

The legacy and future of race between science, constitutional lexicon, and political action

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ABSTRACT: Beyond the recurring questions “Is race social or biological?”, “Is race real or illusory?” which encapsulate the philosophical morass of the ontology of race, this paper, after a brief summary of the development of the scientific debate, focuses on the attitude that the law should take towards this contested concept and the “cursed” word that describes it. In particular, the analysis will focus on a “symbolic” aspect, that of the use of the word “race” in the constitutional lexicon of different countries, and on a more “functional” one, related to the use of the “racial argument” in some policies aimed at overcoming health disparities. Lastly, a brief reference will be made to the impact of technological innovations on the racial discourse, to understand, in particular, whether and how A.I. technologies increase or reduce racial bias.

KEYWORDS: Race; discrimination law; equality; genetics; constitutional law

SUMMARY: 1. A definitional puzzle: The multifaceted, illusory, “cursed” concept of race – 2. The origins and present-day relevance of race as a scientific assumption – 3. The two-fold attitude of the law to race – 3.1. Can constitutional amendments provide a solution? – 3.2. The contribution of race to (in)justice and (in)equality: From blindness to consciousness – 4. From yesterday’s discrimination to tomorrow’s: A.I. as a multiplier or reducer of racial bias?

1. A definitional puzzle: The multifaceted, illusory, “cursed” concept of race

The term race is common in scientific, social, political, and legal discourse around the world. The word, with its uncertain etymology,¹ refers to a multifaceted concept with a long history which has, over the years, developed a complex relationship with biology, social sciences, and the law. Its significance is due to its position at the interface between science and society. The concept, shaped by its surroundings over generations, has historically been used as a mechanism to group human beings and, consequently, as a powerful tool to legitimize systemic oppression.²

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¹ According to some authors, the term derived from “ratio”, but others have provided evidence demonstrating that it originates from “haraz”, an old French word which refers to horse breeding (G. FRANZINETTI, *The Historical Lexicon of Nationalism: Ethnicity, Ethnos, Race, Volksstamm: Historical Footnotes*, in *Colloquia Humanistica*, 5, 2016, p. 56).

² H. MOHSEN, *Race and Genetics: Somber History, Troubled Present*, in *Yale Journal of biology and medicine*, 93(1), 2020, pp. 215-219.

The concept's long use to justify the hierarchization of society links it explicitly with power, and some scholars have, in fact, conceived race and racisms (understood as the "political abuse of science"³) as structural and formative features of the colonialist era⁴. Claims of racial superiority — supposedly authorized by the laws of nature — have lurked in many places and times, producing aberrant episodes of human history, such as the Holocaust and apartheid, all interwoven from the threads of race and nature.⁵

The category of race has imbued social relations so deeply that Bauman, in his study of the Holocaust, identified the need for modernity to carefully construct a "new naturalness", grounded in an authority "different from that of the evidence of sensual impressions".⁶

Race can only be analyzed and understood within the interplay of politics and science. And now, genetics, which had historically provided an alleged basis for oppressive policies and the spread of systemic racism, is contributing to the delegitimization of "race". Scientific knowledge employed to biologize imaginary hierarchies of human variation has been superseded by the best research in genetics, revealing that the concept of "race" is elusive and has no scientific basis or reliable definition. The link with science does not, however, seem to have been completely severed, and the category of race has not yet altogether disappeared from the field of scientific research and medicine.

Beyond the recurring questions "Is race social or biological?", "Is race real or illusory?" which encapsulate the philosophical morass of the ontology of race, this paper, after a brief summary of the development of the scientific debate, focuses on the attitude that the law should take towards this contested concept and the "cursed"⁷ word that describes it. In particular, the analysis will focus on a "symbolic" aspect, that of the use of the word "race" in the constitutional lexicon of different countries, and on a more "functional" one, related to the use of the "racial argument" in some policies aimed at overcoming health disparities. Lastly, a brief reference will be made to the impact of technological innovations on the racial discourse, to understand, in particular, whether and how A.I. technologies increase or reduce racial bias.

2. The origins and present-day relevance of race as a scientific assumption

While the origins of the term and its earliest uses are debated,⁸ the best known race-based classification of human beings was proposed by the Swedish naturalist Carl Linnaeus who

³ R. BENEDICT, M. MEAD, *Race: science and politics*, Athens, 2019, p. vii.

⁴ A. STOLER, *Race and the Education of Desire: Foucault's History of Sexuality and the Colonial Order of Things*, Durham, 1995, p. 9.

⁵ See D. S. MOORE, J. KOSEK, A. PANDIAN (eds.), *Race, nature, and the politics of difference*, Durham and London, 2003, Introduction, pp. 1-70.

⁶ Z. BAUMAN, *Modernity and the Holocaust*, Cambridge, 1989, p. 57.

⁷ This definition was given in Italy during the debates of the Constitutional assembly by Meuccio Ruini (see the Constitutional Assembly's debates of 24 March 1947 in www.nascitacostituzione.it).

⁸ It is interesting to note that, according to an analysis of the uses of the word "race" in different ages, the physical-biological connotation of the term does not appear until the 18th century. See D. TEYSSEIRE, *De l'usage historico-politique de race entre 1680 et 1820 et de sa transformation*, in *Mots. Les langages du politique*, 33, 1992, pp. 43-52 and N. HUDSON, *From "Nation" to "Race": The Origin of Racial Classification in Eighteenth-Century Thought*, in *Eighteenth-Century Studies*, 29(3), 1996, pp. 247-264.

classified *Homo sapiens* into four groups: *europaeus*, *americanus*, *asiaticus*, and *afēr*. By the tenth edition of his *Systema Naturae*, published in 1758, these groups had become subspecies, color-coded as red Americans, white Europeans, yellow Asians and black Africans.⁹ At the time, various attempts were made to categorize race scientifically, influenced by Linnaeus' inclusion of social and personality traits alongside physical ones in order to further entrench racial hierarchies.¹⁰

The more cautious approaches developed by Darwin, who challenged the rigidity of these categories and emphasized the inconsistency and subjectivity of the criteria chosen to define them¹¹, were followed by the ideas of Galton, who theorized eugenics as the science by which the human stock would be improved and described how selective breeding could be used to give "more suitable races [...] a better chance of prevailing".¹² Galton's ideas, shared by a considerable number of other members of the scientific establishment at the time, spread and became increasingly influential during the second half of the 1800s¹³.

Early twentieth-century manifestations of the concept marked an important change: whereas previous theories had based racial distinctions on observable physical traits, such as cranial capacity and skin color, as knowledge of biology advanced, race came to be conceived as a reflection of unseen differences attributed to the then newly discovered rules of heredity, based on genes. Eugenics progressively gained momentum, justifying practices of discrimination and marginalization in a range of different ways.

It took the Nazi policies of "racial hygiene" and the Holocaust to show the world the logical endpoint of this horrific ideology¹⁴. And, while these theories are no longer part of the scientific debate, and openly eugenic practices are no longer tolerated,¹⁵ the confused relationship between race and biology has persisted.

1972 marked a turning point in the debate on race, when Harvard geneticist Richard Lewontin, in a paper titled "The Apportionment of Human Diversity," showed that most genetic variation (85.4 %) occurs within human populations, and not among (supposed) racial groups. Lewontin concluded that

⁹ S. MÜLLER-WILLE, *Linnaeus and the Four Corners of the World*, in K.A. COLES, R. BAUER, Z. NUNES, C.L. PETERSON (eds), *The Cultural Politics of Blood, 1500–1900*, London, 2014, pp. 191-209.

