UNDERSTANDING RACE: THE EVOLUTION OF THE MEANING OF RACE IN AMERICAN LAW AND THE IMPACT OF DNA TECHNOLOGY ON ITS MEANING IN THE FUTURE

William Q. Lowe*

I. INTRODUCTION

Race has played a decisive role in nearly all aspects of American society, yet its meaning in various contexts remains unclear. Throughout history, individuals have struggled to define “race” as it pertains to science, society, and the law in particular.1 Although race became a part of the English language in the mid-sixteenth century, it did not take on its modern definition until the early-nineteenth century.2 Scientific, social, and political interpretations of race have gone through an evolutionary process as well.3 After over two-hundred years of trying to understand its meaning, “[t]he word ‘race’ defies precise definition in American law.”4 Countless competing theories exist as to the definition and meaning of race, and the inability for one to earn universal support poses a significant problem to the American legal system.5 Despite the fact that numerous statutes have been enacted to prohibit racial

* B.A. Stony Brook University (2006); J.D. Albany Law School (2009). I would like to thank Professor Vincent Bonventre for his invaluable guidance throughout the creation of this paper, and my wife Kristin for her constant love and support.


3 See infra Part II.

4 Finkelman, supra note 1, at 937 n.3.

5 See Wright, supra note 1, at 518 (“Because race is such a significant factor in American life, society’s failure to define race substantively is one of the most compelling legal problems currently facing this nation.”); see also Ian F. Haney López, The Social Construction of Race: Some Observations on Illusion, Fabrication, and Choice, 29 HARV. C.R.-C.L. L. REV. 1, 5–6 (1994) (arguing that “[r]ace may be America’s single most confounding problem, but the confounding problem of race is that few people seem to know what race is”).

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discrimination throughout all aspects of American society, “the law has provided no consistent definition of race and no logical way to distinguish members of different races from one another.”

It has been argued that “race” was first used as a tool to classify individuals during the age of colonial exploration; however, this use was maintained for centuries. Today, classifications based on race are still present in America, and have been found to be permissible in some instances, such as when used to remedy instances of past discrimination. With the predominant role race continues to play in American society, to ensure that all are treated fairly under the law, it is imperative that a single definition of race is applied universally to all Americans. It is foreseeable that advances in science, particularly in DNA testing, will allow for a uniform method of determining one’s race.

This note will discuss the current lack of a settled definition of race in American Law, and the potential role DNA technology can play in remedying the problems associated with it. Part II of this Note will explore the concept of race by examining various definitions of race and how they have evolved into the modern definition. This section will additionally look at the historical understanding of the meaning of race, and the recent divergence from traditional thought. Part III of this Note will analyze the role of race throughout American legal history. This portion of the Note will address historical notions of race in America, the origin of the need to define race, and the treatment of race by the legislature and the courts. Part IV of this Note will discuss current DNA technology and the potential impact it may have of on modern concepts of race, particularly with regard to the law. It is foreseeable that advances in DNA technology will allow scientists to identify and classify individuals through an analysis of their genetic information.

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6 Wright, supra note 1, at 519 (citation omitted).
8 Wright, supra note 1, at 519; see, e.g., Grutter v. Bollinger, 539 U.S. 306, 328 (2003) (holding that race-based classifications for the purpose of remedying past discrimination may pass strict scrutiny).
II. THE CONCEPT OF RACE

Over the course of the past three-hundred years, common definitions and theories on race have gone through an evolutionary process. This evolution of “race” can be seen in a variety of ways, one of which is a simple analysis of dictionary entries for the word “race” over the course of time. Historians, anthropologists, and social scientists alike all have re-examined their understanding of the meaning of race, as both biological and social theories on race have developed over time. Ultimately, a variety of opinions on race have grown to reject theories of race based in biology, and have reconceptualized race as a cultural category or social construct.

A. Race Defined

Part of the difficulty in understanding the meaning of race can be attributed to the various definitions given to the word. The definition of race, as found in dictionaries, has evolved prior to reaching its current general definition. As was argued by the respondent in St. Francis College v. Al-Khazraji, “[t]he word ‘race’ is a term whose meaning has indeed changed substantially over the course of the last 150 years.” The respondent’s contention was:

that the term race has had three quite distinct meanings over that [150 year] period of time—in 1800 ‘race’ meant ‘family,’ between roughly 1850 and 1950 ‘race’ was generally understood to denote an individual’s ancestry or ethnic background, and only in the last several decades has ‘race’ been widely understood among laymen to refer to one of the 4 or 5 basic divisions of mankind.

The point made by the respondent’s attorney is demonstrated by

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10 See Brief for Respondent, supra note 2, at app. E (providing definitions of “race” from over fifty dictionaries printed from 1750–1985).
13 See A DICTIONARY OF THE ENGLISH LANGUAGE 1175 (1875); THE RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE 1590 (2d ed. unabr. 1987).
14 Brief for Respondent, supra note 2, at 50. This case dealt with an individual of Iraqi dissent who claimed he was denied tenure at St. Francis College because of his ancestry, and that such discrimination was in violation of 42 U.S.C. §1981. Id. at 1–2, 6.
15 See id. at 51 (discussing an analysis of a collection of various definitions of “race” found in over 50 selected dictionaries published between 1750 and 1985).
examining the definition of race, as found in the 1828, 1913, and 2006 versions of Webster's Dictionary, which defines race as: (1) “The lineage of a family, or continued series of descendants from a parent who is called the stock” in 1828; (2) “[t]he descendants of a common ancestor; a family, tribe, people, or nation, believed or presumed to belong to the same stock; a lineage; a breed” in 1913; and finally, the 2006 version, (3) “a class or kind of people unified by community of interests, habits, or characteristics.”

These three different definitions of race demonstrate the evolution and broadening of its meaning. As the attorney representing the respondent in St. Francis College v. Al-Khazraji articulated, the 1830 dictionary gives race a narrow definition, describing it in terms of “family” and “lineage,” whereas the 2007 version defines race in a much broader and inclusive sense. Interestingly enough, the modern definition of race, describing race in terms of classes, as will be discussed later, alludes to an understanding of race that lost acceptance during the twentieth century.

B. Biological Race

During the period of time in which the definition of race was changing, biologists and anthropologists advanced a common theory of race that gained widespread support. From the nineteenth century until the latter part of the twentieth century, distinct racial categories developed under the biological race theory. Under this theory, racial categories were based primarily upon “externally visible traits, primarily skin color, features of the face, and the shape and size of the head and body, and the underlying skeleton.” This is only logical as “human groups do vary strikingly in a few highly visible characteristics . . . [and these characteristics] often
allow us to determine a person’s origin at a single glance.”

Classification based on physical traits was impeded by the “coexistence of races... through conquests, invasions, migrations, and mass deportations,” as this caused it to be increasingly difficult to identify the race of individuals by visible traits only.

Although the intermingling of humans from different geographic locations made identifying physical traits that could be used for classification difficult, scientists generally agreed on three distinct groups of mankind: Caucasoid, Negroid, and Mongoloid. Johann Friedrich Blumenbach was the first to specifically separate humans into distinct classifications. Based originally upon skull size, he grouped individuals into distinct races “on the basis of their features and not their ancestry.” The three major human races under the biological theory of race classified individuals by the color of their skin, stature, head form, hair color and texture, eye color, and nose shape.

The Caucasoid... is characterized as pale reddish white to olive brown in skin color... medium to tall stature... a long or broad head form... [Hair] is light blond to dark brown in color, of a fine texture, and straight or wavy. The color of the eyes is light blue to dark brown and the nose bridge is usually high. The Mongoloid race... has... saffron to yellow or reddish brown in color... medium stature... a broad head form. The hair is dark, straight, and coarse; body hair is sparse. The eyes are black to dark brown. The epicanthic fold, imparting an


26 See Okizaki, *supra* note 1, at 467 (“There is a common popular understanding that there are three major human races—Caucasoid, Mongoloid, and Negroid.” (citing Saint Francis Coll. v. Al-Khazraji, 481 U.S. 604, 610 n.4 (1987)). But see Charles Darwin, *The Descent of Man and Selection in Relation to Sex* 174–75 (D. Appleton and Co. 1896) (1871) (describing the conflicting views on how many “races” actually exist, and his belief that the lack of agreement showed that it is not “possible to discover clear distinctive characters between them”).


