person is genetically inclined to do something does not mean that he has to do it. As a matter of fact, all humans are born with genetic tendencies. Both enhanced and unenhanced individuals mature to be autonomous adults. As long as they are doing something that they like, they can be sure they are fully behind their actions because they themselves want to do it.

You can give a child something for one thing, but they may use it for another. Everyone is born with genetic dispositions that help shape what we become, and grow to have dreams and goals that we set for ourselves to achieve. Everyone struggles to find fulfillment when they are conscious of how our abilities conflict with our desires. They also go through pressures anywhere from the social, to their parents, and possibly even genetic enhancement. All that matters is they find what life suits them; a life that they believe is best for them so that they can maintain a healthy development.

In addition, there really is no ‘norm’ that exists in society. Yes, it is true that humans are from nature, but they are not natural. They do unnatural things all the time, and what is considered to be ‘normal’ is only socially institutionalized; it can change at any point in time. When you say that genetically engineered humans cannot live an autonomous life because they deviate from the ‘norm’, you are claiming them to be unnatural. But, like I mentioned above, an unenhanced human is just as unnatural as a genetically enhanced human, the only difference that exists is one was genetically enhanced.
Plus, when we go against what is considered to be normal for an individual and perform an intervention without consent, the autonomy that one has might not be diminished. It can be detrimental to their moral agency, but it might also be unknowingly beneficial.

**OTHER THINGS TO TAKE INTO CONSIDERATION**

However, those warnings that Habermas lays out are still in effect. We cannot just blindly go out into the world and freely start genetically enhancing people. There probably will be people who are genetically enhanced who may not want to be. It might not have anything to do with whether one’s autonomy has been taken away. It is possible that they just want to try out a lifestyle in which they use their own abilities and developing their natural talents that they received by chance.

Also, performing genetic enhancement in a way such that a child will be powerless to develop abilities for other things he might want to do is immoral. We cannot predict the future and see what the child may end up doing, so it is best to think in the long-term and not in just the short-term in favor of the child.

**IDEA OF AUTHENTICITY LEADING TO DISCRIMINATION**

Finally, I would like to conclude this discussion with a warning. Habermas also appears to be saying that our genome is what makes us human. If there is any manipulation of it other than by nature, then we have lost our humanity.

If we come to live in a world where human genetic engineering is acceptable and it is believed by many that genetic engineering takes away a person’s humanity, then genetically engineered people are not going to be seen as humans. If there is this bias attitude, then their integrity would be really stripped away.
In my opinion, a genetically engineered human would just be another ‘breed’ of our species, just like how there are different breeds of dogs and cats. If they are not defined as authentic humans, as beings who are born with moral agency, then this can lead to discrimination and a battle over how they should be viewed, what freedoms they can have and how they ought to be treated. Just because they are ‘different’ and ‘abnormal’, they would face discrimination just like women, slaves and different races had to endure in the past – and in some places they still do.

Like I said in the beginning, I am not here to be an authority on this bioethical subject. People have difference opinion on how to define human integrity and autonomy. They also freeze when they face something that is loaded with scandal or uncertainty. Just make sure that you do not come to rely on technology too much – to make decisions for you, to base false facts on and to use as the only way to educate yourself – or you might lose your humanity and take away someone else’s.
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