TEACHING THE HISTORY OF SCIENTIFIC RACISM: A CRITICAL IMPERATIVE FOR ANTI-RACIST PEDAGOGY

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ABSTRACT. Drawing from a review of literature that has explored the history of scientific racism, this article considers how understanding the history of race, as an 18th- and 19th-century invention of Western Europe and the United States, can enhance Canadian anti-racist teacher education. I begin with a review of key conceptual building blocks of race — racial categories, racial hierarchies, White male intellectual superiority, and racial purity — and then outline pivotal historical stages that led acclaimed researchers to denounce race science in the mid-20th century. To conclude, I draw from anti-racist theory to discuss implications for present-day Canadian teacher education regarding who benefits from racism, who can be racist, school-based deficit and essentialist racist practices, and K–12 curricular connections.

ENSEIGNER L'HISTOIRE DU RACISME SCIENTIFIQUE : UN IMPÉRATIF CRITIQUE POUR UNE PÉDAGOGIE ANTIRACISTE

RÉSUMÉ. Cet article examine comment la compréhension de l'histoire de la race peut enrichir la formation antiraciste des enseignants au Canada. Je commence par une analyse des principaux fondements conceptuels de la notion de race, puis je retrace les étapes historiques décisives qui ont conduit des chercheurs reconnus à dénoncer la science raciale au milieu du XX° siècle. Pour conclure, je mobilise la théorie antiraciste afin de discuter des implications pour la formation actuelle des enseignants au Canada, en ce qui concerne les bénéficiaires du racisme, la question de savoir qui peut être raciste, les pratiques scolaires déficitaires et essentialistes racistes, ainsi que les liens avec les programmes scolaires de la maternelle à la 12° année.

On page 1 of *Racial Theories* (1998), Michael Banton argued, "To speak of people as 'mixed-raced' implies that there are pure races, a notion known for a century to have no scientific justification" (p. 1). As someone racialized as mixed-race — White, Indigenous, and Asian — I remember

reading this statement 25 years ago with a feeling of shock. That race has no scientific justification was new to me and caused me to question my identity and assumptions. While I had experienced and felt anti-Indigenous and anti-Asian racism throughout my life growing up in Western Canada and was able to navigate and privilege from many White spaces, I lacked the knowledge and language needed to understand and challenge racism. Through graduate studies, I therefore sought to understand how and why race was invented, and what this knowledge might mean for me as a young woman teacher who hoped to become an anti-racist teacher educator in contexts of continuing colonialism.

Applicable across post-secondary disciplines, this article argues anti-racist teacher education can be strengthened when teacher candidates review the history of race. Undergraduates often begin their programs with an understanding that race is a social construct, yet I have found most students continue to lack knowledge regarding the history of race as 18th-and 19th-century Western European and American pseudoscience. The purpose of this article is to revisit specific historical ideas constructed about race that have assisted me with understanding racism. To do so, I provide a review of the history of race, focusing on key conceptual building blocks and historical stages that led to the rejection of race science, and then discuss how this knowledge has impacted my pedagogy. I hope this article will spur further interest in research considering the history of race and present-day anti-racist education from diverse perspectives.

Literature and methods

Racialization, the process of categorizing humans as belonging to a particular artificial race – and thus a biological, intellectual, and moral set of traits - and acting on these false beliefs, is embedded in Canada and other territories founded on colonialism. Racial identifications, although biologically false, as will be demonstrated throughout this article, continue to carry the weight of intergenerational, historical, and embodied experiences of subordination and power. To denote the immense meaning attached to racialized identifications, I have capitalized all present-day racial identities throughout the article. While Canadian research concerning race, schools, and teacher education has examined the reproduction of Whiteness (e.g., Gebhard, 2020; Hess, 2018; Pratt & Hanson, 2020) - the recirculation of historical racist laws (e.g., Guo & Guo, 2021), the scientific invalidity of race within larger analyses (e.g., Daniel & Escayg, 2019), and racialization within higher education (Henry et al., 2017) – a lack of scholarship exists regarding the value of studying the history of race. An exception is Willinsky's (1998) Learning to Divide

the World, which traced the history of scientific racism — pseudoscientific studies that falsely claim to provide evidence of White biological intellectual and moral superiority — as a tool of colonialism within Canadian high school textbooks.