28 *Columbia Encyclopedia,* *supra* note 25.
almond shape to the eye, is common, and the nose bridge is usually low or medium. The Negroid race . . . [has] brown to brown-black skin . . . a long head form, varying stature, and thick, everted lips. The hair is dark and coarse, usually kinky. The eyes are dark, the nose bridge low, and the nostrils broad.29

Despite the widespread acceptance these three major human-race categories enjoyed in the past, "'[m]any modern biologists and anthropologists . . . criticize racial classifications as arbitrary and of little use in understanding the variability of human beings.'"30 Analyzing and classifying race in a biological or scientific context under the Caucasoid, Negroid, and Mongoloid classifications has been rejected by social scientists and anthropologists alike.31 Many assume the external differences among people are reflected internally as well as in "our genetic makeup."32 This assumption, however, may not be consistent with modern findings.33 Scientific advancements, particularly in genetics, have revealed that the features once used to identify race—such as "stature, skin color, hair texture, and facial structure"—"do not correlate strongly with genetic variation."34 One commentator cited criticisms by the Supreme Court of biological race: "'[G]enetically homogenous populations do not exist and traits are not discontinuous between populations; therefore, a population can only be described in terms of relative frequencies of various traits. Clear-cut categories do not exist.'"35

Many now argue that genetic studies have produced findings in direct conflict with the biological race theory.36 One study, in particular, showed "most physical variation, about 94%, lies within so-called racial groups . . . . This means that there is greater

29 Id.
30 Okizaki, supra note 1, at 467 (quoting Saint Francis Coll. v. Al-Khazraji, 481 U.S. 604, 610 n.4 (1987)).
31 See, e.g., López, supra note 5, at 6; AAPA Statement, supra note 11, at 569.
32 Grubach, supra note 24.
33 Id.
34 López, supra note 5, at 15 (The author goes on to describe how despite physical similarities between Oceania population groups and populations of Southern and West Africa, their genetic makeup is quite different); see also American Anthropological Association, supra note 22 ("With the vast expansion of scientific knowledge in this century, however, it has become clear that human populations are not unambiguous, clearly demarcated, biologically distinct groups.").
36 See, e.g., American Anthropological Association, supra note 22.
variation within ‘racial’ groups than between them.”

37 This is not to say that “individuals are genetically indistinguishable from each other, or even that small population groups cannot be genetically differentiated,” only that visible external differences may not be as telling as they were once thought to be.

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The American Association of Physical Anthropologists and the American Anthropological Association each released statements in the late 1990s with regard to race and their “understanding of the structure of human variation from a biological perspective.”

40 Both associations expressed how society had grown accustomed to viewing race within the classic racial categories, which were based on physical attributes and were advanced throughout the nineteenth and early twentieth centuries, but that these views were not entirely based on scientific findings.

41 While some, in the extreme, believe that the theory of biological race is entirely dead and devoid of any support, a more rational conclusion is that “[b]iological differences between human beings reflect both hereditary factors and the influence of natural and social environments. . . . [T]hese differences are due to the interaction of both.”

42 Ultimately, scientific advances have pushed many to the realization that racial classifications cannot be accurately made by relying on visible, external attributes and that race does not have a biological basis to the extent that it was once thought to have. Recent studies of genetic information (DNA), however, show that internal biological factors, as opposed to external factors of the past, may play an invaluable role in the ability to determine the race of individuals in the future.

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57 Id.

38 López, supra note 5, at 12.

39 Id. at 12–13.

40 AAPA Statement, supra note 11, at 569; American Anthropological Association, supra note 22.

41 AAPA Statement, supra note 11, at 569 (“Popular conceptualizations of race are derived from 19th and early 20th century scientific formulations . . . based on externally visible traits . . . . They were often imbued with nonbiological attributes, based on social constructions of race.”); American Anthropological Association, supra note 22 (“Historical research has shown that the idea of ‘race’ has always carried more meanings than mere physical differences.”).

42 López, supra note 5, at 16 (The author provides Barbara Field's conclusion surrounding "the plausibility of biological races").

43 AAPA Statement, supra note 11, at 569.

44 See infra Part IV.
III. THE NEED TO DEFINE RACE

Race-based classifications have their origin in colonial times, when such divisions were used to differentiate between populations being brought together. The use of racial classifications in this context “show[s] that the idea of ‘race’ has always carried more meanings than mere physical differences.”\(^{45}\) The use of distinct physical characteristics to determine racial classifications under the modern use of “race,” however, had the effect of promoting certain biases, some arguably racist.\(^{46}\) As the colonial era established itself in America, race “became a strategy for dividing, ranking and controlling,” by creating a hierarchical structure in society based on biological or physical differences.\(^{47}\) The structure that was created led to the need for rules defining race.\(^{48}\) Race established itself as an important concept in early American history, immediately becoming relevant in the American legal system; the institution of slavery played a major role in this.\(^{49}\)

A. Race in American Legal History

Colonial America was a melting pot comprised of Europeans, Africans, and Indians, and race “was a social mechanism” used to classify individuals, predominantly by color based classifications.\(^{50}\) In the colonial setting, race-based classifications gave strength to the European views towards “the conquered and enslaved peoples,” and were used not only to justify the practice of slavery, but also to establish a social hierarchy dominated by Europeans, with blacks

\(^{45}\) American Anthropological Association, supra note 22 (elaborating on the idea of “race” that has always meant more than the biological race theory held, and that “physical variations in the human species have no meaning except the social ones that humans put on them”).

\(^{46}\) Sevanthinathan, supra note 27, at 20 (“[M]odern racial classifications seem to be based upon these erroneous, and often racist, views of the eighteenth and nineteenth century scientists.”).

\(^{47}\) American Anthropological Association, supra note 22.

\(^{48}\) Wright, supra note 1, at 521.

\(^{49}\) Sevanthinathan, supra note 27, at 22–23 (arguing that in addition to being an important anthropological and social concept, race is important when considered in a legal context); see also Okizaki, supra note 1, at 472 (“In the beginning, racial legal rules were developed to enhance and fortify the socioeconomic institution of slavery, which was itself defined by race.”).

\(^{50}\) American Anthropological Association, supra note 22; Finkelman supra note 1, at 950 (noting that before early statutes regulating slavery were in place, classification based on color “encouraged the economic exploitation of blacks”).
Understanding Race

and Indians as inferior racial classes. This societal hierarchy, established by race-based classifications, allowed for the dominant whites to “maintain[] the institution of slavery.” During this time period, race maintained its biological connotation; thus “[t]he different physical traits of African-Americans and Indians became markers or symbols of their status differences.” The fact that only blacks were slaves amplified this and gave additional importance to racial classifications because the color of one’s skin was the difference between being a slave and being free. Arguably two leading causes for the need to define race by statute in early America were: (1) the superior status of whites to both blacks and Indians, and (2) the growing problem of children born to parents of mixed race.