¹⁰ H. MOHSEN, *Race and Genetics: Somber History, Troubled Present*.

¹¹ C. DARWIN in his *On the Origins of Species* (1859) and *The Descent of Man, and Selection in Relation to Sex* (1871). For a reconstruction of the evolution of the concept, see P. Greco, *Breve storia del concetto di razza umana*, in M. Monti, C.A. REDÌ (ed.), *No razza, sì cittadinanza*, Pavia, 2017, pp. 21-29 and Id., *Addio alla razza. Una parola pericolosa che per la scienza non ha senso*, in *Scienza e Società*, 27-28, pp. XIII-133.

¹² F. GALTON, *Inquiries into Human Faculty*, London, 1883, p. 25.

¹³ On the historical evolution of genetics, in this Special Issue, see I. AMPOLLINI, *A brief history of genetics: chronology, concepts, themes*.

¹⁴ A fundamental reference goes to Gobineau's *Essay on the inequality of races*, which had an almost incalculable effect on late 19th-century social theory. Published in 1853-55, it is thought to be the "intellectual" link between earlier racial theories and later, explicitly discriminatory scientific systematizations and public policies (J.A. DE GOBINEAU, *Essai sur l'inégalité des races humaines*, Paris, 1833-1835).

¹⁵ An intuition of race as a social concept with no genetic basis seems first to have been presented by the anthropologist Ashley MONTAGU in 1942, in his *Man's Most Dangerous Myth: The Fallacy of Race*, New York, 1942.

“Since such racial classification is now seen to be of virtually no genetic or taxonomic significance either, no justification can be offered for its continuance”.¹⁶

The debate around the concept of race resurfaced with the conclusion of the Human Genome Project in 2003, which seemed to offer an important opportunity to finally lay the race and genetics debate to rest: announcing the working draft of the human genome, both Francis Collins and Craig Venter clearly declared the inexistence of a genetic basis for race. Only two years later, however, just before the official completion of the Project, a report was published in *Science*, which appeared, to some, to confirm the biological basis of race. The paper claimed that genetic samples from 52 populations could be clustered into five geographically based categories: Europe, Africa, East Asia, Oceania, and the Americas.¹⁷ Then, in March 2003, an article in the *New England Journal of Medicine* argued, to the contrary, that “although everyone, from geneticists to laypersons, tends to use ‘race’ as if it were a scientific category, with rare exceptions, no one offers a quantifiable definition of what a race is in genetic terms.”¹⁸

A decade and a half later, in 2018, the debate flared up again, ignited by the publication of an opinion piece in the *New York Times* titled “How Genetics is Changing our Understanding of ‘Race’”. Harvard geneticist David Reich argued that the consensus around Lewontin’s positions (most of which the author shared) had calcified over the decades, into an orthodoxy. In particular, Reich contested the wide-spread anxiety about any research into genetic differences among populations, supposed to be poised “on a slippery slope” that can lead to the kinds of pseudoscientific arguments that were used to try to legitimize the slave trade, the eugenics movement and the Nazis’ murder of six million Jews. Reich expressed his “deep sympathy for the concern that genetic discoveries could be misused to justify racism”, but said that nevertheless, as a geneticist, he was also clear “that it is simply no longer possible to ignore average genetic differences among “races.” Reich’s concern was that advances in the field of genetics could reveal substantial biological differences among human populations, and that those discoveries might then be cited as “scientific proof” that racist prejudices and agendas are correct. The topic’s sensitivity was immediately demonstrated by a response to Reich’s opinion, given by 67 scholars (from disciplines ranging across the natural, medical and population health and social sciences to law and the humanities) in an open letter, titled “How Not to Talk About Race and Genetics”. The letter’s intention was to highlight the complexity of the concept of race and the fact that it does not operate in a political vacuum. Relying on a robust body of scholarship recognizing the existence of geographically based genetic variation in our species, but at the same time showing that such variation is not consistent with biological definitions of race, the letter called for a “a more sophisticated approach to the problem of human group categorization in the biomedical sciences.”

¹⁶ R.C. LEWONTIN, *The Apportionment of Human Diversity*, in T. DOBZHANSKY, M.K. HECHT, W.C. STEERE (eds), *Evolutionary Biology*, New York, 1972.

¹⁷ N.A. ROSENBERG et al., *Genetic Structure of Human Populations*, in *Science*, 298(5602), 2002, pp. 2381-2385. See also E.D. LANDER, L.M. LINTON, B. BIRREN et al., *Initial sequencing and analysis of the human genome*, in *Nature*, 409, 2001, pp. 860-921.

¹⁸ R.S. COOPER et al., *Race and Genomics*, in *The New England Journal of Medicine*, 348, 2003, pp. 1166-1170.

While the general consensus among Western researchers is now that human race is a sociocultural construct, and not a genetic variable,¹⁹ references to “race” or “racial categories” still occur in biomedical research and medical practice, revealing the persistence of biologic essentialism.²⁰

One of the reasons why racial labels are still in use is that a great deal of research is currently being done into human biological differences, in order to develop “precision medicine” instruments, diagnostic and therapeutic tools that are as well suited as possible to individuals’ genetic makeup.²¹

Many, therefore, consider the concept of race to provide a useful, if imperfect, method for grouping people. Researchers often rely on self-reported race to assess people’s origins,²² despite the fact that this criterion has no scientific basis and does not correspond to real variability, especially in case of admixed populations. Furthermore, the applicability of data drawn from these studies is often weakened by researchers’ failure to explain what they mean by “race,” as if its meaning is self-evident.²³

¹⁹ In a very clear synthesis, the American Association of Physical Anthropologists states that “Race does not provide an accurate representation of human biological variation. It was never accurate in the past, and it remains inaccurate when referencing contemporary human populations. Humans are not divided biologically into distinct continental types or racial genetic clusters. Instead, the Western concept of race must be understood as a classification system that emerged from, and in support of, European colonialism, oppression, and discrimination. It thus does not have its roots in biological reality, but in policies of discrimination. Because of that, over the last five centuries, race has become a social reality that structures societies and how we experience the world. In this regard, race is real, as is racism, and both have real biological consequences” (*Executive Summary: AAPA Statement on Race and Racism*, March 8, 2019).

²⁰R.S.COOPER, *Race in Biological and Biomedical Research*, in *Cold Spring Harbor Perspectives in Medicine*, 3(11), 2013. See also V. L. BONHAM, E.D.GREEN, J.PEREZ-STABLE, *Examining how race, ethnicity, and ancestry data are used in biomedical research*, in *JAMA*, 320(15), 2018, pp. 1533-1534.

²¹ So-called “personalized/precision medicine” refers to the tailoring of medical treatment to the individual characteristics of each patient. “It does not literally mean the creation of drugs or medical devices that are unique to a patient, but rather the ability to classify individuals into subpopulations that differ in their susceptibility to a particular disease, in the biology and/or prognosis of those diseases they may develop, or in their response to a specific treatment” (NATIONAL RESEARCH COUNCIL, *Toward Precision Medicine: Building a Knowledge Network for Biomedical Research and a New Taxonomy of Disease*, Washington D.C., 2011, p. 125). Nevertheless, the use of the notion of race for these purposes is widely contested: see G. ADIGBILI, *Race, science and (im)precision medicine*, in *Nature. Medicine*, 26, 2020, pp. 1675-1676.

