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A Promise for a Better Future: Distinguishing Genetics from Eugenics

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**A Promise for a Better Future:
Distinguishing Genetics from Eugenics**

Vadim Rodin¹

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I. Introduction

Eugenics, as originally coined by Francis Galton in 1883, was a study of “all influences that tend in however remote a degree to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable than they otherwise would have had.”² He defined the term in 1904 as “the study of agencies under social control that may improve or impair the racial qualities of future generations either physically or mentally.”³ The goal behind eugenics was certainly appealing and garnered strong support throughout the United States by the early twentieth century.⁴ Eugenic support rallied around its fundamental premise: “that science could be used to alleviate suffering and improve the human condition.”⁵ Support for this eugenic premise took shape in many forms, including events like “better babies” contests and county fairs holding rewards for “the fittest families.”⁶

It was unclear, for a time, how the eugenic goal of bettering mankind would be achieved.⁷ Ultimately, a simple approach was chosen: through the use of eugenic laws which sought to limit the reproduction of the “unfit;” including laws authorizing compulsory sterilization.⁸ In light of the popularity of the eugenic movement during the time, compulsory sterilization laws were deemed constitutional by the Supreme Court of the United States.⁹ Unfortunately, these laws

² PAUL A. LOMBARDO, *Disability, Eugenics, and the Culture Wars*, 2 ST. LOUIS U. J. HEALTH L. & POL’Y 57, 58-9 (2008) (citing FRANCIS GALTON, *INQUIRIES INTO HUMAN FACULTY AND ITS DEVELOPMENT* 17 n.1 (1883))

³ Philip R. Reilly, *Eugenics, Ethics, Sterilization Laws in 1* ENCYCLOPEDIA OF ETHICAL, LEGAL, AND POLICY ISSUES IN BIOTECHNOLOGY 204, 204 (Thomas H. Murray & Maxwell J. Mehlman ed., 2000).

⁴ PAUL A. LOMBARDO, *Taking Eugenics Seriously: Three Generations of ??? Are Enough?*, 30 FLA. L. REV. 191, 208-9 (2003).

⁵ *Id.* at 211.

⁶ LOMBARDO, *supra* note 2, at 59-60 (internal citation omitted).

⁷ *See, generally*, LOMBARDO, *supra* note 4, at 208-14 (discussing the different views taken by people on how to apply eugenics, resulting in suggestions like allowing “the unfit” to die at birth and mandatory sterilization).

⁸ *Id.* at 216.

⁹ *See*, *Buck v. Bell*, 274 U.S. 200 (1927) (finding a compulsory sterilization law constitutional).

resulted in the forced sterilization of over 65,000 people,¹⁰ usually based on unsubstantiated allegations that they were “imbeciles.”¹¹

Regardless of any moral implications related to controlling a person’s reproductive choices, the eugenic movement was extremely popular and adopted by countries all over the world.¹² Germany was one such country, being the proud holder of the most extreme eugenic laws.¹³ In light of Germany’s great enthusiasm to sterilize those that did not share their “blood,” leading to mass sterilizations and the Holocaust, it comes as no surprise that the United States’ eugenic fervor started to wane.¹⁴ Consequently, the term “eugenics,” having become associated with Nazi Germany and the extreme limits to which it has been pushed, became a “taboo” that is, at least on the surface, abandoned.¹⁵ However, even with its darkened history, the eugenic goal of bettering mankind through science continues to thrive.

After eugenics, which focused on poorly defined traits like feeble-mindedness, insanity, epilepsy, alcoholism, criminality and poverty,¹⁶ came genetics, “the scientific study of how genes control the characteristics of plants and animals.”¹⁷ Like eugenics, genetics is founded on idea “that science could be used to alleviate suffering and improve the human condition.”¹⁸ Because

¹⁰ LOMBARDO, *supra* note 2, at 62.

¹¹ *See, e.g., Buck*, 274 U.S. at 200-8 (1927) (resulting in the compulsory sterilization of Carrie Buck). *See also, generally*, PAUL A. LOMBARDO, *THREE GENERATIONS, NO IMBECILES: EUGENICS, THE SUPREME COURT, AND BUCK V. BELL* 112-73(2008) (discussing the facts behind the case and revealing that Carrie was likely not an imbecile, and only deemed as such because of false or unsubstantiated facts allegations).

¹² *See*, ALLEN BUCHANAN, ET AL., *FROM CHANCE TO CHOICE: GENETICS AND JUSTICE* 32-7 (2000) (discussing the various types of eugenics practices around the world).

¹³ *Id.* at 37-8.

¹⁴ *Id.* at 39.

¹⁵ *Id.*

¹⁶ KERRY LYNN MACINTOSH, *Brave New Eugenics: Regulating Assisted Reproductive Technologies in the Name of Better Babies*, 2010 U. ILL. J.L. TECH. & POL’Y 257, 294 (2010).

¹⁷ Merriam Webster, *Genetics*, MERRIAMWEBSTER.COM, <http://www.merriam-webster.com/dictionary/genetics> (last visited 11/3/2013).

¹⁸ LOMBARDO, *supra* note 4, at 211; *See also*, BUCHANAN, ET AL., *supra* note 12, at 27 (“[t]he revolution in genetics, although full of promise for understanding our own constitution and for the power to change human lives for the better, has nevertheless proven profoundly unsettling”).

genetics seeks the same goals as eugenics, it can also repeat the same mistakes.¹⁹ However, given the many potential therapeutic functions of genetics, it is vital that genetics be clearly distinguished from eugenics so that it may aid in the betterment of mankind without being dismissed in light of its eugenic shadow.

This paper investigates the history of eugenics and the uses of genetics in the reproductive context, analyzing the merits and pitfalls of both through their execution in order to determine how genetics can be distinguished from eugenics so that it can be effectively used to aid mankind without succumbing to the same consequences as eugenics. The paper will begin by addressing the first issue: what is eugenics? It will describe the history behind eugenics, addressing its origin, use, rise and fall in popularity and how it is used today. Particular attention will be paid to one widely known case, *Buck v. Bell*,²⁰ to illustrate the support for eugenics and method of carrying out the eugenic goals. The paper will then address the second issue: the use genetics as a reproductive tool. The paper will explain how genetics is used as a tool to aid reproduction and its potential therapeutic aspects through that use, and show how it can achieve the eugenic goals. The paper will then address the third issue: distinguishing genetics from eugenics. The section will focus on demonstrating how genetics, when used as in the reproductive context, can be distinguished from eugenics. The paper will utilize these differences to suggest how these they can be applied to prevent genetics from being abused in the same manner as eugenics.

¹⁹ See, generally, BUCHANAN, ET AL., *supra* note 12, at 27-30 (discussing how the history of eugenics affects the prospects of genetics).

²⁰ *Buck*, 274 U.S. at 207 (1927).