B. Early Race-Based Statutes

The first legislative attempt at defining race took place in Virginia, nearly one-hundred years before America gained its independence from England, and it was enacted in response to the “uncertain status” of children born with parents of mixed race. The statute was concerned only with the status of mulatto children who were born to a black woman, and stated that the race of the mother would be used to determine the race of the child. This policy reflected the biological definition of race, as the skin color of

51 American Anthropological Association, supra note 22.
52 Wright, supra note 1, at 520–21.
53 American Anthropological Association, supra note 22.
54 Wright, supra note 1, at 521.
55 See Finkelman, supra note 1, at 950; Okizaki, supra note 1, at 472 (“The need to define race grew out of a tension between the institutionalized discrimination of non-Whites and the inevitable racial mixing that created children who were at least part White.”); Wright, supra note 1, at 521–22 (“A good faith analysis of this period in American history leads to the conclusion that the need for the adoption of rules defining race grew out of two phenomena: (1) the decision to deny blacks and Indians the same treatment as whites under the law; and (2) the birth of children who had only one white parent or who had ancestors who were not white. The presence of both of these factors in American society created the significance of racial classifications.”).
56 Id.
57 Okizaki, supra note 1, at 473 (discussing the State of Virginia’s statute, passed in 1662, “to deal with the ‘uncertain status’ of mixed-race children”).
58 Wright, supra note 1, at 522.
Whereas some doubts have arisen whether children got by an Englishman upon a negro woman should be slave or free. Be it therefore enacted and declared by this present grand assembly, that all children borne in this country shall be held bond or free only according to the condition of the mother . . . .

Id. at 522 n. 57.
the individual in question was determinative. This statute was in contrast to that of English law, where inheritance followed the paternal line. Ultimately, under the Virginia statute, children born of a free white man and his slave could potentially be considered to be slaves themselves.

The presence of many free blacks residing in Virginia quickly made this statute unworkable, because it was not easy to determine if a child’s black ancestry came from his or her mother’s side or his or her father’s side. The possibility that a white woman could have a child with a black man, whether he was a slave or a free man, resulted in mulatto children being exiled from Virginia, and ultimately led to the creation of “one-drop rules.” Such rules held that an individual would be classified as black, despite the fact that his or her genetic makeup was primarily white.

Subsequently, Virginia, as well as other states, passed similar laws aimed at the prevention of interracial marriages. Pursuant to such laws, any white person who married a non-white would be exiled from Virginia. The language used in the statute is striking, as interracial marriage is referred to as “that abominable mixture and spurious issue which hereafter may encrease in this dominion.” This serves as yet another example of the hierarchical system of classification based on race at this time in American history.

Later statutes based on the “one-drop rule” departed from the 1662 Virginia statute in the sense that they did not take a “physical appearance approach.” Such “[f]ormula-based definitions of race” became increasingly popular in the South, and Booker T. Washington provided an accurate description of what they entailed: “[I]f a person is known to have one percent of African blood in his veins, he ceases to be a white man. The ninety-nine percent of

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58 Id. at 523.
59 Finkelman, supra note 1, at 951.
60 Okizaki, supra note 1, at 473.
61 See id. at 474 (“The ‘obsessive phobia on the part of White southerners’ that Blacks could pass themselves off as Whites—thereby making fools of Whites and White society—led to stricter hypodescent rules and culminated in the one-drop rule.” (citation omitted)).
62 Wright, supra note 1, at 524 (“The majority of states classified people who were one-eighth black as negro, meaning that these individuals had at least one black great-grandparent.”).
63 Finkelman, supra note 1, at 951.
64 Id.
65 Id.
66 Wright, supra note 1, at 523.
67 Id. at 524.
Caucasian blood does not weigh by the side of the one-percent of African blood. . . . The person is a Negro every time.” 68 In practice, most states with race-based statutes formed under the “one-drop rule” held that individuals who had at least one black grandparent were legally black. 69 It should be noted, however, that “as the likelihood that more biracial people could be classified as white . . . the laws became more restrictive . . . finally culminating in the one-drop rule.” 70

The earliest race-based statutes, some of which attempted to define race, all clearly had the goal of maintaining racial hierarchy where non-whites were the inferior race. This illustrates the early statutory favoritism for white racial purity and a belief that at some point in history there were pure white, black, and Indian races. Individuals were often considered tainted with black or Indian blood at a remote generational level, denying them the right to be classified white. 71

The early mulatto and hypodecent rules show that the biological race theory was still accepted at this time in history. This is further illustrated by the fact that the 1790 United States Census Bureau recognized three races: “[w]hites,” “American Indians,” and “[s]laves.” 72 Furthermore, it is clear that historical racial classifications under statute did not recognize “the ‘multiracial experience’ . . . [and] served to further the institution of slavery . . . .” 73

C. Early American Courts’ Interpretation of Race Statutes

Although the legislatures played a large role in defining the meaning of race early in American history through race-based statutes, the courts played an important role as well. As did the early statutory attempts at creating a definition for race, the earliest examples of courts dealing with the issue of defining race originated in Virginia. 74 In Hudgins v. Wrights, the Supreme Court

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68 Okizaki, supra note 1, at 474.
69 See supra note 58 and accompanying text.
70 Wright, supra note 1, at 524.
71 Id. at 525 (citation omitted).
72 Sevanthinathan, supra note 27, at 23 (quoting JUANITA TAMAYO LOTT, ASIAN AMERICANS: FROM RACIAL CATEGORY TO MULTIPLE IDENTITIES 17 (1997) (alterations in original)).
73 Okizaki, supra note 1, at 465.
of Appeals of Virginia heard the complaints of three generations of women who were suing for their freedom on the basis that they were descendants of a free female. Judge Tucker, writing for the majority, was against slavery, and ultimately found the women to be free “because they appeared more Indian or white than black,” and that in such a case such, the burden was on the slaveholder to prove the individual was in fact a descendant of a slave. The opinion created the presumption that when whites and Indians were challenging their status as a slave, they would be set free, and their accuser would “have an opportunity of asserting and proving them to be lineally descended in the maternal line from a female African slave.” The opinion pointed out that difficulties would arise when presumptions based on appearances were weakened because races had been “intermingled.”

Nearly twenty years later, the same court, in *Gregory v. Baugh*, faced another case where an individual was seeking freedom, but this time it was a biracial slave. Here, the court again relied on appearance to determine the legal status of the plaintiff. Unlike the *Hudgins* case, where the court imposed a burden on the owner to establish the moving party’s racial identity, here the court “imposed upon the mixed-race plaintiff the additional burden of proving the status of his maternal ancestors.” *Gregory* reaffirmed the “appearance standard” as established in *Hudgins*, which most likely “allowed many free blacks to be enslaved, [while] it undoubtedly allowed some enslaved blacks who looked white to be set free.”

This case reaffirms the focus on the use of external physical characteristics to classify individuals under the biological race theory. It is interesting to note that in the *Hudgins* case, where the judge writing for the majority was an admitted abolitionist, he found the physical appearance and characteristics of an individual

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75 *Id.* at 134 (stating that the appellees were three generations of slave women who were asserting their right to freedom based on the contention that they all “[had] descended, in the maternal line, from a free Indian woman; but their genealogy was very imperfectly stated”).
76 *Finkelman, supra* note 1, at 953 (emphasis added).
77 *Id.*
78 *Hudgins*, 11 Va. (1 Hen. & M.) at 140.
79 *Id.* at 141 (Roane, J., concurring).
81 *Wright, supra* note 1, at 526 (“His maternal grandmother had the appearance of an Indian but, according to the court, was too dark to be a full-blooded Indian.”).
82 *Id.*
83 *Id.* at 527.
alone to be determinative of race. This rationale reinforces the hierarchical structure of early American society, which relied on biologically based racial classifications and “allow[ed] institutions such as the law to play major roles in ‘shaping and legitimizing social ideas that accept subordination of those who are not white.’”

D. The Pre-Brown Courts Interpretation of Race

As America passed through the end of the nineteenth and entered the twentieth century, the nation’s need to define race was becoming more and more apparent. The Supreme Court decided \textit{Plessy v. Ferguson}, a monumental case in which the “separate but equal” doctrine was upheld. The main issue before the Court was the constitutionality of a law requiring segregated railway cars in the State of Louisiana, but the race of the plaintiff Plessy was at issue as well. While the Louisiana statute was upheld, the Court seemed to avoid Plessy’s contention that he was seven-eighths white, and “the mixture of African blood was not discernible.” This could be attributed to difficulties some states had in “defining the status of those people who had some Negro blood,” or the Court’s general attitude towards racial issues, which could be described as one of “avoidance” at best.