²² This criterion is strongly supported by some authors who consider self-identified race as a useful factor for understanding differences in disease and in the response to drugs: see among others, N. RISCH, E. BURCHARD, E. ZIV, H. TANG, *Categorization of Humans in Biomedical Research: genes, race and disease*, in *Genome Biology*, 3(7), 2002, pp. 1-12, according to which “self-defined race, ethnicity or ancestry are actually more genetically informative than clusters based on analysis of random genetic markers” (p. 6). Others highlight how “Group identity (...) and genetic heritage are much more complex than self-identity” (T.B. MERSHA, T. ABEBE, *Self-reported race/ethnicity in the age of genomic research: its potential impact on understanding health disparities*, in *Human Genomics*, 9, 2015, pp. 1-15).

²³ One paper examined how race and ethnicity terms are used in publications on genetic research and, sampling over 300 studies published between 2001 and 2004, found that fewer than 10 percent of the articles contained any discussion of how racial labels were assigned (P. SANKAR, M.K. CHO, J. MOUNTAIN, *Race and ethnicity in genetic research*, in *American Journal of Medical Genetics, Part A*, 143A, 2007, pp. 961–970). Furthermore, it has to be acknowledged that racial categories are dynamic designations which have to be understood as specific to the time and place in which they occur and are constantly being redefined. For example, in the U.S. census racial categories have changed every decade since 1790 (M. NOBLES, *Shades of citizenship: Race and the census in modern politics*, Stanford, 2000).

In addition to being inaccurate, the use of an unspecified criterion of race can be dangerous, for at least two reasons: on the one hand it can reinforce the assumption that human races have a biological basis and, on the other, it can blind scientists to other factors that contribute much more to health disparities.

Despite frequent attempts to replace “race” with other terms, free of stigma or oriented to show how humanity can be organized but not hierarchized (such as “ethnicity” or “ancestry”) and despite mounting scientific evidence showing that humans are fundamentally more similar than different from each other, the legacy of the past still shadows genomic research. For example, even though ancestry testing is often marketed as a celebration of diversity and a way to overcome difference, racial supremacists, such as members of the Alt-right in the U.S., have embraced these tests as a way to prove their “pure white heritage” (while often rejecting or reinterpreting “unsatisfactory” results).²⁴ Regardless of the words chosen, the concept of race is an epistemological category that operates independently of the aims of any individual geneticist. That said, the latter should not ignore the social implications of what they do.²⁵

3. The two-fold attitude of the law to race

Reference to race in the legal sphere can be interrogated from two perspectives. First, in view of the “expressive”²⁶ and therefore also symbolic value of the law, should the use of the term in legal - and particularly in constitutional - texts be reconsidered, or is it appropriate to retain it?

Secondly, it is necessary to acknowledge the perennial ambivalence of the concept of race in the legal domain. On the one hand, especially in the past, public power seized upon it, using “race” as a pseudo-scientific argument for the categorization and hierarchization of human beings and thereby causing tangible harms. Conversely, more recently, “race” has been employed by the law to protect and benefit minority groups. It has also increasingly become an important identity factor, whether individually or collectively chosen.²⁷ The same concept has thus sometimes proved profoundly dangerous, at others, potentially empowering.

3.1. Can constitutional amendments provide a solution?

As the scientific debate has progressed, in recent years, so too has the law, which has also questioned the validity of the notion of race and, in particular, whether the term should enter, or remain in, the constitutional lexicons of various states. As is well known, the constitutions of many countries refer to the category of race, generally included as one of the factors that do not justify differential treatment.

²⁴ A. PANOFKY, J. DONOVAN, *Genetic ancestry testing among white nationalists: From identity repair to citizen science*, in *Social studies of science*, 49(5), 2019, pp. 653-681. On the use of ancestry testing in different legal contexts, T. JONES, J.L. ROBERTS, *Genetic race? DNA, Ancestry tests, racial identity, and the law*, in *Columbia Law Review*, 120(7), 2020, pp. 1929-2016.

²⁵ R.S. COOPER et al., *Race and Genomics*, cit., p. 1169.

²⁶ On the “expressive” role of the law in shaping public ideology: C.R. SUNSTEIN, *On the Expressive Function of Law*, in *University of Pennsylvania Law Review*, 144, 1996, pp. 2021-2053.

²⁷ See the political ontology of race constructed by M.R. JAMES, *The political ontology of race*, in *Polity*, 44(1), 2012, pp. 122 ff.

The word “race” was first used in legislation in 1870, when the United States decided to prohibit discrimination “on the basis of race” in the 15th Amendment to the Constitution.

In Europe, “race” first appeared in 1920 in the Treaty of St. Germain (which established peace between Austria and the Allied Powers), soon afterwards entering the Austrian and Czech Constitutions. After World War II, of course, “race” was heavily identified with Nazi ideology and thus considered a well-nigh pathogenic concept. It was within this context that it entered many post-War constitutions. Similar provisions can also be found in more than 140 more recent constitutions worldwide, such as those that emerged from the collapse of the Soviet bloc and apartheid South Africa, for instance. It is worthy of note that while fewer than half of the Constitutions adopted before 1970 include the protection of equal rights on the basis of race/ethnicity, 89% of those adopted between 2000 and 2009 and 79% of those adopted between 2010 and 2017 do so.²⁸

The 1947 peace treaties obliged the defeated countries to prepare the necessary constitutional instruments to ensure the protection of fundamental rights “without distinction of race, sex, language or religion”.²⁹

Despite these international indications, and at a time when many people still believed in the scientific basis of human races, the problematic nature of the concept sometimes emerged during the drafting of constitutional texts. In Italy, for example, while art. 7 of the draft Constitution (which would later become art. 3) was being discussed, an amendment by Mario Cingolani was debated: “In the first paragraph, replace the word race with the word lineage (stirpe)”. Cingolani justified his proposal by describing the need expressed in this regard by the Jewish communities, a need which deserved to be heard, in recognition of their recovery of absolute equality as Italian citizens.³⁰

This proposal was opposed by other members of the Constituent Assembly, who considered that the term “race” (razza) should be maintained as it referred to historical fact, to acts of real discrimination which had taken place in Italy; the word was free of any negative connotation and its inclusion was intended to draw a line under what had happened in the past and to affirm equality among all human beings (Laconi and Ruini).

In Italy, however, the issue has recently re-emerged, in response to the consolidation of new scientific knowledge: on 14 October 2014, two scientists, Olga Rickards and Gianfranco Biondi, appealed to the President of the Republic, the Presidents of the Chambers of the Parliament and the President of the Council of Ministers to remove the term “race” from the Constitutional Charter, for lack of any objective basis. The ensuing, and ongoing, debate³¹ has still not led to any concrete results.

²⁸ A significant exception is Latin America: the word “race” is not present in the constitutions of Argentina, Costa Rica, Guatemala, Haiti, Paraguay, the Dominican Republic or Uruguay. Interestingly, while Bolivia and Ecuador removed the word during recent constitutional reforms, it has made its way into the new constitutional text proposed in Chile (see www.constituteproject.org).

²⁹ See, for example, Art. 15 of the Treaty of peace with Italy (Paris, 10 February 1947), according to which “Italy shall take all measures necessary to secure to all persons under Italian jurisdiction, without distinction as to race, sex, language or religion, the enjoyment of human rights and of the fundamental freedoms, including freedom of expression, of press and publication, of religious worship, of political opinion and of public meeting.”

³⁰ Constitutional Assembly debates of 24 March 1947 in www.nascitacostituzione.it.