II. What is Eugenics?

The eugenic movement can be summarized by one simple phrase by Margaret Sanger: “[m]ore children from the fit, less from the unfit.”²¹

A. Origin of Eugenics in the United States

As originally coined by Francis Galton in 1883 and defined in 1904, eugenics is “the study of agencies under social control that may improve or impair the racial qualities of future generations either physically or mentally.”²² Essentially, it involved using Mendelian genetics²³ to predict what traits would pass from one person to another.²⁴ Presently, eugenics is understood as “a science that deals with the improvement (as by control of human mating) of hereditary qualities of a race or breed.”²⁵ Eugenics has is generally practiced in two ways: positive and negative eugenics.²⁶ Positive eugenics encourages the reproduction of people presumed to have superior qualities to promote the growth of those qualities.²⁷ Conversely, negative eugenics involves limiting, or altogether denying, the reproductive opportunities of those individuals which are deemed “unfit” in an effort to stem the proliferation of their qualities.²⁸

It is the “negative eugenics” approach that was ultimately adopted by the United States, and is the focus of this paper to demonstrate how the eugenic ideals were pushed too far.

²¹ See EDWARD LARSON, *Putting Buck v. Bell in Scientific and Historical Context*, 39 PEPP. L. REV. 101, 104 n.26 (2011) available at <http://ssrn.com/abstract=1948793> (“For an example of the use of this phrase in an editorial from American Medicine, see Editorial, *Intelligent or Unintelligent Birth Control*, BIRTH CONTROL NEWS 10, 11, May 1919, at 12”).

²² Reilly, *supra* note 3, at 204.

²³ “Mendelian genetics hold that parental and other ancestral traits reappear in children and more remote descendants without blending. Early geneticists saw this process applying in a simplistic one-to-one fashion to man severely disabling traits, including the types of serious mental illness and retardation supposedly at issue in *Buck*.” LARSON *supra* note 21, at 103.

²⁴ David Miklos & Eloy Carlson, *Engineering American Society: the Lesson of Eugenics*, NATURE REV., Nov. 2000, at 153, 154 available at http://isites.harvard.edu/fs/docs/icb.topic256428.files/LS1b08_6_Micklos%20Carlson%202000.pdf.

²⁵ Merriam Webster, *Eugenics*, MERRIAMWEBSTER.COM, <http://www.merriam-webster.com/dictionary/eugenics> (last visited 12/6/2013).

²⁶ FRED D LEDLEY, *Distinguishing Genetics and Eugenics on the Basis of Fairness*, 20 J. MED. ETHICS, 157, 158 (1994).

²⁷ *Id.*

²⁸ *Id.*

Shortly after Francis Galton introduced the concept of “eugenics,” much of the world adopted it.²⁹ With respect to the United States, it was Charles Benedict Davenport (“Davenport”) who contributed greatly to the rise of the United States’ eugenic movement and is considered its father.³⁰ Davenport was the director of the Biological Laboratory at Cold Spring Harbor, New York, where he researched and applied the Mendelian laws of heredity and became interested in heredity in human beings.³¹ Davenport was an active member of American Breeders Association, which promoted human eugenics³² and found wide support from many influential people.³³ Although genetics – the science explaining how genes affect the growth and traits of living things - was initially used to support eugenics, researchers like Davenport and Harris Laughlin (“Laughlin”) nonetheless ignored many of its factual underpinnings which questioned the heritability of some of the alleged heritable traits and instead collected data about family genealogies and their traits to argue that traits like feeble-mindedness, insanity, epilepsy, alcoholism, criminality, and poverty were heritable.³⁴

Based off of Davenport’s and Laughlin’s efforts and “results,” lawmakers soon began adopting the eugenic ideals.³⁵ However, before discussing how lawmakers attempted to execute these eugenic ideals, it is important to note what the motivational factors were to understand why exactly it was so widely supported.

²⁹ BUCHANAN, ET AL., *supra* note 12, at 31.

³⁰ Miklos & Carlson, *supra* note 24, at 154

³¹ *Id.*

³² *Id.*

³³ *See generally* LOMBARDO, *supra* note 4, at 209-14 (describing how the eugenic movement found support from people like Theodore Roosevelt, Elihu Root, Woodrow Wilson, Winston Churchill, Alexis Carrel, Thomas Hunt Morgan, Jane Addams, H.J. Muller, William Shockley, Linus Pauling, Joshua Lederberg, Francis Crick, Konrad Lorenz, Gunnar Myrdal, Helen Keller, Alexander Graham Bell, William Welch and Adolf Hitler).

³⁴ MACINTOSH, *supra* note 16, at 294

³⁵ *Id.*

B. Eugenic Motives

The eugenic movement had three main motivations: (i) the desire to improve the human species; (ii) the desire to protect the unborn from living a disabled and crippled life; and (iii) the desire to save economic resources.³⁶

It is clear that the ultimate eugenic goal was a positive one: to improve the human species.³⁷ By promoting the reproduction and therefore continuance of positive traits while limiting the continuance of negative traits, it is reasonable to assume that it would improve the human species. It was believed that it was possible to eliminate crime, insanity, disability and sickness by carefully controlling reproduction such that those qualities would be weeded out after a few generations.³⁸ Having successfully done that, it was believed that the overall human condition would improve.³⁹

Eugenicists believed that “parenthood weighed heavily upon the ‘unfit’ and life itself was a burden to offspring with heritable defects.”⁴⁰ This idea is sometimes known as “better not born” doctrine.⁴¹ It implies that a child born from an unfit couple would himself be unfit and be forced to live an “unfit” life, such as a life of crime, and result in him doing himself and society more harm than he otherwise would have.⁴² In the words of Justice Oliver Wendell Holmes in *Buck*, eugenicists believed that “[i]t is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent

³⁶ See, *Id.* at 299-303 (introducing the differences).

³⁷ *Id.* at 299-300 (citing ALBERT EDWARD WIGGAM, *THE NEW DECALOGUE OF SCIENCE* 105 (1922) (“Eugenics is, I repeat, not a mere program—it is a change in the perspective of civilization, character and life. It is a new kind of humanism”)).

³⁸ MACINTOSH, *supra* note 16, at 300 (citing DIANE B. PAUL, *CONTROLLING HUMAN HEREDITY: 1865 TO THE PRESENT*, 68 (1995)).

³⁹ See, MACINTOSH, *supra* note 16, at 302.

⁴⁰ See, *Id.* (citing VICTORIA F. NOURSE, *IN RECKLESS HANDS: SKINNER V. OKLAHOMA AND THE NEAR TRIUMPH OF AMERICAN EUGENICS* 21 (2008) (“explaining that many viewed eugenics as a means of alleviating the suffering of both parents whose offspring had heritable defects and the offspring themselves”)).

⁴¹ MACINTOSH, *supra* note 16, at 302.

⁴² MACINTOSH, *supra* note 16, at 302-3.

those who are manifestly unfit from continuing their kind.”⁴³ Therefore, even Justice Holmes implied that, by stemming the reproduction of the “unfit,” those not yet born are also protected.⁴⁴

Lastly, at least from the government’s perspective, it was believed that executing eugenic ideals would inevitably lead to saving economic resources.⁴⁵ If traits like “crime” and “poverty” are heritable, then it must be the case that valuable resources are being used to control and support individuals with that trait.⁴⁶ If these traits could be eliminated, then there would be no need to waste those resources. Additionally, eugenicists believed that people who carried “bad” heritable traits, such as crippling disabilities, were capable of supporting themselves but not a family.⁴⁷ Therefore, eliminating these defects, or disallowing these defects to pass on, would essentially alleviate the burdens placed on taxpayers to support the disabled, as well as alleviate the burdens placed on the disabled themselves.⁴⁸ This motivation became even more dominant during the Great Depression.⁴⁹

Given these motivations, it comes as little surprise that the United States took steps to achieve the eugenic goal of bettering mankind. It was believed that all three motivations could be achieved by altering the breeding practices of humans.⁵⁰ Although the goals were positive, it

⁴³ *Buck*, 274 U.S. at 207 (1927).