After 1900, the population of free black citizens, particularly in states like Virginia, was expanding, and it was becoming increasingly difficult to differentiate between blacks and whites. In response, an increasing number of states instituted one-drop rules and more specific racial classifications in hopes of clarifying the definition of race. The Louisiana Supreme Court in \textit{State v. Treadaway} laid out distinctive classifications based on race, highlighting the fact that biological notions of race were still prevalent. The court held:

\begin{quote}
We do not think there could be any serious denial of the fact
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\begin{itemize}
\item \textsuperscript{84} See Okizaki, \textit{supra} note 1, at 465 (citation omitted).
\item \textit{Plessy v. Ferguson}, 163 U.S. 537, 548 (1896).
\item \textit{Id.} at 541.
\item \textit{Wright, supra} note 1, at 527–28 (citation omitted).
\item \textit{Id.} at 528 n.98.
\item \textit{See id.} at 528.
\item Wright, \textit{supra} note 1, at 528.
\item Id.
\item \textit{See State v. Treadaway}, 52 So. 500, 508 (La. 1910); \textit{see also} Wright, \textit{supra} note 1, at 528.
\end{itemize}
\end{quote}
that in Louisiana the words “mulatto,” “quadroon,” and “octoroon” are of as definite meaning as the word “man” or “child” . . . among educated people at least . . . . Nor can there be . . . any serious denial of the fact that in Louisiana, and . . . throughout the United States . . . the word “colored,” when applied to race, has the definite and well-known meaning of a person having [N]egro blood in his veins.94

During the early twentieth century, in the time following the Treadaway decision, as mentioned earlier, the validity of scientific race came under scrutiny.95 Individuals began to question the accepted definition of race, and “a liberal race theory developed that pictured race in terms of merely superficial physical differences, and that decidedly repudiated the claim that nature placed races in hierarchical relationship to each other.”96

While the understanding of race was going through a transitional period during the early twentieth century, with its meaning taking on a more cultural focus as opposed to a biological one,97 the civil rights movement spurred a dramatic change in the way the Supreme Court, Congress, and America in general, viewed race. The Equal Protection Clause of the Fourteenth Amendment was enacted to impose upon the states, a duty to prohibit legislative classification and administrative behavior that discriminated against particular groups with regard to the distribution of certain fundamental rights.98 The Supreme Court struggled throughout the late nineteenth and early twentieth centuries to correctly interpret the true intention of the Equal Protection Clause, with the aforementioned decision in Plessy being the most glaring example of this difficulty.99 In his dissenting opinion, Chief Justice Harlan, in addition to advancing his concept of the “color-blind constitution,”100

94 Treadaway, 52 So. at 508.
95 See generally Ian F. Haney López, “A Nation of Minorities”: Race, Ethnicity, and Reactionary Colorblindness, 59 STAN. L. REV. 985, 996–1000 (2007) (discussing various emerging theories on race that challenged the existing scientific views, while advocating a more cultural understanding of race).
96 Id. at 996–97.
97 Id.
99 Id. at 217–25 (discussing the statements of Chief Justice Warren regarding the “fundamental error” the Court made in its 14th Amendment interpretation in the Plessy decision).
100 Plessy v. Ferguson, 163 U.S. 537, 559 (1896) (Harlan, J., dissenting) ("There is no caste here. Our Constitution is color-blind, and neither knows nor tolerates classes among citizens.").
spoke of what he believed to be the true purpose and intended impact of the Fourteenth Amendment. He believed the Fourteenth Amendment, in combination with the Thirteenth Amendment, should “protect all the civil rights that pertain to freedom and citizenship.” Although Harlan was in the dissent, and the “separate but equal” doctrine advanced by the *Plessy* majority allowed the white race to continue to be the superior race for another half-century, his theory of a “color-blind constitution” was not ignored by the nation, nor by the Justices of the Supreme Court.

**E. The Impact of Brown and the Civil Rights Act**

Nearly sixty years following *Plessy*, in deciding *Brown v. Board of Education*, the Supreme Court not only eradicated “separate but equal,” but made a dramatic step towards giving the Equal Protection Clause of the Fourteenth Amendment the meaning and authority it was intended to have. Prior to *Brown* the Supreme Court interpreted the Fourteenth Amendment as granting only civil and political rights to all citizens. This had allowed many states, particularly in the south, to circumvent granting true social equality to all black citizens through the implementation of various discriminatory practices, such as residency and literacy requirements aimed at disenfranchising African Americans.

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101 *Id.* at 555–56 (Harlan, J., dissenting) (“These notable additions to the fundamental law [the 13th and 14th Amendments] . . . removed the race line from our governmental systems. . . . They declared, in legal effect, this court has further said, ‘that the law in the states shall be the same for the black as for the white; that all persons, whether colored or white, shall stand equal before the laws of the states, and, in regard to the colored race . . . no discrimination shall be made against them by law because of their color.’” (citation omitted)).

102 *Id.* at 555.

103 *See* *Brown v. Bd. of Educ.*, 347 U.S. 483, 495 (1954) (“We conclude that in the field of public education the doctrine of ‘separate but equal’ has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have been brought are, by reason of the segregation complained of, deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment.”).


105 *See Goring, supra* note 98, at 220 n.32.

106 *See Plessy*, 163 U.S. at 544 (“The object of the amendment was undoubtedly to enforce the absolute equality of the two races before the law, but in the nature of things it could not have been intended to abolish distinctions based upon color, or to enforce social, as distinguished from political equality, or a commingling of the two races upon terms unsatisfactory to either.” (emphasis added)).

The decision in Brown was the first time the Supreme Court recognized the Fourteenth Amendment as granting a promise of social equality, in addition to civil and political equality, to African-Americans as well as whites.\textsuperscript{108} This holding acknowledged Justice Harlan’s opinion as to the true intentions of the Fourteenth Amendment, but did not go as far to advance his theory of a color-blind constitution.\textsuperscript{109} The Brown Court’s decision which held that “the doctrine of ‘separate but equal’\textsuperscript{110} with regard to public education is inconsistent with the “equal protection of the laws guaranteed by the Fourteenth Amendment,”\textsuperscript{111} undoubtedly gave African Americans more protection under the post-Civil War Amendments than ever before. The Brown decision, did not, however, provide a rejection of the Plessy Court’s contention that:

\[\text{[t]he object of the [Fourteenth] [A]mendment was undoubtedly to enforce the absolute equality of the two races before the law, but in the nature of things it could not have been intended to abolish distinctions based upon color, or to enforce social, as distinguished from political, equality, or a commingling of the two races upon terms unsatisfactory to either.}\textsuperscript{112}

Although with one decision, the Brown Court may have arguably done more to cure the racial inequality that plagued American history for roughly two-hundred years than any other single event, the removal of the “race line”\textsuperscript{113} in America and Harlan’s “color-blind Constitution” were not truly attained until later in the twentieth century.\textsuperscript{114}