³¹ On the use of the word “race” in the Italian Constitution, among others, G. SILVESTRI, *Il termine “razza” nella Costituzione*, in A. MENICONI, M. PEZZETTI (eds.), *Razza e ingiustizia, Consiglio Superiore della Magistratura - Consiglio Nazionale Forense*, 2018, pp. 69-76; G.M. FLICK, *Verso la convivenza: leggi razziali, eguaglianza e pari*

In other jurisdictions, in contrast, more significant developments are occurring with regard to such references (now shown to be scientifically unfounded) and whether or not they should be retained.³² France is one of the countries where this issue has been most hotly debated. After the Second World War, France, like most European countries, banned racial discrimination in its 1946 Constitution, intended as a clear rejection of racist theses and 19th century theories of race. The use of the term “race” was not discussed, and it was also incorporated into the 1958 Constitution.

Then, in 1992, a scholarly debate around “race” was initiated by two law professors, Danièle Lochak and Jean-Jacques Israël, who were convinced that, since genetics had shown the term to have no basis in science, it should be abandoned. The proposal was that any legal text containing the word should be amended, replacing it with a reference to racism.

Almost ten years later, the Communist MP Michel Vaxès proposed removing the term “race” from the Constitution and other legislation,³³ but was opposed, mainly by those who feared that the removal of the term could mean the loss of a valuable tool for combating racism. Debating a similar proposal, advanced six years later, Jean-Luc Mélenchon suggested adding the adjective “prétendue” before the term “race”, but this was also rejected. The debate did not entirely die down and was then rekindled a few years later, by a statement made by the then presidential candidate François Hollande: “Il n'y a pas de place dans la République pour la race. Et c'est pourquoi je demanderai, au lendemain de la présidentielle, au Parlement de supprimer le mot race de notre Constitution”.

After another failed attempt to reform the French legislation,³⁴ the first tangible results were obtained when the Law for the modernization of justice in the 21st century³⁵ and the law on equality and citizenship³⁶ replaced the word “race” with the expression “so-called race” in some articles of the

dignità sociale, in *Rivista AIC*, 1, 2019, pp. 72-82; A. MORELLI, *Should Italy follow Germany's lead and remove 'race' from the Constitution?*, in *Il Manifesto Global Edition*, 6 December 2020, online: <https://global.ilmanifesto.it/>; V. TONDI DELLA MURA, *La parola razza nella Costituzione, ovvero: della rilevanza costituzionale di una nozione scientificamente infondata*, in *Diritti fondamentali*, 2, 2019, pp. 1-17; S. SALARDI, “Razza”: falsi miti e danni reali di un concetto. Abolirlo serve alla causa anti-discriminatoria?, in *Materiali per una storia della cultura giuridica*, 2, 2016, pp. 451-478; V. SATTÀ, *Principio di eguaglianza e razza, tra dibattito costituente e giurisprudenza costituzionale*, in *Jus-online*, 5, 2020, pp. 298-330.

³² Some intermediate solutions have been adopted in the course of constitutional revision processes. For instance, in Sweden, the 1974 Constitution was amended in 2012 and the term race, which was present in art. 15, prohibiting discrimination on various grounds (Art. 15. “No act of law or other provision may imply the unfavourable treatment of a citizen because he belongs to a minority group by reason of race, colour, or ethnic origin”), and also in articles 14 and 22.7, was cancelled and can now be found only in art. 4.11, among the limits to freedom of the press.

³³ Proposition of law n. 623: Proposition de loi tendant à la suppression du mot « race » de notre législation, presented on 13 February 2003, online: <https://www.assemblee-nationale.fr/12/propositions/pion0623.asp>.

³⁴ In 2003 the National Assembly passed a bill to remove the word “race” from all French statutes (Proposition of law n. 218: Proposition de loi tendant à la suppression du mot « race » de notre législation, presented on 13 February 2003, online: <https://www.assemblee-nationale.fr/14/pdf/propositions/pion0218.pdf>).

³⁵ Loi n°2016-1547 du 18 novembre 2016 - Art. 86

³⁶ Loi n°2017-86 du 27 janvier 2017, Art. 171 and Art. 13.

criminal code.³⁷ Despite these and other changes, the term remains in some parts of French legislation.³⁸

It also, moreover, remained in the Constitution. Nevertheless, in 2018 a proposal to remove “race” from art. 1 of the Constitution was advanced by LREM MPs,³⁹ using the now standard argument that the use of the term implied its reality. The bill was passed unanimously on Thursday 12 July 2018 by the Assemblée Nationale. However, the constitution has not been amended, as the process was interrupted by the so-called “Benalla affaire”.

It is interesting to note, however, that even if the reform had taken place, “race” would have remained in the French constitutional lexicon, since the word also occurs in the preamble to the 1946⁴⁰ Constitution, having been included in the *bloc de constitutionnalité*.⁴¹ No proposal to amend the latter has ever been made, since it is a text of historical value,⁴² unlike the 1958 Constitution, which has been amended more than twenty times.⁴³

The different value attributed to the two (1946, 1958) texts somewhat reflects the two main positions taken on these legal debates, which we will now explore in more detail: some believe that the word race has a symbolic, monitory value, and should therefore be maintained, particularly in constitutional texts, given their foundational nature, others believe that constitutional texts are living instruments which should be adapted to contemporary needs and facts.

In Germany too, and the history of the country’s legal system lends this proposal particular significance, a large political majority (CDU-CSU-SPD) has recently signaled its intention to amend Article 3, Section 3 of the German Basic Law, according to which “No person shall be favoured or disfavoured because of his sex, parentage, race, language, homeland and origin, faith or religious or political opinions. No person shall be disfavoured because of disability”.⁴⁴

³⁷ See also Art. 225-1 and Articles 132-76 and 222-13 of the Code pénal.

³⁸ See, for example, Art. 695-9-17 of the Code de procédure pénale and Art. D4122-8 of the Code de la défense. Furthermore, the Code pénal still contains a reference to “groupe racial” (see. Art. 212-1).

³⁹ “Le terme de « race » a été introduit dans la Constitution en 1946, après le nazisme, pour indiquer que toute race était égale, pour mettre fin aux discriminations et rejeter les théories racistes. Toutefois, la persistance de sa mention est aujourd’hui mal comprise, à rebours de l’intention initiale. Il est donc proposé de supprimer ce terme de l’article premier” (Amendment CL847, adopted on 27 June 2018).

⁴⁰ See par. 1 (“[...] the people of France proclaim anew that each human being, without distinction of race, religion or creed, possesses sacred and inalienable rights”) and par. 16 (“France shall form with its overseas peoples a Union founded upon equal rights and duties, without distinction of race or religion”).

⁴¹ As is well known, the *bloc de constitutionnalité* was “created” by the *Conseil Constitutionnel* in a decision of 1971 (décision n° 71-44 DC) to compensate for the lack of a bill of rights in the 1958 Constitution. Relying on the preamble of the 1958 Constitution, which refers to the Preamble of the 1946 Constitution and the Declaration of 1789, the *Conseil* gave fundamental rights full constitutional value, allowing the *Conseil* to protect those rights and asserting itself as a modern constitutional court.

⁴² Although nothing prevents a modification of these pieces of legislation, there is a broad scholarly consensus that the texts of 1789 and 1946 should not be modified or updated. On this, see the report of 2008 *Redécouvrir le Préambule de la Constitution - Rapport du comité présidé par Simone Veil*, online: <https://www.vie-publique.fr/sites/default/files/rapport/pdf/084000758.pdf>.

⁴³ The list of the constitutional amendments is available at: <https://www.conseil-constitutionnel.fr/la-constitution/les-revisions-constitutionnelles>.