⁴⁴ *See*, MACINTOSH, *supra* note 16, at 302-3 (suggesting that Justice Holmes implicitly stated that it was also better for those children to never even be born from those “unfit”).

⁴⁵ MACINTOSH, *supra* note 16, at 301.

⁴⁶ Miklos & Carlson, *supra* note 24, at 154-5.

⁴⁷ PHILIP R. REILLY, *THE SURGICAL SOLUTION* 94 (1991).

⁴⁸ *See*, MACINTOSH, *supra* note 16, at 301 (citing MARTIN S. PERNICK, *THE BLACK STORK: EUGENICS AND THE DEATH OF “DEFECTIVE” BABIES IN AMERICAN MEDICINE AND MOTION PICTURES SINCE 1915*, 91-2 (1996) (“discussing how eugenics is for the “collective good” of society”).

⁴⁹ MACINTOSH, *supra* note 16, at 301 (citing DANIEL J. KEVLES, *IN THE NAME OF EUGENICS*, 113-5 (Harvard University Press 1995) (1985) (“noting the increasing numbers of mentally disabled people and the public cost of caring for them and discussing how eugenicists attributed unemployment and low socioeconomic status to mental incapacity”).

⁵⁰ BUCHANAN, ET AL., *supra* note 12, at 42.

was unfortunate that the means used to effectuate these goals turned the idea of “eugenics” into a taboo. One such means was the use of compulsory sterilization laws.⁵¹

C. Rise of Eugenic Sterilization Laws

Although Virginia was not the first state to pass sterilization laws,⁵² it was the first state to draft a statute that received the Supreme Court stamp of constitutional approval and that served as a model for other state sterilization laws.⁵³ The Virginia sterilization law owes its birth to the efforts of Harris Laughlin, Dr. Albert Priddy, and Aubrey Strode.

Dr. Priddy, the superintendent of the Virginia State Colony for Epileptics and the Feeble-minded (the “Colony”), was an ardent supporter of sterilizing the “unfit.”⁵⁴ Without any express state support, Dr. Priddy took pride in sterilizing many patients, whom he deemed “unfit,” without their consent or knowledge during unrelated procedures.⁵⁵ It is not surprising that his practice eventually caused him to be sued in *Mallory v. Priddy*.⁵⁶ Although he won the case, he realized that he could not continue his eugenic practice without express statutory support.⁵⁷ That was when he came upon Laughlin who in 1914 authored “A Model Sterilization Law” and was by this time known as a leader in the field of eugenics.⁵⁸ Through the efforts of Dr. Priddy, Strode, the attorney for the Colony, and Laughlin, the Virginia Sterilization Act of 1924 (the “Virginia Sterilization Act” or “Act”) was passed.⁵⁹

⁵¹ LOMBARDO, *supra* note 4, at 216.

⁵² The first state to pass sterilization laws was Indiana in 1907, the Indiana Sterilization Law. LOMBARDO, *supra* note 2, at 61.

⁵³ *Id.* at 62; *See also, Buck*, 274 U.S. at 200-8; *see also, generally*, LOMBARDO, *supra* note 11, at 112-73 (describing the history leading up to and following *Buck*).

⁵⁴ LOMBARDO, *supra* note 11, at 60.

⁵⁵ *See, generally*, LOMBARDO, *supra* note 11, at 58-77 (describing how Dr. Priddy sterilized many of his patients during operations to relieve “chronic pelvic disorder,” and others because he considered them “entirely unsafe,” eventually leading to *Mallory v. Priddy*).

⁵⁶ *Id.*

⁵⁷ *Id.* at 91-2.

⁵⁸ *Id.* at 51.

⁵⁹ *Id.* at 98-100. It should be noted that parts of the Act were copied verbatim from Laughlin’s own model act. *Id.* at 97.

It is important to realize that the Virginia Sterilization Act had many provisions in place to ensure that patients would have due process. The Virginia Sterilization Act vested authority for initiating sterilization procedures in “superintendents of state hospitals or colonies for the mentally deficient,” contingent on a diagnosis of a hereditary defect.⁶⁰ A physician must have first petitioned the governing body of the institution to ask for permission to sterilize a patient and initiate sterilization proceedings.⁶¹ The patient and his guardian were required to be “notified of the proceedings in writing.”⁶² If the patient had no legal guardian, one was to be appointed by a local court.⁶³ The patient had a “right to be represented by a lawyer” and to “attend [his] sterilization hearings, put witnesses under oath, and receive a written record of the evidence.”⁶⁴

The Virginia Sterilization Act permitted sterilization only “if the board [had] found that the patient was insane, idiotic, imbecile, feeble-minded, or epileptic, and by the laws of heredity is the probably potential parent of socially inadequate offspring likewise afflicted.”⁶⁵ Additionally, the board must have concluded that the patient could be sterilized without any detriment to his “general health and that both the welfare of the patient and society would be promoted by the operation.”⁶⁶ Following that conclusion, the patient then had a right to appeal the decision.⁶⁷

After a cursory inspection of the Act, it appears as though the patient was protected from any unnecessary infringement on his body without due process. However, there was one ambiguity that left open the door for abuse: who was “insane, idiotic, imbecile, feeble-minded, or

⁶⁰ *Id.* at 99.

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.* (internal quotations omitted).

⁶⁶ *Id.* (internal quotations omitted).

⁶⁷ *Id.*

epileptic?” To test the Virginia Sterilization Act, the first patient chosen to be sterilized was Carrie Buck.⁶⁸

D. Eugenics in Action: *Buck v. Bell*

Buck, decided in 1927 by the Supreme Court of the United States with only one Justice dissenting, found that the Virginia Sterilization Act was constitutional and upheld the sterilization of Carrie Buck.⁶⁹ Carrie argued that the Virginia Sterilization Act was “void under the Fourteenth Amendment as denying to the plaintiff in error due process of law and the equal protection of the laws.”⁷⁰ However, the Court found that the Virginia Sterilization Act afforded Carrie sufficient protection and that “every step in [the] case was taken in scrupulous compliance with the statute”⁷¹ Ultimately, the court concluded, in the infamous words of Justice Holmes, that “[t]hree generations of imbeciles are enough.”⁷² The court believed that:

[t]he public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind.⁷³

The opinion – a short read which suggests the Court's own view of how debatable this issue was – decided the reproductive fate of one individual specifically: Carrie Buck; however, it also set the stage for many more people to be sterilized in the future by deeming such a compulsory sterilization law *constitutional*. With the Court's decision, the door was open for every state to enact its own sterilization law. Ten years after *Buck*, thirty-two states had similar

⁶⁸ *Id.* at 102.

⁶⁹ *See, Buck*, 274 U.S. at 200-8.

⁷⁰ *Id.* at 205.

⁷¹ *Id.* at 207.