As the civil rights movement was gaining momentum, and state-sponsored discrimination and discriminatory practices were coming under scrutiny following the Brown decision, the passage of the Civil Rights Act in 1964 marked a monumental step towards achieving a color-blind Constitution. In theory, the passage of the Act in 1964 brought an end to the relevance of “the concepts of race, color and ethnicity . . . as constitutionally relevant factors.”\textsuperscript{115} The

\begin{thebibliography}{9}
\bibitem{108} Goring, \textit{supra} note 98, at 229–30.
\bibitem{109} Brown, 347 U.S. at 495.
\bibitem{110} Id.
\bibitem{111} Id.
\bibitem{112} Plessy, 163 U.S. at 544.
\bibitem{113} Id. at 555 (Harlan, J., dissenting).
\bibitem{114} \textit{See} Goring, \textit{supra} note 98, at 231–33.
\bibitem{115} Id. at 209.
\end{thebibliography}
Act prohibited “discrimination or segregation” based on “race, color, religion, or national origin” with regards to public accommodations and facilities, education, federally assisted programs, and employment.\textsuperscript{116} The Act codified the sentiments of Harlan’s color-blind constitution theory and, in doing so, “overturned doctrines embedded in the American culture.”\textsuperscript{117} The Civil Rights Act did what the majority in the \textit{Brown} Court failed to do.\textsuperscript{118} It managed to “expressly repudiate the discussion in \textit{Plessy} regarding the constitutional rights and privileges afforded to African Americans in the post-war amendments,”\textsuperscript{119} as well as give a Congressional response to the “continuing national conversation about race.”\textsuperscript{120}

The passage of the Civil Rights Act of 1964 brought about tremendous change, immediately invalidating many existing southern laws, such as one-drop rules and Jim Crow Laws. Despite being criticized by many in the South who opposed racial equality, the legitimacy of the Civil Rights Act was not faced with significant opposition, arguably because it became authority through an act of Congress, not a Supreme Court decision.\textsuperscript{121} It is conceivable that “[i]f the new rules had come down from on high from the Supreme Court, many Americans would have probably considered the change of law illegitimate, high-handed, and undemocratic.”\textsuperscript{122} The Supreme Court jurisprudence that followed the passage of the Act supported the ban on racially motivated discrimination and segregation, and displayed how “[t]he Supreme Court had not ignored Justice Harlan’s theory of constitutional color-blindness.”\textsuperscript{123}

The first significant Supreme Court decision following the passage of the Civil Rights Act was \textit{Loving v. Virginia}.\textsuperscript{124} This decision invalidated two Virginia miscegenation statutes that prevented “marriages between persons solely on the basis of racial classifications,” finding them in violation of the Equal Protection


\textsuperscript{117} Stoddard, supra note 116, at 974 (“The Act brought into being a whole new model of conduct that, consciously and deliberately, overturned doctrines embedded in American culture—and, more widely speaking, European culture—for several centuries.”).

\textsuperscript{118} See Goring, supra note 98, at 229.

\textsuperscript{119} Id.

\textsuperscript{120} Stoddard, supra note 116, at 976.

\textsuperscript{121} See id. at 975–77.

\textsuperscript{122} Id. at 977.

\textsuperscript{123} Goring, supra note 98, at 231.

\textsuperscript{124} See Loving v. Virginia, 388 U.S. 1, 2 (1967).
Clause of the Fourteenth Amendment. Here, the court voiced its belief that

\[\text{at the very least . . . racial classifications . . . be subjected to the "most rigid scrutiny,"}\]

and, if they are ever to be upheld, they must be shown to be necessary to the accomplishment of some permissible state objective, independent of the racial discrimination which it was the object of the Fourteenth Amendment to eliminate.

In striking down the two Virginia statutes, the Supreme Court made it clear that race-based classifications, already suspect before the law, would be subjected to rigid judicial scrutiny, and unless found to be necessary to advance a state objective, they would fail to overcome their presumption of invalidity.

\[\text{F. Development of Constitutional Color-Blindness}\]

Throughout the remainder of the twentieth century following the decisions in \textit{Brown}, \textit{Loving}, and the passage of the Civil Rights Act, the Supreme Court continued to develop its equal protection jurisprudence as it heard a variety of cases bringing race-based classifications into question. During this time “the theory of the color-blind constitution re-emerged in American jurisprudence,” and it did so through the opinions of a variety of Justices, primarily when addressing “race-based remedial measures.”

While the Court was advancing the concept of a racially neutral Equal Protection Clause and “the presumption of constitutional invalidity associated with the use of race-based classifications,” Justice Powell, in his plurality opinion in \textit{Regents of the University}

\[\begin{align*}
\text{125} & \quad \text{Id.} \\
\text{126} & \quad \text{Id. at 11 (citing Korematsu v. United States, 323 U.S. 214, 216 (1944)).} \\
\text{127} & \quad \text{Id.} \\
\text{128} & \quad \text{See id. at 11–12 (discussing the how the Court has a history of rejecting race-based classifications, and their practice of applying strict scrutiny to such statutes); see also Saxer, supra note 107, at 77–78.} \\
\text{129} & \quad \text{Goring, supra note 98, at 231 ("In the years following Brown, the Justices grappled with the constitutional dilemma underlying the implementation of race-based remedial measures, while simultaneously fostering race neutrality in the Court’s interpretation of the Equal Protection Clause.").} \\
\text{130} & \quad \text{Id. at 231.} \\
\text{131} & \quad \text{See id. at 231–32 (discussing how Justice Powell and Justice O’Connor were two of the leading advocates for the color-blind constitution theory); see also Wright, supra note 1, at 533 (commenting on Justices Rehnquist, Scalia, and O’Connor as all being individuals on the Supreme Court who “advocated a color-blind view of the Constitution”).} \\
\text{132} & \quad \text{Goring, supra note 98, at 231.} \\
\text{133} & \quad \text{Id. at 251.}
\end{align*}\]
of California v. Bakke,\textsuperscript{134} recognized the possibility of circumstances where the use of race-based classifications would be constitutionally permissible.\textsuperscript{135}

The Supreme Court decided the Bakke case in 1978, and within his opinion for the plurality, Justice Powell established the foundation for the two current permissible uses of race-based classifications.\textsuperscript{136} In Bakke, the Supreme Court upheld the decision finding the admissions program of University of California-Davis Medical School to be unconstitutional, as it was “undeniably a classification based on race,”\textsuperscript{137} and it failed to meet the applicable test of strict scrutiny.\textsuperscript{138} The Court ultimately held “the attainment of a diverse student body”\textsuperscript{139} to be a compelling state interest, but the admissions program was not narrowly tailored to this compelling state interest.\textsuperscript{140}

Powell’s support of a color-blind Constitution is shown throughout his opinion as he repeatedly discusses “the racially neutral character of the Equal Protection Clause.”\textsuperscript{141} He alludes to the rights granted in the Fourteenth Amendment as being personal and individual rights\textsuperscript{142} on more than one occasion, yet he also acknowledges the existence of exceptions to his color-blind interpretation of the constitution.\textsuperscript{143} The opinion of the plurality in Bakke is the first opinion in a series of Equal Protection cases involving race-based classifications where Justices show their support of a color-blind Constitution.\textsuperscript{144} Interestingly enough,

\textsuperscript{134} Regents of the Univ. of Cal. v. Bakke, 438 U.S. 265 (1978).
\textsuperscript{135} See id. at 307 (“The State certainly has a legitimate and substantial interest in ameliorating, or eliminating where feasible, the disabling effects of identified discrimination. The line of school desegregation cases . . . attests to the importance of this state goal and the commitment of the judiciary to affirm all lawful means toward its attainment.”); see also id. at 311–12 (“The attainment of a diverse student body. This is clearly a constitutionally permissible goal for an institution of higher education.”).
\textsuperscript{136} See Goring, supra note 98, at 250–52.
\textsuperscript{137} Bakke, 438 U.S. at 289.
\textsuperscript{138} Id. at 305 (“We have held that in order to justify the use of a suspect classification, a State must show that its purpose or interest is both constitutionally permissible and substantial, and that its use of the classification is “necessary . . . to the accomplishment” of its purpose or the safeguarding of its interest.” (citations omitted)).
\textsuperscript{139} Id. at 311.
\textsuperscript{140} Id. at 318–19 (discussing how a “plus” system similar to the one used in Harvard’s admissions program would have been permissible, but using race as a deciding factor violates the Fourteenth Amendment).
\textsuperscript{141} Goring, supra note 96, at 250.
\textsuperscript{142} See Bakke, 438 U.S. at 289–90 (maintaining the race-neutrality of the rights guaranteed to all citizens in the Equal Protection Clause of the Fourteenth Amendment).
\textsuperscript{143} Id. at 307, 312.
\textsuperscript{144} See Goring, supra note 98, at 231–32; Wright, supra note 1, at 533.
modern Supreme Court jurisprudence has found only two government interests to be compelling enough to justify the use of race-based classifications, and both were developed in the color-blind Constitution advancing plurality of the Bakke decision. Powell discusses the compelling state interest that exists in remediating the effects of past, identifiable discrimination. Additionally, Powell asserted that obtaining the benefits of a diverse student body is a compelling interest, but he found the method used by the University of California-Davis Medical School’s admission program was not narrowly tailored to achieving that interest.