⁴⁴ German Basic Law, 8 May 1948. In German: “Niemand darf wegen seines Geschlechtes, seiner Abstammung, seiner Rasse, seiner Sprache, seiner Heimat und Herkunft, seines Glaubens, seiner religiösen oder politischen

The current provision has been criticized on the grounds that the use of the word “race” could lead to the erroneous conclusion that the text recognizes the existence of categorical differences between human beings, a conclusion reinforced by the presence of the adjective “his” before the word “race”. According to the German Institute for Human Rights (Deutsches Institut für Menschenrechte), the current wording of the article risks perpetuating racist thinking⁴⁵ and contains an irresolvable contradiction, requiring those affected by racial discrimination to declare that they have been discriminated against on the basis of their “race”, thus making the use of racist terminology unavoidable.⁴⁶ According to others, however, the decisive argument would derive from the Basic Law’s “negative” use of the term, since it rejects discrimination based on race, thereby stigmatizing both the word and the terminology related to it. The constitutional statement is thus connected with a historical tradition to which it is proposed as an alternative.⁴⁷

The proposal put forward by the Federal Ministry of Justice and Consumer Protection, sent for comment to all bodies with an interest in the topic at the beginning of February 2021, charts a course between the two extremes: on the one hand, it suggests eliminating the direct reference to the word race, on the other - in order not to weaken an important barrier to the spread of racism - it proposes the addition of a reference to “racial motives”. Specifically, the proposal is to delete the expression “seiner Rasse” and to add “oder aus rassistischen Gründen” at the end of the sentence. The new version of the article would thus read: “No person shall be favoured or disfavoured because of sex, parentage, language, homeland and origin, faith or religious or political opinions or on racist grounds”. This wording is inspired by that already contained in the constitutions of some Länder, such as Brandenburg (art. 12, par. 2) and Sachsen-Anhalt (art. 7, par. 3).

The new wording, according to its proponents, would have the following advantages: the use of the adjective “racist” denotes an action or an opinion and would enable – even more explicitly than the contested notion of “race” - the inclusion of both actual and merely presumed biological features. Secondly, the abandonment of the term race means that the article transcends the origins of the formulation (a response to National Socialism), thus extending to cover wider forms of discrimination. Finally, the discussion paper clarifies that the use of the term “Gründen” rather than, for instance, “Kriterien”, means that no objective connecting factors for discrimination are required.⁴⁸

Anschauungen benachteiligt oder bevorzugt werden. Niemand darf wegen seiner Behinderung benachteiligt werden”.

⁴⁵ H. CREMER, *Das Verbot rassistischer Diskriminierung. Vorschlag für eine Änderung von Artikel 3 Absatz 3*, Deutsches Institut für Menschenrechte, 2020, online: <https://www.institut-fuer-menschenrechte.de/publikationen/detail/das-verbot-rassistischer-diskriminierung>.

⁴⁶ H. CREMER, *Ein Grundgesetz ohne „Rasse“ Vorschlag für eine Änderung von Artikel 3 Grundgesetz*, Deutsches Institut für Menschenrechte, 2020, online: https://www.institut-fuer-menschenrechte.de/fileadmin/migrated/tx_commerce/policy_paper_16_ein_grundgesetz_ohne_rasse_01.pdf.

⁴⁷ See the debate between Hendrik Cremer (a researcher at the German Institute for Human Rights) and Uwe Volkmann (Professor of Public Law and Philosophy of Law at the University of Frankfurt), available at https://www.deutschlandfunk.de/hendrik-cremer-vs-uwe-volkmann-rasse-raus-eine-grundgesetz.2927.de.html?dram:article_id=478960.

⁴⁸ The new proposal and the reasons supporting it can be found in the draft Discussion at: https://www.bmju.de/SharedDocs/Gesetzgebungsverfahren/Dokumente/DiskE_Ersetzung_Begriff_Rasse.pdf?__blob=publicationFile&v=3.

The proposed formula, however, has not escaped criticism since, according to some (e.g. the Greens), it would require discriminatory intent, thus privileging a subjective element rather than the objective circumstances, resulting in diminished levels of protection.

The Greens, in fact, had already submitted a different proposal, in which they suggested the deletion of the word race and the introduction of the adverb *rassistisch*. *Rassistisch Benachteiligung* (racial disadvantage) and *rassistisch Bevorzugung* (racial preference) should be understood objectively, like the other (substantive) prohibitions of discrimination of Article 3, section 3 of the Basic Law, and do not presuppose a subjective-intentional element.⁴⁹

While Germany seems – at least according to some – to be ready to break with the past, a similar path may not be possible in legal systems where the scars of racism are even farther from being healed. The extent to which a system’s history affects not only the structure and content but also the vocabulary of the constitutional text in the country concerned is evident from reading the 1996 South African Constitution, where the words “race”, “racial” and “non-racialism” are mentioned in several provisions.

From a South African legal perspective, the European debate can appear “perplexing”, since the removal of the term race from the Constitution could be read as a “regressive step aimed at protecting white privilege and reinforcing the social and economic dominance of the white minority”. Here, the explicit and recurring references to race have a dual function, to “prevent the perpetuation of public and private forms of racial discrimination and racism” and “to address the effects of past and ongoing racial discrimination and racism by allowing or mandating race-based redress measures to correct the racial injustices of the past”.⁵⁰

The importance of the issue is clearly evident in Section 1 of the Constitution which lists “non-racialism” as one of the fundamental values of the whole constitutional system. Among the different interpretations of this principle, one is especially significant, particularly for the discourse being developed in this article. The South African Constitutional Court sees “non-racialism” as an ideal towards which to strive; the creation of a non-racial society has to start from an acceptance that “race” produces significant effects in daily life, otherwise the results of lingering racism and formal and informal racial discrimination cannot be dealt with effectively.⁵¹

This approach focuses on the function of the – albeit objectively unfounded – concept of race and the concrete effects it has in society.

⁴⁹ A further proposal is to add a sentence about the role of the State in protecting against any group-related violation of the equal dignity of all people and in working towards the elimination of existing disadvantages (Der Staat gewährleistet Schutz gegen jedwede gruppenbezogene Verletzung der gleichen Würde aller Menschen und wirkt auf die Beseitigung bestehender Nachteile hin).” The text of the proposal can be found at <https://dserver.bundestag.de/btd/19/244/1924434.pdf>.

⁵⁰ P. DE VOS, “Race” and the Constitution: A South African perspective, in *Verfassungsblog.de*, 26 June 2020, at: <https://verfassungsblog.de/race-and-the-constitution-a-south-african-perspective/>.

⁵¹ This was clearly stated by the Constitutional Court in a 2004 judgement: “However, it is also clear that the long-term goal of our society is a non-racial, non-sexist society in which each person will be recognised and treated as a human being of equal worth and dignity. Central to this vision is the recognition that ours is a diverse society, comprised of people of different races, different language groups, different religions and both sexes. This diversity, and our equality as citizens within it, is something our Constitution celebrates and protects.” (*Minister of Finance and Other v. Van Heerden*, CCT 63/03 [2004], par. 44).

With reference to the constitutional language, in conclusion, it can be observed that the choice either to eliminate or to maintain the term race is profoundly influenced by each legal order's relationship with history, the substance of the social issues with which it is confronted and the constitutional moment in which it finds itself.

The functional approach, which requires a focus on the effects concretely produced in society by the category of race, can undoubtedly be used to interpret some of the issues in biomedicine.