⁷² *Id.*

⁷³ *Id.*

sterilization laws.⁷⁴ Before the last of these laws was repealed in 1979, 65,000 people were sterilized in the name of “bettering mankind.”⁷⁵

Looking beyond any moral grounds for criticizing the opinion, it is likely that *Buck* was rightly decided.⁷⁶ Given the record at hand and what the Court knew about the Virginia Sterilization Act, Holmes was “right to declare that, as a matter of state public health law and in due deference to majoritarian decision-making, ‘[t]he principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes.’”⁷⁷ That would remain true even if the facts supporting Carrie’s sterilization were proved false.⁷⁸ As a result, *Buck* was never explicitly overruled.⁷⁹ However, it is important to realize that it was not the law itself that was at fault, but rather the execution of the law that eventually caused the very idea of “eugenics” to be disfavored. Like in *Buck*, it was the abuse of facts when defining terms like “feeble-minded” that resulted in one of the worst application of eugenics.⁸⁰

The *Buck* opinion only recited a few simple facts to support sterilizing Carrie: that “Carrie Buck [was] a feeble minded white woman who was committed to the ... Colony in due form. [That] [s]he is the daughter of a feeble minded mother in the same institution, and the mother of an illegitimate feeble minded child.”⁸¹ Strode, counsel supporting the sterilization of Carrie and one of the drafters of the Virginia Sterilization Act, presented eight witnesses and four depositions to prove that Carrie was “socially inadequate.”⁸² In defense, Whitehead, counsel for

⁷⁴ LOMBARDO, *supra* note 2, at 62.

⁷⁵ *Id.*

⁷⁶ *See, generally*, LARSON *supra* note 21 (discussing the historical context behind *Buck* and arguing that it was correctly decided).

⁷⁷ LARSON, *supra* note 21, at 108 (internal citations omitted).

⁷⁸ *Id.* (internal citations omitted).

⁷⁹ *Id.*

⁸⁰ *See, generally*, LOMBARDO, *supra* note 11, at 112-73 (discussing how the facts behind *Buck* were manipulated and false).

⁸¹ *Buck*, 274 U.S. at 205.

⁸² *See*, PAUL A. LOMBARDO, *Three Generations, No Imbeciles: New Light on Buck v. Bell*, 60 N.Y.U.L. REV. 30, 50-62 (1985) (describing the evidence presented at trial supporting Carrie’s sterilization).

Carrie, called no witnesses and offered practically no cross-examination.⁸³ Essentially, Whitehead made no attempt to defend Carrie.⁸⁴ The reason was likely because he wanted to lose. He had been long associated with both Strode and Dr. Priddy – the main proponents in support of sterilizing Carrie – and was a member of the Colony Board, the same board which authorized the same sterilization requests as Carrie’s under the Virginia Sterilization Act.⁸⁵

If Whitehead had made any attempt to defend Carrie, he would have found that substantially all of the “facts” cited against Carrie and relied on by expert witnesses were either false or unsubstantiated.⁸⁶ To quickly summarize, Carrie was neither an illegitimate child, immoral, nor plagued with mental deficiency.⁸⁷ Carrie, her mother and her daughter – the “three generations of imbeciles” – were improperly categorized as imbeciles without any real due process.⁸⁸ *Buck* is important to show that the great enthusiasm for eugenics – particularly “negative eugenics” – caused an innocent woman to be sterilized “for the betterment of mankind.” Consequently, her sterilization allowed the same harm to befall many others as subsequent sterilization laws took effect.⁸⁹

Buck, with all its clear and significant deficiencies, is the case which found compulsory sterilization *constitutional*. In retrospect, the result is shocking. Consequently, *Buck* now rests

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *See, Id.*

⁸⁶ *See, Id.* (describing how all the facts are either false or could be put into question); *See also*, LOMBARDO, *supra* note 11, at 112-73 (describing Buck’s history and how she was found “feble-minded” and the many problems associated with her trial).

⁸⁷ *See*, LOMBARDO, *supra* note 82, at 50-62 (describing how all the facts are either false or could be put into question); *See, also*, LOMBARDO, *supra* note 11, at 112-73 (describing Buck’s history and how she was found “feble-minded” and the many problems associated with her trial).

⁸⁸ *See*, LOMBARDO, *supra* note 82, at 50-62 (describing how all the facts are either false or could be put into question); *See, also*, LOMBARDO, *supra* note 11, at 112-73 (describing Buck’s history and how she was found “feble-minded” and the many problems associated with her trial).

⁸⁹ *See* LOMBARDO, *supra* note 2, at 62 (stating that between 1907 and 1979, there were more than 65,000 sterilizations).

in the annals of U.S. history as a reminder of the dangers associated with eugenics and of the dangers of taking such ideas too far.

Even though *Buck* affirmed the constitutionality of compulsory sterilization statutes,⁹⁰ it also served as a hook for the dissenters of negative eugenics to use in support their criticisms against the eugenic movement.⁹¹ Although such criticism contributed to its fall, it was Nazi Germany that rapidly reversed any support the United States had for eugenics.⁹²

E. The Fall of Eugenics

Germany had enacted its own eugenic laws that were, in many respects, significantly more powerful than the United States' laws.⁹³ These laws, at least in part, were inspired by the American eugenics movement.⁹⁴ However, Germany's eugenic laws were "distinctive in [their] scale and elaborateness, [their] ferocity, [their] racial orientation, and [their] demands for absolute submission by the individual to the interests of the group."⁹⁵

Initially, Germany's eugenic laws were applauded by U.S. eugenicists.⁹⁶ However, those laws eventually lead to the sterilization of approximately 300,000 to 400,000 people and to the execution of mental patients.⁹⁷ The German ideologies of "pure blood" contributed greatly to the laws' strict enforcement and eventually lead to the Holocaust.⁹⁸ It was found, during the Nuremberg war trials in 1946, that many sterilizations were done using "experimental means,

⁹⁰ See, *Buck*, 274 U.S. at 200-8.

⁹¹ See, generally, MARK A. LARGENT, BREEDING CONTEMPT: THE HISTORY OF COERCED STERILIZATION IN THE UNITED STATES 96-103 (2008) (describing how one group, Catholics, organized opposition to the eugenic movement in response to the *Buck* decision).

⁹² *Id.* at 124.

⁹³ BUCHANAN, ET AL., *supra* note 12, at 38.

⁹⁴ See, LOMBARDO, *supra* note 11, at 199-218 (describing the relationship between U.S. eugenicists and German eugenicists).

⁹⁵ BUCHANAN, ET AL., *supra* note 12, at 38.

⁹⁶ See, LOMBARDO, *supra* note 11, at 199-218 (describing the relationship between the United States geneticists and German eugenic laws). It is interesting to note that Harry Laughlin even got an honorary degree from a German University based on his work in eugenics. BUCHANAN, ET AL., *supra* note 12, at 38-9.

⁹⁷ MACINTOSH, *supra* note 16, at 301 (internal citations omitted).