Following the Bakke decision, the Court developed its treatment of race-based classifications under its interpretation of the Equal Protection clause, and the opinions of some Justices continued to advance the color-blind Constitution. In Wygant v. Jackson Board of Education, decided less than a decade after Bakke, the Court reiterated the unconstitutional presumption associated with race-based classifications and its limited exceptions. Additionally, Justice Powell, in his concurrence in Fullilove v. Klutznick, furthered the color-blind Constitution sentiments he

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145 See Parents Involved in Cmty Schs. v. Seattle Sch. Dist., 127 B. S. Ct. 2738, 2752–53 (2007) (explaining that the “two interests that qualify as [being] compelling” are “the compelling interest of remediating the effects of past intentional discrimination,” and “the interest in diversity in higher education.”).

146 See Bakke, 438 U.S. at 307 (“The State certainly has a legitimate and substantial interest in ameliorating, or eliminating where feasible, the disabling effects of identified discrimination. The line of school desegregation cases . . . attests to the importance of this state goal and the commitment of the judiciary to affirm all lawful means toward its attainment.”); see also id. at 311–12 (“[T]he attainment of a diverse student body. This clearly is a constitutionally permissible goal for an institution of higher education.”).

147 See id. at 307 (“The State certainly has a legitimate and substantial interest in ameliorating, or eliminating where feasible, the disabling effects of identified discrimination. The line of school desegregation cases . . . attests to the importance of this state goal and the commitment of the judiciary to affirm all lawful means toward its attainment.”).

148 Id. at 311–12, 315 (discussing how the attainment of a diverse student body is a compelling interest in higher education, but ultimately held “the reservation of a specified number of seats in each class for individuals from the preferred ethnic groups” was not the least restrictive means of achieving said interest).

149 See generally Goring, supra note 98, at 250–53 (discussing the treatment of race-based classification).

150 Id. at 231; Wright, supra note 1, at 533.

151 See Wygant v. Jackson Bd. of Educ., 476 U.S. 267, 273 (1986) (stating that the Court had “consistently repudiated ‘[d]istinctions between citizens solely because of their ancestry’ as being ‘odious to a free people whose institutions are founded upon the doctrine of equality’” (quoting Loving v. Virginia, 388 U.S. 1, 11 (1967)); Bakke, 438 U.S. at 291 (“Racial and ethnic distinctions of any sort are inherently suspect and thus call for the most exacting judicial examination.”).
originally expressed in *Bakke* stating, “[r]acial classifications must be assessed under the most stringent level of review because immutable characteristics, which bear no relation to individual merit or need, are irrelevant to almost every governmental decision.”152

Consistent with the opinions of Powell, Justice O’Connor voiced her support of constitutional color-blindness in her majority opinions in *City of Richmond v. J.A. Croson Co.*,153 and *Adarand Constructors, Inc. v. Pena*.154 In *Croson* the Court invalidated the city of Richmond’s minority set-aside program used in awarding municipal contracts, which the city enacted despite the fact that “[t]here was no direct evidence of race discrimination on the part of the city.”155 Writing for the majority, O’Connor spoke of “the individualized nature of the rights guaranteed by the Fourteenth Amendment”156 which Powell had previously espoused, and supported Powell’s focus “on the plain meaning of constitutional equality.”157 Similar to the words of Powell,158 O’Connor’s opinion showed her skepticism with regard to race-based classifications.159 She supported Powell’s belief that, in order for a race-based classification, intended to provide “remedial relief,” to withstand strict scrutiny, there must be specific “identified discrimination” of a disadvantaged group within the specific jurisdiction.160

O’Connor built upon the post-*Bakke* concept of constitutional color-blindness again in her decision in *Adarand*, where the Court’s trend of striking down race-based classifications under a strict

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155 See *Croson*, 488 U.S. at 480 (commenting on statements made arguing that there had been no evidence of racial discrimination, and that the situation was more a result of a limited number of minority contractors).
156 Goring, supra note 98, at 240.
157 Id. at 241; see also *Croson*, 488 U.S. at 494 (Justice O’Connor quoted the *Bakke* decision, stating “[t]he guarantee of equal protection cannot mean one thing when applied to one individual and something else when applied to a person of another color” (quoting Regents of the Univ. of Cal. v Bakke, 438 U.S. 265, 289–90 (1978))).
158 See *Bakke*, 438 U.S. at 298 (discussing the potential that “preferential programs” may have the unfortunate effect of “reinforc[ing] common stereotypes” while allowing for maintaining notions of racial inferiority).
159 See *Croson*, 488 U.S. at 493 (noting that race-based classifications “carry a danger of stigmatic harm,” and if used incorrectly, may “promote notions of racial inferiority”).
160 See id. at 505–06 (“To accept Richmond’s claim that past societal discrimination alone can serve as the basis for rigid racial preferences would be to open the door to competing claims for ‘remedial relief’ for every disadvantaged group.”).
scrutiny analysis continued. Here, the Court presented the standard that Justice Powell believed to be “implicit in the *Fullilove* lead opinion”: that federal, as well as state, race-based classifications must be narrowly tailored to a compelling state interest in order to survive a strict scrutiny analysis. Additionally, O’Connor showed the Court’s goal of consistency in recognizing “that any person, of whatever race, has the right to demand that any governmental actor subject to the Constitution justify any racial classification subjecting that person to unequal treatment under the strictest judicial scrutiny.”

**G. The Modern Court’s Struggle with Race**

The growth in support for constitutional color-blindness that took place following the *Bakke* decision portrayed a variety of trends in the equal-protection jurisprudence of the Supreme Court, but none appeared more consistently than the presumption of unconstitutionality placed on race-based classifications. During this time the Court consistently invalidated race-based classifications under strict-scrutiny analysis, except when such classifications were narrowly tailored to one of the two established compelling interests. Despite the general invalidity of race-based classifications and the Court’s ability to establish a concrete standard of review for cases dealing with such classifications, the *Saint Francis College* decision shows the Court had not developed a workable definition of race during this same time period. While the Supreme Court’s acceptance of constitutional color-blindness became clear throughout many post-*Bakke* decisions, it had not been required to address the meaning of race since the validity of the scientific definition came under question following the

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162 Id.
163 Id. at 224.
165 See Parents Involved v. Seattle Sch. Dist., 551 U.S. 701, 721–22 (2007) (explaining that the “two interests that qualify as being compelling are “the compelling interest of remedying the effects of past intentional discrimination,” and “the interest in diversity in higher education”).
166 See Stylianos-Ioannis G. Koutatzis, *Affirmative Action in Education: The Trust and Honesty Perspective*, 7 Tex. F. On C.L. & C.R. 187, 194–97 (2002) (discussing the standard of review applied by the Court in modern affirmative action jurisprudence); see also Parents Involved, 551 U.S. at 721–22 (noting the “searching standard of review” that the petitioners must satisfy to be successful in their claim).
167 Okizaki, *supra* note 1, at 467–68.
Treadaway decision.\textsuperscript{168}