3.2. The contribution of race to (in)justice and (in)equality: From blindness to consciousness

As we have seen, the study of genetics has always been enmeshed with racist ideas and all developments in this science should therefore be carefully monitored. A tendency to misappropriate the principles of genetics, as we have seen, continues. In 2018, the American Society of Human Genetics (ASHG) issued a strong statement denouncing attempts to link the science to white supremacy: "Any attempt to use genetics to rank populations demonstrates a fundamental misunderstanding of genetics". It went on to urge scientists to "debunk genetics-based arguments promoting racial supremacy."⁵² Even more recently, the society reiterated its strong opposition to efforts that twist genetic knowledge for social or political ends, affirming "the biological reality that we are one people, one species, and one humanity."⁵³

More than a decade after leading geneticists argued that race is not a true biological category, the concept continues to be used in many studies. Race, as Troy Duster put it, has been "buried alive."⁵⁴ While the scientific community is trying to steer the debate in the right direction,⁵⁵ the law must keep its focus on equality and the compelling public interest of eliminating disparities, shifting the emphasis from race to the very real, and very disturbing, phenomenon of racism, both in its more explicit and more subtle forms. Racism is, first and foremost, not an ideology but a policy, and this is the angle from which it must be opposed.⁵⁶

Racism, for example, has long had a negative impact on the just provision of health care in many countries.⁵⁷

⁵² AMERICAN SOCIETY OF HUMAN GENETICS, *ASHG Denounces Attempts to Link Genetics and Racial Supremacy*, in *American Journal of Human Genetics*, 103(5), 2018, p. 636.

⁵³ AMERICAN SOCIETY OF HUMAN GENETICS, *Statement Regarding Concepts of "Good Genes" and Human Genetics*, 24 September 2020, at: <https://www.ashg.org/tag/statement/>.

⁵⁴ T. DUSTER, *Buried Alive: the Concept of Race in Science*, in *The chronicle of higher education*, 14 September 2001

⁵⁵ Instead of throwing out the categories of race and ethnicity in biomedical research, National Institute of Health (NIH) leaders are calling for the scientific community to develop a consensus on their appropriate use in research: see J. MJOSETH, *NIH leaders call for a consensus on use of race and ethnicity data in biomedical research*, online: <https://www.genome.gov/news/news-release/NIH-leaders-call-for-a-consensus-on-the-use-of-race-and-ethnicity-data-in-biomedical-research>.

⁵⁶ Z. BAUMAN, *Modernity and the Holocaust*, cit., according to whom "Racism is a policy first, ideology second. Like all politics, it needs organization, managers and experts".

⁵⁷ See the data collected by the Centers for Disease Control and Prevention in the U.S., "Health of Black or African American non-Hispanic population," available at <https://www.cdc.gov/nchs/fastats/black-health.htm>. It is necessary to recognize that health inequities are presented differently, according to context specificities: whereas in the EU reports usually focus on inequalities in health between people living in different parts of the Union and inequalities between the most advantaged and disadvantaged sections of the population, in the U.S. health disparities are reported to be associated with race and ethnicity as the primary focus (see E. DOCTEUR, R.A.

For instance, the data on Covid-19, in the United States, show a mortality rate almost three times higher in some groups than in others.⁵⁸ These studies show that such situations of inequality do not depend on race as a biological feature, understood as an independent risk factor for disease, but rather as a mediator of structural inequalities resulting from racist policies,⁵⁹ a “risk marker of vulnerability, bias or systemic disadvantage”.⁶⁰

The policies in question are not, in fact, necessarily explicitly racist, rather many of them create inequality indirectly. Some contemporary theories highlight the very close link between public policies and health equality: a group of scholars at Harvard, for example, has developed the so-called “ecosocial” theory of disease distribution and the construct of “embodiment,” referring to how we literally (biologically) incorporate, within our societal and ecologic context, the material and social world in which we live. Relevant factors include food insecurity, poor sanitation and a lack of potable water, discrimination, toxic exposure, but the theory’s crucial element is its claim that these exposures are structurally shaped by a society’s political economy, political ecology, and social history.⁶¹

If the above thesis is accepted, the role of law cannot be subordinated to science in the field of health equality: it must move to the fore and has many ways of intervening.

To promote equality, it is not necessary to deny human differences - the latter may, indeed, be important at a biological level -, but it is essential to decouple the concept of race from its purely biological component and to endeavor to understand its full complexity. Race should not enter legal

BERENSON, *In Pursuit of Health Equity: Comparing U.S. and EU Approaches to Eliminating Disparities*, Robert Wood Johnson Foundation and Urban Institute, available at SSRN: <https://ssrn.com/abstract=2462922>. Nevertheless, the idea that race in Europe is not irrelevant and should be “viewed as an *absent presence*, something that oscillates between reality and nonreality, which appears on the surface and then hides underground” is addressed by some authors (see A. M’CHAREK, K. SCHRAMM, D. SKINNER, *Technologies of Belonging: The Absent Presence of Race in Europe*, in *Science, Technologies and Human Values*, 39(4), 2014, pp. 459-467).

⁵⁸ Data collected in 2020 showed a greater mortality rate among African-American/black individuals compared with Latino and European ancestry/white individuals. See T.L. Edwards et al., *Equity in Health: Consideration of Race and Ethnicity in Precision Medicine*, in *Trends in Genetics*, 36(11), 2020, pp. 807-809; R.A. Opiel Jr. et al., *The Fullest Look Yet at the Racial Inequity of Coronavirus*, in *The New York Times*, 5 luglio 2020, at <https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latinos-african-americans-cdc-data.html>, and the CDC report at <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/disparities-illness.html>.

⁵⁹ J.P. CERDEÑA, M.V. PLAISIME, J. TSAI, *From race-based to race-conscious medicine: how anti-racist uprisings call us to act*, in *The Lancet*, 396, 2020, pp. 1125-1128, meaning that biological differences do not account for the racial and ethnic disparities in Covid-19 illnesses and deaths. The importance of socio-economic and environmental factors is also highlighted by G. OGEDEGBE et al., *Assessment of Racial/Ethnic Disparities in Hospitalization and Mortality in Patients With COVID-19 in New York City*, in *JAMA Netw Open*, 3(12), 2020, e2026881. Other studies show the importance of reporting COVID-19 outcomes by race/ethnicity together with socioeconomic measures including education and occupation, age, and gender (J.T. CHEN et al., *Intersectional inequities in COVID-19 mortality by race/ethnicity and education in the United States, January 1, 2020–January 31, 2021*, Harvard Center for Population and Development Studies, Working Paper Vol. 21, n. 3, 23 February 2021 pp. 1-14). Tsai interprets Covid-19 outcomes as a result of racism: *COVID-19 is Not a Story of Race, but a Record of Racism—Our Scholarship Should Reflect That Reality*, in *The American Journal of Bioethics*, 21(2), 2021, pp. 43-47.

⁶⁰ J. TSAI, *What Role Should Race Play in Medicine?*, in *Scientific American*, 12 September 2018, at: <https://blogs.scientificamerican.com/voices/what-role-should-race-play-in-medicine/>.

⁶¹ N. KRIEGER, *Living and Dying at the Crossroads: Racism, Embodiment, and Why Theory Is Essential for a Public Health of Consequence*, in *American Journal of Public Health*, 106(5), 2016, pp. 832-833.



debate as a biological reality, but as a reflection of the cultural and social underpinnings originally used to justify the creation of groups within humanity and their hierarchization, or, in other words, their “othering”.⁶²

In the field of medicine, existing disparities can be counteracted in at least two ways. The first is by recognizing the real differences between individuals described by science and taking advantage of them to promote forms of equality.