⁹⁸ BUCHANAN, ET AL., *supra* note 12, at 37.

such as caustic chemicals or radiation, and were condemned as torture that occurred under the guise of medical research.”⁹⁹

Suffice it to say that Nazi Germany’s actions regarding their eugenic laws, World War II and the Holocaust undeniably tainted any good in eugenics.¹⁰⁰ Consequently, it caused many eugenic followers to distance themselves from the very idea of eugenics.¹⁰¹

F. Eugenics Today

Regardless, many of eugenics’ principles continue to be advocated by state legislators and private individuals.¹⁰² One instance where eugenics plays a role is in criminal prosecution. Beginning in the mid-1980’s lawmakers began to question whether they can use compulsory sterilization in specific classes of people such as “those many who had been convicted of particular sex crimes, women who abused their children, and ‘welfare queens,’ or single mothers on public assistance.”¹⁰³ Several attempts were made by states to pass such laws, but nearly all failed to pass or were quickly repealed after they were compared to the history of eugenics.¹⁰⁴ One example of a successfully passed sterilization law that is still in effect today is California’s law requiring chemical castration of repeat sex offenders.¹⁰⁵

There are other examples of eugenics today that do not involve government intervention. For example, Project Prevention, formerly known as Children Requiring a Caring Kommunity (“CRACK”), offers three hundred dollars to drug addicted woman for their “consent” to undergo

⁹⁹ LOMBARDO, *supra* note 2, at 64-5.

¹⁰⁰ BUCHANAN, ET AL., *supra* note 12, at 37-8.

¹⁰¹ *Id.* at 39.

¹⁰² *See, generally*, LARGENT, *supra* note 91, at 140-7 (discussing how many states continued to try to pass eugenic laws and other private groups which promote eugenic-like principles).

¹⁰³ *Id.* at 141.

¹⁰⁴ *Id.* at 141-2.

¹⁰⁵ *Id.* at 142.

sterilization.¹⁰⁶ Additionally, groups which have previously advocated for eugenics have changed their approach from compulsory sterilization to “voluntary” choice sterilization.¹⁰⁷

Regardless, eugenics is no longer championed as it was in the early twentieth century. However, it is incorrect to assume that the eugenic principles have altogether disappeared from the minds of society. With the discovery of the double helix in 1953, the previously slow growing field of genetics gained a new surge of enthusiasm in the scientific community and launched a reinvigorated fervor to improve the genetic wellbeing of the human race.¹⁰⁸ However, genetics stands along the same principle as eugenics: using science to better mankind. Although it is through a different source that human traits and characteristics are determined, it can potentially succumb to the very same consequences as eugenics. Therefore, it is vital that genetics be properly distinguished from eugenics so that it may grow and effectuate its goal to better the human race.

III. Genetics as a Reproductive Tool

Although genetics can take a wide array of forms, this paper will focus on the use of genetics as a reproductive tool and how it affects reproductive choices.

A. Embryo Selection and Genetic Testing Intervention

Genetics is “the scientific study of how genes control the characteristics of plants and animals.”¹⁰⁹ Genetics allows a scientist to look into the DNA of a person and determine, with

¹⁰⁶ See, Project Prevention, *Project Prevention – Children Requiring a Caring Community*, PROJECTPREVENTION.ORG, <http://www.projectprevention.org/> (last visited 11/3/2013) (homepage for Project Prevention).

¹⁰⁷ See, generally, MARY ZIEGLER, *Reinventing Eugenics: Reproductive Choice and Law Reform After World War II*, 14 CARDOZO J.L. & GENDER 319 available at <http://ssrn.com/abstract=1646010> (discussing the actions taken by the pro-eugenic organizations in attempting to continue promoting eugenic ideals).

¹⁰⁸ KAREN, ROTHENBERG, *From Eugenics to the “New” Genetics: “The Play’s the Thing,”* 79 FORDHAM L.R. 407, 422 (2010).

¹⁰⁹ Miriam Webster, *supra* note 17.

some degree of likelihood, his qualities and characteristics.¹¹⁰ The world's knowledge of the human genome is still incomplete; however, with the ongoing success of the Human Genome Project many genes have been identified, and more continue to be identified, that are linked with human characteristics, genetic diseases, and disabilities.¹¹¹ The continued success allows scientists to make increasingly more reasonably accurate predictions of the effects of those genes.¹¹²

Genetics can be used to affect reproductive choices in at least two ways: embryo selection and reproductive genetic testing interventions (collectively referred to as “genetic intervention”).¹¹³ Embryo selection involves removing at least one embryo, fertilizing it, analyzing the egg's DNA, and implanting the egg that has the specifically desired genes into the mother.¹¹⁴ One particular group that has greatly benefited from embryo selection is infertile individuals.¹¹⁵ Typically, embryo selection is coupled with some form of assisted reproductive technology (“ART”), allowing doctors to insert a fertilized egg with desired characteristics into a mother.¹¹⁶ Reproductive genetic testing intervention occurs when genetic information is used to affect reproductive choices.¹¹⁷ These interventions occur in response to information revealed after a genetic testing, whether that testing occurs on a person intending to conceive or on a fetus itself after conception occurred.¹¹⁸

¹¹⁰ See, generally, BUCHANAN, ET AL., *supra* note 12, at 347-50 (describing how genes are passed from the parents to the child). In summary, DNA has two strands; each strand has its own sequence of nucleotides. Geneticists have the ability to analyze those strands and determine if they contain certain genes which they are able to identify, for example the gene responsible for Tay Sachs disease. With this knowledge, geneticists are able to predict whether or not an infant will be born with, for example, Tay Sachs disease. *Id.*

¹¹¹ See, e.g., BUCHANAN, ET AL., *supra* note 12, at 4, 7-8 (discussing these two forms of genetic intervention).

¹¹² *Id.*

¹¹³ *Id.* at 7.

¹¹⁴ *Id.*

¹¹⁵ Michelle Oberman, *Thirteen Ways of Looking at Buck v. Bell*, 35 (Santa Clara U. Sch. L., Working Paper No. 09-07, Mar. 2009) available at <http://ssrn.com/abstract=1366029>.

¹¹⁶ See, MACINTOSH, *supra* note 16, at 264-5 (describing the one possible ART procedure: in vitro fertilization).

¹¹⁷ BUCHANAN, ET AL., *supra* note 12, at 7.

¹¹⁸ *Id.*

Geneticists have the ability to analyze the genetic makeup of the embryo and individual to determine if they have certain key genes which will produce, or likely will produce, certain traits, such as heritable diseases like Tay Sachs disease.¹¹⁹ Although genetic analysis is not entirely accurate, there are many genes known today that act in a predictable nature.¹²⁰ For example, some heritable traits require DNA to have only two sets of that gene to produce the result.¹²¹ With this kind of heritable trait, “[it is not essential to understand the developmental details to put this intervention into practice. All that is needed is a test for whether parents have one copy of a gene that produces the target phenotypic condition when the gene is found in double dose.”¹²²

B. Eugenic Concern

Genetic intervention has taken form in at least two ways: designer babies and donor babies. Designer babies are those that are conceived through the use of an ART, where a fertilized egg is chosen specifically for key characteristics, or lack thereof, that the parent wants.¹²³ As technology in genetic prediction continues to improve, it is only a matter of time before parents can begin to design their children in any number of ways, like physique and intelligence.¹²⁴ One twist on designer babies that has previously occurred is what is sometimes referred to as “negative enhancement.”¹²⁵ This occurs when parents choose their children to have specific characteristics which are typically not socially desired, such as deafness.¹²⁶ Donor babies are those that are conceived for the sole purpose of becoming a donor for another

¹¹⁹ See BUCHANAN, ET AL., *supra* note 12, at 350 (describing how genes are passed from the parents to the child).