The proceeding article is inspired by Willinsky (1998) and draws from my master's thesis (Baker, 2007), which examined the history of race, Indigenous racialization, and Saskatchewan education. That study was based on a textual analysis of literature produced by scholars who have studied the history of race extensively (e.g., Banton, 1977, 1998; Gould, 1996; Hannaford, 1996; Kaye, 1997; Malik, 1996; Smedley, 1999; Willinsky, 1998), as well as select primary sources. I also examined post-colonial theory (e.g., McClintock, 1995; Stoler, 2002; Young, 1995) and racialization studies (e.g., Frankenberg, 1993; Gilman, 1985; Goldberg, 1993; Hodes, 1999; Roediger, 1994; Wetherell & Potter, 1992). This article presents condensed versions of select parts of my master's thesis and extends that work by considering present-day conceptual and pedagogical implications for Canadian K–12 anti-racist education.

REMEMBERING RACE

Although anti-racist education has gained increased legitimacy within Canadian teacher education, the concept of race remains largely misunderstood. It is valuable to note that biological racism was first renounced by prominent scientists after the horrors of the Nazi regime were revealed to the world, and with changing political climates driven by civil rights movements. Scholars such as anthropologist Juan Comas joined together for the first time to publicly disavow scientific racism in *The Race Question in Modern Science* (1956) by the United Nations Educational Scientific and Cultural Organization (UNESCO). While scientific racism continues in sporadic academic spaces (Saini, 2019), it remains contested by a vast majority of scientists across disciplines and has been discredited for over 6 decades. Primary artificial ideas constructed about race, however, continue to inform racist ideologies. To disrupt racism, it is helpful to understand what race is, which, I argue, can partially be accomplished by examining the history of race.

Key conceptual building blocks of race

Race as it is known in the 21st century is a relatively new concept. Lerner (1997) explained, "For centuries [race] was almost identical with kin. The term 'race' first appeared in the 16th century; only in the 19th century did it become biologized" (p. 184). Prior to colonial expansion, Western Europeans viewed race as "a description of social distinctions, not of

colour differences" (Malik, 1996, p. 91). Common understandings of race shifted in the 18th century as White male colonial elites encountered a fundamental contradiction when they were forced to reconcile the horrors of imperialism with Christian and Enlightenment ideals that espoused equity, tolerance, and compassion (Lerner, 1997; Miles, 1989). Contradictory ideologies consequently led to the industry of race science, as justification was needed to account for the atrocities of Western European and American conquest.

Not all White Christian men supported race science, but the concept of race originated from White Christian male scholars and scientists in Western Europe and the United States. Contemporary racism can be traced to pseudoscientific racial theories prominent throughout the end of the 18th century until the mid-20th century. All racial theorists categorized humans into hierarchies of worth based on skin colour and positioned White male identities as biologically superior. Racial theorists debated topics such as the humanness of various races, the number and origins of races, the existence and structure of racial hierarchies, and if races are types, species, or subspecies. These queries were contemplated and responded to only by White male scientists who largely had not witnessed or interacted with populations they classified as inferior (Smedley, 1999). Yet, racial theories authorized empire-building through the oppression and genocide of humans constructed as non-White, including populations such as the Irish (Roediger, 1994), which reflected the shifting desires of imperial powers and the absolute artificiality of racial science (Goldberg, 2000).