Consider, for example, the field of genetic research, in which some analyses have reported that, despite an acknowledged need to increase the intensity of research in minority groups, most large-scale genetic studies (>70%) have focused on European ancestry populations. Poorly calibrated models can exacerbate disparities because genetic predictors of disease in European ancestry populations do not maintain consistent predictive power in other populations.⁶³

It is therefore essential to work out ways of facilitating the recruitment of participants from under-represented populations for clinical studies. More broadly, if the promise of more precise individualized medicine is to be realized, not only more diverse research participants, but also more diverse investigators, funders and editors need to be encouraged, in order to better reflect the demographics of society and its healthcare needs.⁶⁴ In this regard, the pluralist spirit of contemporary legal culture can certainly make a valuable contribution to the appreciation and promotion of any differences shown to have a sound scientific basis.

On the other hand, policy makers should consider instruments such as affirmative action to restore balances and equality. Some of the strategies that have been adopted to deal with Covid-19 provide useful topical examples of possible directions.

A few months before the Covid-19 vaccines began to be approved, many countries started to consider which criteria to adopt in choosing who in their populations to vaccinate first. Having established health workers as their absolute priority, more controversial criteria had to be evaluated. In the United States, for instance, the Centers for Disease Control and Prevention and the Advisory Committee on Immunization Practices considered the contentious option of prioritizing the vaccination of Black and Latino people, who have disproportionately fallen victim to Covid-19. The U.S. National Academies of Sciences, Engineering, and Medicine, too, have recommended prioritization of socioeconomically and epidemiologically disadvantaged racial minorities and the World Health Organization has cautioned that “colorblind” allocation frameworks could perpetuate or exacerbate existing injustices.⁶⁵

⁶² Referring to “the process whereby an individual or groups of people attribute negative characteristics to other individuals or groups of people that set them apart as representing that which is opposite to them” (P. ROHLER, *Othering*, in T. TEO (ed), *Encyclopedia of Critical Psychology*, New York, 2014).

⁶³ G. SIRUGO, S.M. WILLIAMS, S.A. TISHKOFF, *The Missing Diversity in Human Genetic Studies*, in *Cell*, 177(1), 2019, pp. 26-31. The same problem can be observed regarding clinical trials in general and has recently been pointed out in relation to anti-Covid vaccines (L.E. FLORES et al., *Assessment of the Inclusion of Racial/Ethnic Minority, Female, and Older Individuals in Vaccine Clinical Trials*, in *JAMA*, 4(2), 2021, e2037640).

⁶⁴ G. ADIGBLI, *Race, science and (im)precision medicine*, in *Nature Medicine*, 26, 2020, pp. 1675-1676.

⁶⁵ WORLD HEALTH ORGANIZATION, Strategic Advisory Group of Experts (WHO/SAGE), *Values framework for the allocation and prioritization of COVID-19 vaccination*, 14 September 2020, online: https://apps.who.int/iris/bitstream/handle/10665/334299/WHO-2019-nCoV-SAGE_Framework-Allocation_and_prioritization-2020.1-eng.pdf?ua=1.

As of early March 2021, and despite the efforts shown by the Biden administration,⁶⁶ vaccine distribution data demonstrate that the concerns underpinning the above deliberations are all too real.⁶⁷

These positions, however, have been challenged by some medical experts, who are not convinced that prioritization on grounds of race has any sound scientific basis. And some legal experts have questioned whether this “reverse discrimination” could be considered lawful by courts, concluding that it would be more appropriate to adopt vaccine distribution formulas based on factors like geography, socioeconomic status, and housing density that would favor racial minorities de facto, without explicitly referring to race.⁶⁸ Another complicating factor is that Black Americans would not necessarily welcome vaccine priority,⁶⁹ probably because many do not trust the medical establishment, given the generations of ethical abuse that they have suffered.

A recent South African court decision provides fascinating evidence of the sensitivity of the social issues involved in such matters: the court had to decide on whether to use “race” as one of the criteria in allocating Covid-19 related financial aid, and its ruling, that the “Constitution read as a whole cannot be construed as a libertarian constitution” (as opposed to egalitarian) “or as a race-neutral constitution”, was greeted without particular surprise. To ignore race, according to the Court, would be to erase the country’s “egregious history in which race overlaid by class and gender was the central determinant of the distribution of resources in our society for more than 300 years of its existence.”⁷⁰ The concept of race will not go away simply because it is denied: race should be spoken about in terms of current racism, to combat socioeconomic disparities and to move from a “race blind” to a “race conscious” approach. Race, in its configuration as a multifactorial complex concept, cannot simply be overlooked if real equality is to be built⁷¹. The political nature of race requires concrete analysis of various domains in order to determine, firstly, when and where using the concept outweighs the costs⁷² and, secondly, which political actions can redirect its effects.

⁶⁶ S. GAY STOLBERG, *As Biden Pushes for Racial Equity in Vaccination, Data Is Lagging*, in *The New York Times*, 9 February 2021, online: <https://www.nytimes.com/2021/02/09/us/politics/biden-vaccination-race-data.html>.

⁶⁷ So far, 41 States in the U.S. have released data on vaccine distribution by race and ethnicity, showing great disparities (<https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-race-ethnicity/>). Of relevance here is that data are essential to prioritizing racial and ethnic equity: as of 1 March 2021, data collected by the CDC showed that race/ethnicity was known for just over half (54%) of people who had received at least one dose of the vaccine (<https://covid.cdc.gov/covid-data-tracker/#vaccination-demographic>).

⁶⁸ H. SCHMIDT, L.O. GOSTIN, M.A. WILLIAMS, *Is It Lawful and Ethical to Prioritize Racial Minorities for COVID-19 Vaccines?*, in *JAMA*, 324(20), 2020, pp. 2023-2024. According to the Authors, public health agencies “should not exacerbate racial divisions” with vaccine allocation decisions, and have an opportunity to become “agents of change toward improving social and racial justice.”

⁶⁹ In a late November poll by the Pew Research Center, only 42% of Black adults said they would “probably” or “definitely” take the vaccine, compared with 61% of white, 63% of Latino and 82% of Asian adults (<https://www.pewresearch.org/science/2020/12/03/intent-to-get-a-covid-19-vaccine-rises-to-60-as-confidence-in-research-and-development-process-increases/>).

⁷⁰ Case no. 21424/2020, commented by P. DE VOS, *Court ruling on Covid-19 relief criteria affirms that the pandemic is not the ‘great equaliser’*, in *Daily Maverick*, 23 June 2020.

⁷¹ As recently stated: “Dislodgement of race from research may hide still-evident and often egregious episodes of health disparities”, see J.P.A. JOANNIDIS et al., *Recalibrating the Use of Race in Medical Research*, in *JAMA*, 325(7), 2021, pp. 623-624.

⁷² M.R. JAMES, *The political ontology of race*, cit., pp. 106-134.