The three main human races, Caucasoid, Mongoloid, and Negroid, and the biological race theory they advance, which fell under scrutiny beginning in the early twentieth century,\textsuperscript{169} was presented to the Supreme Court in 1987.\textsuperscript{170} There, the plaintiff filed suit against Saint Francis College, claiming that his denial of tenure constituted discrimination based on his race, a violation of 42 U.S.C § 1981.\textsuperscript{171} The Supreme Court affirmed the lower court’s decision, and found that a person of Arabian ancestry may be protected from racial discrimination under 42 U.S.C. § 1981.\textsuperscript{172} The Court argued that “[s]uch discrimination is racial discrimination that Congress intended § 1981 to forbid, whether or not it would be classified as racial in terms of modern scientific theory.”\textsuperscript{173}

The Court’s decision in \textit{Saint Francis College} was the first legitimate example of the law’s departure from the scientific basis of race that had been accepted for centuries.\textsuperscript{174} The unanimous opinion worked to advance the arguments being made by biologists and anthropologists with regard to racial classifications.\textsuperscript{175} The holding in this case joined modern scientific thought in finding “that genetically homogenous populations do not exist and traits are not discontinuous between populations . . . [c]lear cut categories do not exist.”\textsuperscript{176} The decision, although not a complete departure from the use of “immutable racial categories,”\textsuperscript{177} marked a shift in the law’s definition of race. It announced the law’s departure from a scientific understanding of race and acceptance of the theory that race is more of a social construct than biologically based tool for classification.\textsuperscript{178} The opinion did not, however, establish the
Supreme Court’s definition of race. The Justices avoided this task by finding:

[t]he Court of Appeals was thus quite right in holding that § 1981, ‘at a minimum,’ reaches discrimination against an individual ‘because he or she is genetically part of an ethnically and physiognomically distinctive sub-grouping of *homo sapiens,*’ and ‘that a distinctive physiognomy is not essential to qualify for § 1981 protection.’179

While the Court recognized the shift in the accepted meaning of race in their decision, the opinion in *Saint Francis College* did not provide a clear definition.180 Furthermore, it has been argued that the re-emergence of, and growth in support for, the color-blind view of the Constitution has resulted in a situation where “discussions of racial issues rarely attempt to define race itself.”181 This, combined with the presumption of unconstitutionality carried by race-based classifications, brings into question whether a formalized definition of race is even necessary.182

The Supreme Court, in its equal protection jurisprudence, has identified two compelling governmental interests that justify race-based classifications, so long as the classifications are the least restrictive means of accomplishing those compelling interests.183 The two compelling interests are: remedying the effects of past intentional discrimination184 and obtaining student body diversity in higher education.185 It seems clear that despite the continued advocacy of a color-blind Constitution, American courts are in need of a “workable definition of race”186 if they are to successfully decide cases involving such issues. “Even those who support the ‘color-blind’ ideal are forced to admit that modern practices such as affirmative action necessitate a workable definition of race.”187

**H. The Current “Race” Dilemma**

The emergence of the Supreme Court’s advocacy for a “color-
blind” interpretation of the Constitution through certain decisions emphasizes the evolution in the definition of race. While a biological or scientific definition of race received widespread support in the past, current jurisprudence, beginning with the *Saint Francis* decision, shows race is now viewed as more of a social construct than a scientific concept. As mentioned before, this development lends itself to the argument that there is no need for a legal definition of race, but the Supreme Court’s determination that race based classifications are constitutional when remedying the effects of past intentional discrimination or obtaining diversity in higher education, illustrates the flaw in this rationale.

Furthermore, the ease with which individuals may be able to commit racial fraud or improperly take advantage of remedial and affirmative action programs instituted by the government, highlights the need for the ability to not only ascertain the race of an individual, but to verify it as well. The difficulty in devising a workable definition of race from the various competing theories, combined with the lack of an “enforcement mechanism,” reinforces the need for a legal definition of race.

Recent scientific developments resulting from the study of the human genome may provide a remedy to this problem. While the topic is subject to a great deal of debate, “people can be sorted broadly into groups using genetic data,” and advancements in technology may provide the ability to determine the race of an individual through a simple DNA analysis. This is, however, largely dependent upon the definition of race encompassing ancestry. It is conceivable that genetic testing may ultimately provide courts with not only a judicial standard for race, but a reliable methodology for verifying an individual’s alleged race.

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188 Id.
189 See supra Part III.G (discussing the transformation in the Court’s understanding of race).
191 Id. at 720–21.
192 Wright, supra note 1, at 515–18 (discussing two instances of individuals committing racial fraud).
193 See Amy Harmon, *The DNA Age: All About Status Seeking Ancestry and Privilege in DNA Ties Uncovered by Tests*, *N.Y. Times*, April 12, 2006, at A1 (“Michigan, like most other universities, relies on how students choose to describe themselves on admissions applications when assigning racial preferences.”) This practice conceivably opens the door for an incredible amount of racial fraud unless colleges and universities actively investigate the racial status of each applicant. Additionally, the efforts of such institutions may be fruitless without an established racial verification system.
IV. CURRENT DNA TECHNOLOGY

Recent genetic research indicates that little genetic variation exists among human beings. This can be directly attributed to the fact that, as a species, humans are quite young, and that all humans “share a common origin in Africa.” Evidence shows that throughout the past one-hundred thousand years the human population has grown dramatically as it has redistributed itself around the world. Despite the striking genetic similarities among humans, scientists are now able to use the minimal genetic variations, or polymorphisms, that are present in the DNA of humans, “to distinguish groups and allocate individuals into groups.”

A. Genetic Variation Among Humans

The human genome sequence contains roughly three billion nucleotide base pairs, and “each pair of humans differs, on average, by two to three million base pairs.” This means that humans are 99.9% genetically similar. The locations within human DNA where these differences are found are called polymorphisms. The only way to measure genetic variation among specific individuals is to determine where such polymorphisms occur within various individuals’ DNA.

While these polymorphisms allow scientists to group individuals, “genetic variation does not split humans neatly and unambiguously.

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195 See Michael Bamshad et al., Deconstructing the Relationship Between Genetics and Race, 5 Nature Revs. Genetics 598, 599 (2004) [hereinafter Genetics and Race] (“Since the 1980s, there have been indications that the genetic diversity of humans is low compared with that of many other species.”); Pilar N. Ossorio, About Face: Forensic Genetic Testing for Race and Visible Traits, 34 J.L. Med. & Ethics 277, 279 (2006) (“Nearly all people have the same genes, in the same order along our chromosomes; we differ by possessing slightly different versions of genes, termed ‘alleles.’”).

196 See Genetics and Race, supra note 195, at 599.

197 Ossorio, supra note 195, at 280.

198 See Genetics and Race, supra note 195, at 599.

199 See Ossorio, supra note 195, at 279–80 (“Any two unrelated human beings are approximately 99.9% genetically alike.”).

200 See Genetics and Race, supra note 195, at 598.


202 Ossorio, supra note 195, at 280.

203 DNAPrint, supra note 9.

204 Ossorio, supra note 195, at 280.
into four or five distinct racial groups... no gene variants are found in all people of one race but no people of other races.”

Lynn B. Jorde and Stephen P. Woodling provide a clear summary of this problem: “In other words, 90% of total genetic variation would be found in a collection of individuals from a single continent, and only 10% more variation would be found if the collection consisted of Europeans, Asians and Africans.”

The youth of the human species, combined with the significant amount of racial mixing, makes it unlikely that “the ideal genetic polymorphism,” one that is unique to each specific human group, will be discovered anytime soon. There are, however, certain types of polymorphisms such as Alus, pieces of DNA that replicate occasionally and are similar in sequence to one another, and AIMs, special Ancestry Informative Markers, both of which occur much less frequently but provide more specific information about the DNA in which they are found.

B. The Use of Genetic Information to Determine Ancestry

Stemming from the recent growth in genetic sciences, ethnic ancestry tests are becoming increasingly popular, although the results of such tests are scrutinized by many. Critics warn that, while ancestry plays a role in the contemporary understanding of race, “race and ancestry should not be treated as interchangeable or equivalent categories.”