The following section reviews central ideas conceptualized by racial theorists that continue to underscore contemporary racism, but it does not provide a comprehensive review of the vast and in-depth history of race. The article also does not discuss the world-wide atrocities justified by racial theories. Racial theories were produced to reinforce and authorize systemic racism, which until the mid-20th century was outright, blatant, and celebrated publicly through the subjugation, dispossession, and complete dehumanization of all those racialized as non-White. When teaching about key conceptual building blocks of race, I hold myself and students responsible to honour this reality. The proceeding sections outline key ideological building blocks of race, as well as pivotal historical stages that led to the eventual rejection of racial theories.

Racial categories

A powerful idea theorized by racial scientists is that humans originated from and belong to distinct hierarchical races or species (Corcos, 1997). Although European Enlightenment scholars such as Curvier, Bernier, Voltaire, Kant, and Gottfried von Herder wrote influential papers regarding race, Carolus Linnaeus (1707–1778), a Swedish botanist and father of taxonomy, is identified as the first to divide humans into racial categories according to geography and skin colour (Banton, 1998; Gould, 1996). Linnaeus was not particularly interested in the classification of humans, however, and by the 10th edition of Systema Naturae (1758) he had classified approximately 4,400 species of animals and 7,700 species of plants.

When first classifying humans, Linnaeus identified two categories: *Homo sapiens*, representing so-called normal human beings, and a *Homo monstrous* category. As Willinsky (1998) explained, the origins of Linnaeus's *Homo monstrous* myth can be traced to "the Romans and Greeks [who] had identified monstrous races in Ethiopia and other parts of Africa, setting them apart from the true Africans" (p. 161). Humans who lived outside of civilized society had long been represented with a wide assortment of imaginary traits. For instance, as Willinsky (1998) highlighted, *The Nuremberg Chronicle* of 1493 portrayed "a man with a dog's head, another with a single eye, another with no head, and yet another with his feet pointing backward, and on it goes through fourteen variations" (p. 161).

It is through such fanciful imaginary tales that Linnaeus came to classify the *Homo monstrous* race and grouped *Homo sapiens* into six varieties:

Ferus (four footed, mute, hairy); americanus (red, choleric, erect); europaeus (white, ruddy, muscular); asiaticus (yellow, melancholic, inflexible); afer (black, phlegmatic, indulgent); [and] monstrous (further subdivided to include deviant forms from several regions). (Banton, 1998, p. 20)

Gould (1996) explained that *ferus* were said to be "wild boys occasionally discovered in the woods and possibly raised by animals" (p. 404).

According to Gould (1996), Linnaeus focused on the americanus, europaeus, asiaticus, and afer geographic groups, and aligned these individually with the colours red, white, yellow, and black (often referred to in modern times as Indigenous, White, Asian, and Black). Descriptors applied to each racial category (see above quotation) represented skin pigmentation, temperament, and posture. Significantly, Gould (1996) stressed that Linnaeus's theory represented geographical populations and

did not indicate inferiority or superiority, as his model was "not linear or hierarchical" (p. 405). Rather, as Gould (1996) stressed, "When we epitomize his scheme as an essential picture in our mind, we see a map of the world divided into four regions, with the people in each region characterized by a list of different traits" (p. 405).

Racial hierarchies

In addition to categorizing humans according to artificial races, racial theorists following Linnaeus organized their invented racial categories into a variation of hierarchies, reflecting the era's obsession with the "Great Chain of Being" in which God created all living things and organized each into a hierarchy (Lovejoy, 1936). While Linnaeus did not place his racial groupings into a hierarchy, his theory nevertheless placed humans into categories which clearly designated White favourability and were eventually theorized as pure and fixed.

For instance, Linnaeus's work influenced J. F. Blumenbach (1752–1840), a German naturalist and anthropologist. Blumenbach is credited as the first to place racial categories into a hierarchy, thereby establishing "the most influential of all the racial classifications" (Gould, 1996, p. 399). In addition, Blumenbach coined the term "Caucasian," basing it on an assertion that the residents of Russia's Caucasus region possessed "supposed maximum beauty" (Gould, 1996, p. 402). In On the Natural Variety of Mankind, Blumenbach (1795/2000) explained:

I have taken the name of this variety from Mount Caucasus, both because its neighbourhood, and especially its southern slope, produces the most beautiful race of men, I mean the Georgian ... For in the first place, that stock displays, as we have seen ... the most beautiful form of the skull, from which, as from a mean and primeval type, the others diverge. (p. 31)

Accordingly, Blumenbach categorized humans into a hierarchy of five races based on perceived physical beauty, marking a shift from Linnaeus's geographical model.