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.*

¹²³ SONIA M. SUTER, *A Brave New World of Designer Babies?*, 22 BERKELEY TECH. L.J. 897, 929 (2007)

¹²⁴ *Id.*

¹²⁵ ISABEL KARPIN, *Choosing Disability: The Preimplantation Genetic Diagnosis and Negative Enhancement*, 15 J.L.M. 89, 91 (2008) available at <http://ssrn.com/abstract=1120142>.

¹²⁶ *Id.*

individual.¹²⁷ Typically, prenatal testing is used to ensure that the conceived child will be a match for the donee.

At least one eugenic concern is clear from these forms of genetic intervention: there is the very real danger that society may impose limitations on choosing embryos with certain genetic traits or control the reproduction of individuals with specific genetic makeups. Consequently, there is the threat of having certain genetic makeups be completely eliminated from the gene pool. In essence, genetics could accomplish exactly what the eugenic movement attempted to accomplish: the betterment of humankind by eliminating unwanted traits.¹²⁸

The problem potentially lies in determining what those unwanted traits would be. There is the danger that those unwanted traits could encompass things that do not per se affect the human condition in anyway but are looked down upon due to social constructs, similarly to the use of eugenics in the past. Due to this danger and genetics' close proximity to eugenics, it is likely that any progress made in genetic reproductive technologies will be strongly criticized. However, such a result would be a disservice to the world because of the good that genetics can bring about. For instance, many heritable diseases, such as blindness, could theoretically be eliminated through careful embryo selection.

Thus, an important question is raised: can the use of genetics be sufficiently distinguished from eugenics so that it can be used to better mankind but not fall prey to the same abuse and consequences as eugenics?

¹²⁷ See, e.g., *Ferrell v. Rosenbaum*, 691 A.2d 641 (D.C. App. 1997) (discussing the use of donor babies).

¹²⁸ BUCHANAN, ET AL., *supra* note 12, at 42.

IV. Distinguishing Genetics from Eugenics

This paper argues that yes, genetics can be sufficiently distinguished from eugenics.

A. Differences between Genetics and Eugenics

As Francis Galton first envisioned eugenics in 1904, that it was “the study of agencies under social control that may improve or impair the racial qualities of future generations either physically or mentally,”¹²⁹ there can be no doubt that genetics can achieve that goal. Genetics is more capable of fostering a better mankind than the approaches the eugenics movement chose ever could. However, there are at least three differences between eugenics and genetics.

i. Means to an End

As applied in the United States, early eugenics aimed to sterilize individuals to prevent them from passing on their “unfit” genes to subsequent generations; the eugenicists believed that allowing those individuals to reproduce would only bring harm to both the individual and society. However, unlike the forced sterilization emphasized by the eugenic movement, genetics does not involve - at least presently - any sterilization. Instead, genetics allows an individual to observe the genetic makeup of a fertilized embryo, fetus or himself and allow him to make his own decisions about reproduction. Genetics therefore puts an emphasis on *choice* before any child is born.¹³⁰ Therein lays the first difference between eugenics and genetics: the means to the end. Eugenics eliminated the source of the bad genes through sterilization while genetics allows the source to continue reproducing while alleviating the afflictions of the conceived.¹³¹

Even with that difference however, that is not to say that genetics cannot hold the same implications, and the same consequences of eugenics. It is suggested that modern genetic

¹²⁹ Reilly, *supra* note 3, at 204.

¹³⁰ LEDLEY, *supra* note 26, at 159.

¹³¹ *Id.* at 158-9.

technologies might usher in a new era of eugenics.¹³² But, to reject those genetic technologies on that fear alone would also reject the many potential therapeutic and egalitarian uses that genetics can bring.¹³³ Genetics has the potential to “prevent pain, suffering, and premature death in those who are afflicted by disease.”¹³⁴ It can also ameliorate if not altogether eliminate the differences between those wellborn and those born with handicaps.¹³⁵ Therefore, it is important to further distinguish the two sciences.

ii. Governing Body

The second distinguishing feature of genetics is the entity which controls its administration.¹³⁶ The eugenic movement affords much of its downfall to the governmental intervention requiring mandatory sterilizations based on broad and ambiguous terms like “feeble-mindedness, insanity, epilepsy, alcoholism, criminality, and poverty.”¹³⁷ These terms granted the government, and any agency which the government authorized, the power to make near arbitrary determinations as to what it deemed “unfit” and requiring sterilization. By contrast, genetic intervention is presently not in control by any governing agency. Instead, it primarily lies in the hands of the people to make educated decisions regarding their pregnancy. Essentially, the “eugenic choice” of choosing to allow the proliferation of certain heritable traits is in the hands of the person conceiving the child.

There is, however, a trend in governmental agencies, for example the FDA, to increase the regulation of potentially dangerous technologies.¹³⁸ This includes regulations regarding new

¹³² *Id.* at 157.

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.* at 158.

¹³⁷ MACINTOSH, *supra* note 16, at 294.

¹³⁸ *Id.* at 268.

and conventional ART which could be used in genetic intervention.¹³⁹ Additionally, there is potential for there to be more localized controls coming from employers or insurance agencies which could limit an individual's ability to attain access to certain technologies to have a genetic intervention.¹⁴⁰ Therefore, although currently there is no formal governmental or private control regarding genetics, there is potential for there to be some kind of control in the near future.

iii. Defining a “Bad” Heritable Trait

The third distinction between eugenics and genetics is in the metrics it uses to determine whether the individual carries a “good” or “bad” heritable trait. Eugenics concentrated on the quality of humans in terms of “feeble-mindedness, insanity, epilepsy, alcoholism, criminality, and poverty.”¹⁴¹ Many of these metrics were often unsupported by any data that, by today's standards, suggested that they are heritable from one generation to the next.¹⁴² Specifically, eugenics relied on family genealogies and Mendelian principles to suggest that certain traits passed from one generation to the next.¹⁴³ However, a fundamental principle in scientific proof is that correlation does not imply causation. But that is exactly what eugenicists did: they looked to the family genealogies and assumed that because multiple subsequent generations were criminals or poor, then “criminality” and “poverty” must be heritable.

Genetics, by contrast analyzes genes that act in a predictable manner to determine whether or not certain qualities will pass on to infants. Although genetic analysis is not entirely accurate, there are many genes that act in a predictable nature.¹⁴⁴ For example, some

¹³⁹ LEDLEY, *supra* note 26, at 158.

¹⁴⁰ *Id.*

¹⁴¹ MACINTOSH, *supra* note 16, at 294.

¹⁴² *See, Id.* (describing how researchers “collected family genealogies and used the data to argue that feeble-mindedness, insanity, epilepsy, alcoholism, criminality, and even poverty were heritable”).