Nonetheless, “[s]hared history implies shared ancestry and shared ancestry implies shared biology,” and these ancestry tests may ultimately be the answer to the struggle to define and verify race.

Advancements in genome scanning and research allow companies such as DNAPrint Genomics (“DNAPrint”) to provide clients with detailed information surrounding his or her ethnic ancestry through a DNA analysis. Additionally, DNAPrint, through its AIM mapping method, is able to provide such services at a reasonable price to
consumers. Operating at the forefront of the genetic ancestry industry, DNAPrint is able to utilize AIMs, AIM mapping methods, and measures of Bio-Geographical Ancestry Admixture their scientists have developed to “provide an inference of genetic ancestry or heritage.”

Individuals looking to utilize the services offered by DNAPrint need to simply swab the inside of his or her cheek and send the swabs to DNAPrint. Upon receipt of the swabs, DNAPrint’s scientists will apply the customer’s DNA material to complex statistical algorithms comprised of test surveys of 176 AIMs. “[T]he test can determine with confidence to which of the major biogeographical ancestry groups . . . a person belongs, as well as the relative percentages in cases of admixed peoples.” Thus this methodology will work for individuals who are multi-racial as well as those who are not. The AncestryByDNA product places individuals in among the four anthropological groups: Native American, East Asian, Sub-Saharan African, and Indo-European. Additionally, the EurasianDNA 1.0 and EuropeanDNA 2.0 services, allow customers to gain a more comprehensive and thorough understanding of their ancestry.

While DNAPrint and other companies that provide customers with genetic ancestry analyses do not claim to offer clients anything more than a prediction of his or her heritage, one can reasonably argue that such tests provide much more. DNAPrint previously encouraged customers to use its services for purposes not directly

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214 Harmon, supra note 193, at A1 (“For $99 to $250, they promise to satisfy the human hunger to learn about one’s origins—and sometimes much more.”). DNAPrint claims that prior to the development of its pan-genome screening method, Admixture Mapping (“Mapping”), the cost of genome screening was probative. They claim their Mapping technology allows them “to identify genes that underlie human traits or conditions for pennies on the dollar.” DNAPrint, supra note 9.
215 DNAPrint, supra note 9.
216 Id.
217 Id.
218 Id.
219 Id.
220 Id. The EurasianDNA 1.0 predicts an individual’s Indo-European heritage among Northwestern European, Southeastern European, Middle Eastern, and South Asian groups.
221 Id. The EuropeanDNA 2.0 service will predict a customer’s European heritage among five groups: Southeastern European, Iberian, Basque, Continental European, and Northeastern European.
222 DNAPrint, supra note 9.
related to tracing one's ancestry, and it is telling that they classify ancestry by groups that parallel the racial categories advanced by the biological race theory. Individuals who are exposed to the same environments over the course of history will undoubtedly share similarity in biological and physical traits to a certain extent, and such ancestry predictions could provide a means of racial verification provided the accepted definition of race accounts for more than self-identification.

C. Criticisms of the Application of Genetic Ancestry Information

Although the practice of genetic ancestry testing is common today, many critics question the amount of credence that should be given to the results of such examinations. It is argued that such results are generally incomplete and produce diluted results. Furthermore, some believe scientists are too willing to use ancestry information to infer the “race and general appearance” of a test subject. In some cases, notions of race do correspond to genetic differences among populations, which genetic ancestry testing reveals, but often they do not. It is because of this lack of consistency with genetic testing results, that under the current definition of race, one which focuses on race as a social construct, current DNA technology does not provide us with a clear cut tool for defining race and verifying race.

Concerns surrounding the legitimacy of genetic ancestry testing are centered on the alleged incompleteness of such tests and the fact high numbers of polymorphisms may be required to allow scientists to distinguish between those whose ancestors mixed with other populations. An individual inherits half of his or her genetic makeup from his or her mother and the other half from his

223 Harmon, supra note 193 (“On its Web site . . . DNA Print Genomics, once urged people to use it ‘whether your goal is to validate your eligibility for race-based college admissions or government entitlements.”).
224 Compare DNAPrint, supra note 9, with supra Part II.B.
225 Johnston, supra note 27.
226 See Harmon, supra note 193, at A1 (“Many scientists criticize the ethnic ancestry tests as promising more than they can deliver. The legacy of an ancestor several generations back may be too diluted to show up.”); see also Ossorio, supra note 195, at 282 (“Genetic ancestry tracing is always partial and incomplete; genetics will only produce information about some of a person’s ancestors.”).
227 Ossorio, supra note 195, at 281.
228 Bamshad & Olson, supra note 194, at 83.
229 Ossorio, supra note 195, at 282.
230 Bamshad & Olson, supra note 194, at 82.
or her father.\textsuperscript{231} This results in genetic information being lost from generation to generation, “[o]n average, each person lacks three-quarters of the genetic information present in each of her grandparents.”\textsuperscript{232} This means that genetic ancestry testing will only examine a portion of an individual’s ancestry.\textsuperscript{233} The fact that large numbers of polymorphisms may need to be tested in order to allow scientists to differentiate between ancestors who mixed with other populations is certainly an obstacle, but does not prevent accurate genetic ancestry testing from taking place. As mentioned earlier, not only have scientists been able to identify unique polymorphisms such as \textit{Alus} and AIMs, but they have been able to find large quantities of them which have resulted in accurate genetic ancestry testing results.\textsuperscript{234}

Additionally, critics find the ethnic ancestry tests as “promis[ing] more than they can deliver,”\textsuperscript{235} and warn against using the results of such tests to infer race.\textsuperscript{236} Many of these concerns highlight the difficulty in reaching a definition of race due to the fact that it arguably encompasses many characteristics.\textsuperscript{237} While it is clear that ancestry alone cannot serve as a basis for race, particularly because genetic ancestry information does not always correspond to a specific morphology,\textsuperscript{238} it is not unreasonable to hold that such ancestry information, when considered with other characteristics (particularly self-identification), could serve as a reliable mechanism for determining and verifying race.

\textbf{V. CONCLUSION}

“When we talk about the concept of race, most people believe that they know it when they see it but arrive at nothing short of confusion when pressed to define it.”\textsuperscript{239} This mystification surrounding the meaning of race shows it cannot be defined with narrow terms, and that it is potentially impossible to characterize

\textsuperscript{231} Ossorio, \textit{supra} note 195, at 282.
\textsuperscript{232} \textit{Id.}
\textsuperscript{233} \textit{Id.}
\textsuperscript{234} See discussion \textit{supra} Parts IV.A, IV.B.
\textsuperscript{235} Harmon, \textit{supra} note 193, at A1.
\textsuperscript{236} Ossorio, \textit{supra} note 195, at 283.
\textsuperscript{237} \textit{Id.} (‘Inferring race from ancestry is as problematic or more problematic than inferring morphology, because race is based on more characteristics than morphology or ancestry.’).
\textsuperscript{238} \textit{Id.}
\textsuperscript{239} \textit{Id.} at 278 (quoting Evelyn Brooks Higginbotham, \textit{African–American Women’s History and the Metalanguage of Race}, \textit{17 Signs} 251, 253 (1992)).
individuals as belonging one race or another with any certainty at all. Ultimately, it is difficult to argue that an individual’s race can be determined by anything other than his or her own racial self-identification. Additionally, it is likely that an individual’s biological features, ancestry, place of origin, and culture each play a vital role in determining that self-identified race. Thus, any legal standard for interpreting race failing to encompass some, if not all, of these characteristics would undoubtedly be under-inclusive.

The unconstitutionality of race-based classifications suggests a formal definition for the term is unnecessary, but by assigning rights and opportunities on the basis of race in an effort to correct the wrongs of the past and to provide for a more diverse educational atmosphere for all, the government has created the need for a definition of race. Current genetic technology, although not perfect, presents a resource that if applied to the suggested legal standard for race, would aid in the determination and verification of race.