Moreover, Blumenbach (1795/2000) argued "we may fairly assume [the colour white] to have been the primitive colour of mankind, since ... it is very easy for that to degenerate into brown, but very much more difficult for dark to become white" (p. 31). Caucasians, or so-called White humans, were constructed as the original pure race of which all other races derived. It was not Blumenbach's intent, though, as Gould (1996) explained, to create a hierarchy based on racial purity and human worth. Blumenbach observed variation within each category and argued human populations

are not fixed (Malik, 1996). Rather, Blumenbach maintained humans belong to the same species and, like Linnaeus, did not define each race as inherently inferior or superior. Yet, that racial categories were placed into a hierarchy that positioned the White race as original and favourable was replicated in all forthcoming racial science.

White male intellectual superiority

From the taxonomical origins of racial theories to the disciplines of history, English literature, and the emerging fields of anthropology and biology, a wide spectrum of researchers produced and legitimized prevalent beliefs in inherent White male intellectual superiority. This major theme of 19th-century racial theory was influenced by patriarchal ideology that constructed women and femininity as innately uncivilized. Like all women, including White women, non-Caucasians were deemed mentally unfit and incapable of governing civilized society. Prior to the social construction of race, however, "open assertions of *permanent* inferiority were exceedingly rare" (Fredrickson, 1971, as cited in Banton, 1998, p. 49). Stated previously, within rising Western liberal democratic movements, informed by Enlightenment and Christian ideals, it was necessary to theorize the colonized as inherently inferior to rationalize colonial dispossession, slavery, and genocide.

Primary to racial theories was an assumption of innate non-White and female intellectual inferiority. For instance, in An Account of the Regular Gradation of Man, published in 1799, English physician Charles White (1728–1813) theorized that God created each race with varying levels of intelligence (Banton, 1998). Overtly racist pseudoscience, White proposed that Caucasians were created with the highest levels of intelligence and "Negroids" or Black people were the least intelligent because of skin pigmentation and supposed close association to apes (Smedley, 1999). Charles White's racist propaganda became increasingly compelling to elite White powers, as his theories legitimized common racist prejudices. As Smedley (1999) explained, "[White's theory] took the question of the Negro's place in the natural scheme so widely held in folk beliefs and placed it unambiguously in the realm of science" (p. 228).

In Crania Americana (1839) and Crania Aegyptiaca (1844), American physician Samuel Morton (1799–1851) further argued human intelligence is determined by skull and brain size. As Smedley (1999) explained, "Acting on the presupposition that brain size directly correlated with intelligence, Morton asserted an idea already on its way to orthodoxy in science: the natural superiority of the white races over all others" (p. 232). To prove his hypothesis, Morton falsified skull measurements and claimed

small brain sizes of inferior races prevented civilizing capacities (Banton, 1998). For instance, Morton argued Indigenous people in North America were "inherently savage, and it would be difficult, if not impossible, for them to survive under the onslaught of European superiority" (Smedley, 1999, p. 232). Others such as George Gliddon, Josiah Nott, and Louis Agassiz compared non-Caucasian populations to children in *Types of Mankind* (1854). Similarly, race scientist George Cuvier ignored historical and archeological evidence indicating ancient Egyptian civilization was Black rather than White (Smedley, 1999). Although race science has since been disproven (Banton, 1998; Gould, 1996), all racial theorists advanced false claims of biological White male intellectual and moral superiority.