¹⁴³ *Id.*

¹⁴⁴ *See, BUCHANAN, ET AL., supra* note 12, at 350 (describing how genes are passed from the parents to the child).

characteristics require DNA to have only two sets of that gene to produce the result.¹⁴⁵ With these kinds of characteristics, “it is not essential to understand the developmental details [of genes] to put [genetics] into practice. All that is needed is a test for whether parents have one copy of a gene that produces the target phenotypic condition when the gene is found in double dose.”¹⁴⁶ Although presently only a small set of traits can be predicted, the growing success of the human genome project and the improvement of technology ensures that it is only a matter of time before many, if not all, traits can be accurately predicted. Therefore, even in the event that genetics will be used similarly to eugenics – that is to say, it is used to control reproductive habits – there is much less potential for abuse because the complained of characteristic can be more certainly proven as opposed to merely alleged, like in *Buck*.

With these three distinctions in mind, although eugenics and genetics share much of the same ideology, it is possible to separate the two. However, there must be some form of regulation to prevent abuse.

B. A Three Tiered Approach

Using the differences described above, this paper presents a three tiered regime for implementing regulations or legislative action, either on the state, federal or private level (collectively “legislative action”), that will limit, if not eliminate, the use of genetics to control reproductive choice in a eugenic-like manner. Each subsequent tier is inclusive of the previous tier, incorporating the same protections. The first tier is the ideal tier which allows legislative action only in the form of protecting a patient’s knowledge and consent to the use genetics as a reproductive tool. The second tier is to be applied only in the event that there is legislative action that in any way affects the use of genetics as a reproductive tool. The third tier is to be

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

applied only in the event there is legislative action that mirrors the notions of negative eugenics, i.e. is an action that attempts to deter the proliferation of “bad” traits.

i. First Tier

The first and preferred tier suggests that the use of genetics in the reproductive context should be driven only by an individual’s own choice to use it. One of the main downfalls of eugenics was the use of legally authorized mechanisms, such as compulsory sterilization laws, to give power to a relatively small group of people to decide who was “fit” and “unfit” – to decide what is a “good” trait or a “bad” trait – and to take appropriate action thereon. Put differently, the “eugenic choice” was made by a governing body. As explained earlier, genetics, presently, has no governing body. This puts the use of genetics in the hands of the people choosing to conceive. Similarly to how the Supreme Court found that everyone has, at least to some extent, a right of privacy in their activities relating to marriage,¹⁴⁷ procreation,¹⁴⁸ contraception,¹⁴⁹ child education¹⁵⁰ and abortion,¹⁵¹ so too should that right extend to the use of genetics to aid in their reproductive choice. This right should allow individuals to make their own choice as to what they believe is a “good” and “bad” trait to pass on.

Therefore, the use of genetics should remain in the hands of individuals; they should be allowed to continue making the “eugenic choice” themselves – to be allowed to decide what is “right” and “wrong” and execute their own eugenic ideals – when making reproductive choices based on genetics. Although there is a chance that some of those decisions may be made on arguably immoral grounds, e.g. skin color, it is likely that the majority of them will be made in

¹⁴⁷ See, *Loving v. Virginia*, 388 U.S. 1, 12 (1967).

¹⁴⁸ See, *Skinner v. Oklahoma*, 316 U.S. 535, 541-2 (1942).

¹⁴⁹ See, *Eisenstadt v. Baird*, 405 U.S. 438, 453-4 (1972).

¹⁵⁰ See, *Pierce v. Society of Sisters*, 268 U.S. 510, 528 (1925).

¹⁵¹ See, *Roe v. Wade*, 410 U.S. 113, 154 (1973).

the interest of giving a child a healthier life, i.e. by not passing on a disease. Consequently, genetics will likely, for the most part, be used to better mankind.

However, there is the risk that the scientists aiding individuals when using genetics may themselves engage in their own eugenic practice. This creates the risk that those scientists may influence the decisions of couples using genetics. Therefore, the first tier also suggests the establishment of specialized genetic clinics which are designed to aid individuals in the use of genetics in the reproductive context. In these clinics, any doctors treating individuals seeking to use genetics as a reproductive tool should be accompanied by at least one genetic counselor to advise the individuals. In addition, the clinics should house genetic ethic boards to review the actions of the scientists.

The specialized clinics should aim to ensure that individuals are fully informed of all information revealed through their genetic test and any procedures related to using that information. The clinics should also aim to ensure that those individuals are given full control in deciding what to do with the genetic information and are given the opportunity to give informed and voluntary consent to any action taken thereof.

One means of establishing these clinics is through a legislative action. The legislative action should require the genetic counselors to be involved in every reproductive procedure using genetics and require the genetic ethics board to review the doctor's conduct in every such procedure. Alternatively, already existing clinics that use genetic testing as a reproductive tool can incorporate the use of genetic counselors and ethics boards.

By requiring the involvement of genetic counselors or genetic ethics board, this will reduce the likelihood of having the scientist's eugenic ideals influence the decisions of the parents. Additionally, the first tier supports the use of legislative action to prevent other

governing bodies, like the FDA and insurance companies, from enacting its own eugenic-like laws. Such action includes, for example, disallowing an insurance company from refusing to extend insurance coverage to the use of genetic testing.

Accordingly, the first tier suggests using (i) no legislative action that allows no one other than the conceiving individual to make reproductive choices based on genetics, (ii) legislative action that establishes or requires the use of specialized genetics clinics, genetic counselors, or genetic ethics board which only ensure that patients are fully informed in their use of genetics and voluntarily consent to any actions taken thereof and (iii) legislative action that protects a governing agency, private or government, from enacting its own laws or regulations affecting the use of genetics as a reproductive tool. Through this first tier, the main eugenic and genetic goal, the betterment of mankind, will be achieved per every individuals own view of what is a “betterment,” without taking such goals to extremes. However, in the event that this laissez faire approach is not feasible to maintain, then whatever other legislative action is taken should follow the second tier regime.

ii. Second Tier

The second tier requires that any legislative action taken to regulate the use of genetics in the reproductive context must follow three rules: (i) the action must make no distinction between what genetic traits are “good” or “bad;” (ii) the action can only apply to the genetic clinics and to private companies attempting to regulate the use of genetics in the reproductive context; and (iii) the action must not violate the principles of fairness.

The first and second rule is in place to guarantee that an individual’s right to choose what a “good” and a “bad” trait remains in the hands of that individual. These rules will promote the fundamental idea behind the first tier: that the appropriate party to make any decision regarding

the reproductive choice is the party conceiving a child. If, instead, a governing body attempts to define what is a “good” or a “bad” trait, those definitions will likely conflict with the opinions of the individuals seeking to use genetics as a reproductive tool and potentially be subject to abuse, much like it was in sterilization cases like *Buck*.

The third rule is in place to ensure that any legislative action passed does not apply only to groups that society might find “unfit,” but are evenly applied to every social strata, and thus avoid eugenic-like applications. There are at least four principles of fairness. If any one of these principles is violated, then the legislative action must fail.

The first principle states that the legislative action must “affirm the priority of the individual’s right to extensive, equal basic liberties over any application of genetic technologies.”¹⁵² This principle requires that any legislative action passed regarding genetic technology must not infringe on any individuals rights or basic liberties to which he is entitled under the constitution. One such right is the right to privacy.