4. From yesterday's discrimination to tomorrow's: A.I. as a multiplier or reducer of racial bias?

A.I. technologies are having a significant impact on the debate around the definition of the concept of race, its boundaries of truth, and its role in contemporary societies. These technologies are developing rapidly and their interaction with biotechnologies could very possibly provide immense human health benefits. In this, as in many other fields, “The way we approach AI will define the world we live in”.⁷³ However, as is so often the case with transformative technologies, new opportunities are accompanied by new risks.⁷⁴

One of the many potential pitfalls of artificial intelligence applications - already widely discussed by legal experts - is the existence of biases that inevitably affect the functionality of these new applications of technology. Such biases may concern the data sets used (What characteristics do they include? Where do they come from? How are the data collected and selected?),⁷⁵ the algorithms applied (How are they structured? Can they themselves be biased in their operation?), the interaction between datasets and algorithms (Is it possible for bias to emerge, despite the accuracy of the dataset and the correctness of the algorithm?).⁷⁶

This issue is extremely relevant to both fully and partially automated decisions (in the latter, “automation bias” is accompanied by the human tendency to be influenced by the “algorithmically prepared” decision).⁷⁷

Of particular concern to us here is the risk that AI applications either produce new discriminations or reproduce and amplify old ones. The new systems can inherit human racial prejudices and reproduce them in digital technological life, thus reinforcing the role of a category which has no scientific basis. Examples are already familiar: consider the case of self-driving cars that detect pedestrians with different skin tones with different levels of accuracy⁷⁸ thereby exposing darker-skinned people to greater risk; the use of criminal risk assessment technology which has led to black individuals

⁷³ COM (2018) 237 final, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, *Artificial Intelligence for Europe*, 25 April 2018, in www.ec.europa.eu, p. 1.

⁷⁴ J. T. O'BRIEN, C. NELSON, *Assessing the Risks Posed by the Convergence of Artificial Intelligence and Biotechnology*, in *Health Security*, 18(3), 2020, pp. 219-227.

⁷⁵ As highlighted by the EU Commission, “The quality of the data sets used is paramount to the performance of AI systems. When data is gathered, it may reflect socially constructed biases, or contain inaccuracies, errors and mistakes. This needs to be addressed prior to training an AI system with any given data set” (COM(2019) 168 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Building Trust in Human-Centric Artificial Intelligence*, p. 5).

⁷⁶ See A. SANTOSUOSSO, M. TOMASI, *Diritto, Scienza e Nuove Tecnologie*, 3 ed., Milano, 2021, p. 353.

⁷⁷ Cfr. I.J. SKITKA, K.L. MOSIER, M. BURDICK, *Does automation bias decision-making?*, in *International Journal of Human-Computer Studies*, 1999, p. 991.

⁷⁸ A. HERN, *The racism of technology - and why driverless cars could be the most dangerous example yet*, in *The Guardian*, 13 March 2019, referring to B. WILSON, J. HOFFMAN, J. MORGENSTERN, *Predictive Inequity in Object Detection*, in [arXiv:1902.11097](https://arxiv.org/abs/1902.11097), 21 February 2019.

being sentenced to harsher criminal sentences because of a higher risk of recidivism;⁷⁹ the companies which have started to use race-detection software to understand how certain customers use their products, who looks at their ads, or what people of different “racial” groups like;⁸⁰ the healthcare companies that rely on algorithms that deem Black patients less worthy of critical healthcare than other groups with similar medical conditions.⁸¹

These examples explain why, as of 2019, in US cities such as San Francisco, Portland, Oakland and Boston, ordinances have been issued prohibiting the use of facial recognition by municipalities and individuals. These decisions came after a MIT study found that facial analysis programs had an error rate of up to 35% for darker skinned women⁸² and the wrongful arrest of innocent people had sparked protests in a number of cities.⁸³ In New York, Amnesty International launched a global campaign to ban the use of facial recognition systems, on the grounds that they exacerbate systemic racism.⁸⁴

The danger is insidious because, in most cases, the technology is not created with discriminatory intent; artificial intelligence systems are assumed to be color blind, since racial information is not usually an input.

Nonetheless, even unintentional or unconscious discrimination can, of course, cause harm. The combination of AI technology and an unjust social system risks both spreading and reinforcing injustice and vesting decisions based on A.I. with a character of neutrality and objectivity that they do not always deserve.⁸⁵

⁷⁹ In 2016 COMPAS the US news organization *ProPublica* reported that COMPAS (Correctional Offender Management Profiling for Alternative Sanctions), an algorithm widely used in the US to guide sentencing by predicting the likelihood of a criminal reoffending, was racially biased. According to the analysis, the system predicts that black defendants pose a higher risk of recidivism than they actually do, and the reverse for white defendants. See J. ANGWIN, J. LARSON, S. MATTU, L. KIRCHNER, *Machine bias: There's software used across the country to predict future criminals. And it's biased against blacks*, in *ProPublica*, 23 May 2016, online: <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>. The same risk is highlighted by the EU Commission, according to which: “Certain AI algorithms, when exploited for predicting criminal recidivism, can display gender and racial bias, demonstrating different recidivism prediction probability for women vs men or for nationals vs foreigners” (COM(2020) 65 Final, *White Paper on Artificial Intelligence - A European approach to excellence and trust*, p. 11). Reference goes to S. TOLAN, M. MIRON, E. GOMEZ, C. CASTILLO, *Why Machine Learning May Lead to Unfairness: Evidence from Risk Assessment for Juvenile Justice in Catalonia*, ICAIL '19: Proceedings of the Seventeenth International Conference on Artificial Intelligence and Law, 2019, pp. 83-92.

⁸⁰ P. OLSON, *The quiet growth of race-detection software sparks concerns over bias*, in *The Wall Street Journal*, 14 August 2020, at: <https://www.wsj.com/articles/the-quiet-growth-of-race-detection-software-sparks-concerns-over-bias-11597378154>.

⁸¹ Z. OBERMEYER, B. POWERS, C. VOGELI, S. MULLAINATHAN, *Dissecting racial bias in an algorithm used to manage the health of populations*, in *Science*, 336, 2019, pp. 447-453.

⁸² J. BUOLAMWINI, T. GEBRU, *Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification*, in *Proceedings of Machine Learning Research*, 81, 2018, pp. 1-15.

⁸³ A case of faulty facial recognition leading to wrongful arrest is reported by K. HILL, *Wrongfully Accused by an Algorithm*, in *The New York Times*, 24 June 2020, at: <https://www.nytimes.com/2020/06/24/technology/facial-recognition-arrest.html>.

⁸⁴ See the campaign *Ban the Scan in New York* which identifies facial recognition as a threat to “the rights of Black and Brown people” (<https://banthescan.amnesty.org/>).

⁸⁵ J. DANIELS, *‘Colorblind’ Artificial Intelligence Just Reproduces Racism*, in *Huffpost*, 16 January 2019.

In order to achieve equality, the promotion and protection of difference must be ensured when designing A.I. technologies. Most immediately, perhaps, is the need to address the underrepresentation of women and people of color in technology, and the under-sampling of these groups in the data fed to AI systems.⁸⁶

Only if properly and pluralistically constructed, implemented and interpreted, can AI contribute to a fairer society. According to some studies, the true potential of AI lies in revealing existing biases and thereby motivating societal change and, for example, correcting disparities in health care.⁸⁷ If this potential is not met, however, a technology optimized for a small part of the world will circulate and - regardless of the criteria used to identify us - benefit only certain groups of people.

⁸⁶ J. BUOLAMWINI, *Artificial Intelligence Has a Problem With Gender and Racial Bias. Here's How to Solve It*, in *Time*, 7 February 2019.

⁸⁷ For instance, solutions of algorithmic fairness have been developed to create models designed to produce non-discriminatory predictions by limiting bias with respect to predicted outcomes for protected identities, such as race or gender. See M.D. MCCRADDEN, S. JOSHI, M. MAZWI, J.A. ANDERSON, *Ethical limitations of algorithmic fairness solutions in health care machine learning*, in *The Lancet Digital Health*, 2(5), 2020, E221-E223.