The second principle states that the legislative action must “provide absolute benefit for the least advantaged.”¹⁵³ Similarly, the third principle requires the legislative action to “make opportunities and benefits which may accrue from genetic applications available without discrimination.”¹⁵⁴ The application of these two principles ensures that any legislative action which promotes or limits the use of genetics will not do so for only particular groups, such as the poor, but rather apply to everyone equally. The application of these principles will ensure that any legislative action passed will not be another application of negative eugenics, e.g. compulsory sterilization laws, because it would clearly violate at least these two principles.¹⁵⁵

¹⁵² LEDLEY, *supra* note 26, at 160.

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

The fourth principle requires the legislative action to “maximize the minimum level of opportunity or potential shared by all (the social minimum), rather than maximize the average liberties.”¹⁵⁶ Like the second and third principle, this principle requires the legislative action to apply to and benefit everyone rather than specific groups. However, this principle additionally prevents unfair applications of these laws. For example, a legislative action which, requires a minimum fee of at least \$50,000.00 for the use of genetic testing, when, it costs no more than \$10.00 normally, would not be beneficial to the poor and thus violate the fourth principle.

Through the second tier, any legislative action taken will not mirror the same eugenic practices of the past. Just like the first tier, the second tier emphasizes the primary distinguishing feature of genetics: that any eugenic-like decision that is made with respect to reproduction, it is voluntarily made by the individual himself. However, the second tier adds additional protection onto the first tier that prevents any third party from encroaching on the individual’s right to make his own reproductive choice. Specifically, the second tier prohibits the granting of authority to any group to make any eugenic-like decision on behalf of the individual.

However, in the event that the second tier is also not feasible and there is a desire to implement legislative action that intends to limit the proliferation of “bad” traits, then that legislative action should follow the third tier.

iii. Third Tier

The third tier requires that any legislative action that attempts limit the reproduction of any “bad” heritable traits must follow three rules: (i) the “bad” traits must be limited to only heritable life threatening disabilities and diseases; (ii) the “bad” traits must be strictly defined; and (iii) there must be an exception that permits individuals to use genetics to conceive a child with the “bad” trait.

¹⁵⁶ *Id.*

Similarly to the first and second tier, the third tier aims to leave the primary choice of defining what a “good” and “bad” trait is with the individual conceiving the child. Any attempt to definitively say what is a “bad” trait will likely fail because of varying public opinion. Consequently, any “definition” of a “bad” trait that would result would likely be equally as ambiguous as the traits used in eugenics.¹⁵⁷

However, it must be remembered that the ultimate goal of genetics is to better mankind through science by eliminating disease. Therefore, any legislative action attempting to define a heritable “bad” trait must limit itself to only those that would in fact better mankind. It is this papers opinion that those types of traits are those that are life threatening diseases and disabilities. The reason for this limitation is two-fold. First, a limitation on the proliferation of life threatening diseases and disabilities is less likely to subject to substantial public criticism. Second, objectively speaking, the public benefit that would result from limiting the reproduction of life threatening diseases and disabilities, like cystic fibrosis,¹⁵⁸ far outweighs any public benefit that would result in limiting the reproduction of other non-harmful traits, like hair color. Therefore, if there are any “bad” traits that might warrant limitation, it would be those that are life threatening.

However, even this limitation will suffer from the same problems as eugenics, specifically when eugenics it attempted to define who an “unfit” person was. In this case, the question is: what is “life-threatening?” Because scientific knowledge is continuously growing, what is life threatening today may not be life threatening tomorrow. Therefore, there should be

¹⁵⁷ As explained previously, eugenics deemed people unfit if they had “feeble-mindedness, insanity, epilepsy, alcoholism, criminality, and poverty.” See, MACINTOSH, *supra* note 16, at 294.

¹⁵⁸ See, generally, PTC Therapeutics, *Genetic Disorders*, PTC THERAPEUTICS, http://www.ptcbio.com/genetic_disorders (last visited 12/8/2013) (describing the genetic disease and stating that the average age of death is in the mid-thirties).

at least one committee, as part of the specialized genetic clinic for example, that would determine what disease or disability is “life threatening” based on a three-step process.

First, the committee will only consider those diseases or disabilities that the scientific community believes it can clinically identify, can link to specific genes and can predict the phenotypical manifestation in human beings. Second, the committee will weigh a series of factors to determine whether the disease or disability is “life threatening.” These factors include, but are not limited to: life expectancy of the afflicted; cost to manage the disability or disease; frequency of the disease occurring in human beings; frequency the diseases requiring medical aid during the individuals life; mortality rate; average economic standing of individuals with the disability or disease; and the relative dependency on others of individuals with the disability or disease. Third, the committee will review the “life threatening” disease every 10 years or whenever there has been a significant scientific advancement in the treatment or management of the disease or disability.

Using these results, appropriate legislative action could be enacted limited to these “life threatening” diseases. However, the legislative action must permit an exception allowing for the reproduction of the “bad” trait. The legislative action can only be a *limit* not a *ban*. Although it is clear that limiting the proliferation of life threatening disabilities and diseases would benefit mankind by eventually eliminating the disease, it would still be an infringement of man’s fundamental right of reproduction as described earlier. Therefore, the legislative action can go no further than *deter* an individual from *choosing* to reproduce the life threatening disease or disability. Deterrence can be achieved, for example, through the use of a fee. However, any such deterrent must also pass the four principles of fairness described above.

Through the application of this three tiered regime, it should be possible to fully utilize genetics for all of its therapeutic aspects, while avoid repeating the same mistakes as eugenics.

V. Conclusion

It is clear that eugenics and genetics have the same goal: to better mankind through science. However, because of the extreme measures taken to execute the eugenic goals, the very idea of “eugenics” became taboo. Consequently, genetics runs the risk of becoming another taboo. However, to deny the significant therapeutic potential of genetics would be detrimental to the world itself. Therefore, it is vital that eugenics and genetics be clearly distinguished. As this paper demonstrates, this can be done in at least three ways. Specifically, genetics differs from eugenics in (i) its means of achieving its goal, (ii) its governing body and (iii) its basis for claiming what a “bad” trait is.

However, even though genetics can be distinguished from eugenics, it still runs the risk repeating the mistakes of eugenics. Therefore, this paper suggested a three tiered regime to prevent such a result. By concentrating on the choice a person has in utilizing genetics as a reproductive tool, sufficient safeguards can be put into place to prevent geneticists from executing their own eugenic ideals. By leaving the final choice – the “eugenic choice” of ultimately deciding to permit the proliferation of certain heritable traits – in the hands of the individual, the worst practices of eugenics are avoided. Accordingly, genetics can be properly distinguished from eugenics and utilized to better mankind without suffering the same consequences as eugenics.

The approach presented here is certainly not the final step to ensuring the safety of genetics. There may come a time when stricter solutions are necessary to prevent the abuse of genetics. As the human genome project and other similar ventures continue to succeed, the

potential for genetics grows with them. In time, it may be possible to choose every single aspect of a human before birth. Because of that, genetics has the potential to do exactly what the eugenic movement attempted to do: completely eliminate what was deemed “unfit.” Therefore, as technology continues to advance, so must the ethical and moral analyses’ regarding the use of genetics, to create a balance between achieving the eugenic goal of “bettering mankind” without stepping into a world whereby reproduction is entirely controlled.