Racial purity

While Linnaeus and Blumenbach did not subscribe to the fixity of races, subsequent racial scientists theorized each race as a separate species, denoting racial purity. An ideological building block of race, racial purity was theorized through what Young (1995) has termed hybridity theory. Theories of human hybridity were powerful mechanisms utilized by colonial authorities to maintain sharp racialized socio-economic divisions, regulating access to land, labourers, resources, and institutions (McClintock, 1995; Stoler, 2002). Race scientists took three primary positions concerning racial hybridity (Young, 1995). First, as racial theorists were Christian, a need existed to explain how all humans derived from Adam and Eve, who were assumed to be Caucasian. Polygenesis creation theories therefore claimed each race is a separate species with its own origin. The theory proposed that Caucasians derived from Adam, and other human species or races emerged from inferior stocks created separately by God. Polygenesis theories were grounded in real biological evidence of the inability of two distinct species to reproduce, but they shifted as evidence indicated humans of different races could in fact do so. For example, when Morton found the offspring of two races could procreate, he "intuited that human hybrids somehow contradicted the law of nature. Eventually he concluded that interfertility did not prove the unity of the human species" (Smedley, 1999, p. 233).

A second strand of hybridity theory can be categorized as *decomposition* theory (Young, 1995), which asserted that mixed-race (so-called hybrid) children would eventually become infertile or revert to a parent race. In *Types of Mankind*, Agassiz, Nott, and Gliddon (1854, as citied in Banton, 1998) argued "hybrids could not reproduce between themselves but could do so when mated with the parent stock" (p. 57). Interconnected with decomposition theory was the *proximity of race theory*, influential from the

1850s to the 1930s, based on the premise that greater similarities between racial groups led to fertile offspring (Young, 1995). Paul Broca, for instance, supported proximity of race theories in *On the Phenomena of Hybridity in the Genus Homo*, published in 1858 (Young, 1995). To Broca, it was possible for racial groups similar in physical appearance, intellect, and civilizing capacity to create fertile children. Children of those with greater racial differences, he argued, would not survive as a separate race.

Amalgamation, a third strand of hybridity theory (Young, 1995), posited that all races can interbreed and produce offspring but, if not regulated, would produce a new human race. Arthur de Gobineau (1853/2000), for example, attempted to prove that racial mixture would facilitate the downfall of Western civilization due to the gradual degeneration of the Caucasian race:

So long as the blood and institutions of a nation keep to a sufficient degree the impress of the original race, that nation exists ... But if ... the people have been absolutely drained of its original blood, and the qualities conferred by the blood, then the day of its defeat will be the day of its death ... for it has changed its race ... It is therefore degenerate. (p. 52)

Similarly, racial theorists such as Agassiz and Vogt claimed racial mixture would create a "mongrel group that makes up a 'raceless chaos,' merely a corruption of the originals, degenerate and degraded, threatening to subvert the vigor and virtue of the pure races with which they come into contact" (Young, 1995, p. 18). Racial mixture, though some argued unavoidable due to natural laws of attraction, was perceived as a threat to White patriarchal colonial power. Raceless chaos arguments therefore reflected White fears of anti-colonial abolitionist revolts.

Darwin's theory of evolution

Charles Darwin's On the Origins of Species by Means of Natural Selection, published in 1859, challenged prevailing racial science ideologies. Racial theorists began to question how Darwin's theory of evolution might affect popular conceptions of White purity and superiority. This questioning grew stronger with the publication of The Descent of Man, and Selection in Relation to Sex in which Darwin (1874) argued that all humans are descendants of one species:

Nevertheless, all the races agree in so many important details of structure and in so many mental peculiarities, that these can be accounted for only by inheritance from a common progenitor; and a progenitor thus characterized would probably deserve to rank as man. (p. 633)

Darwin argued each species originated from a single life form and, as a result, members of a species share common ancestry and can procreate. He argued that beneficial mutations within a species — such as those that assist with surviving changing climates — are passed on intergenerationally through natural or sexual selection, a hypothesis which has since been confirmed by modern scientists.

Darwin's theory of evolution further disputed racial science in numerous ways. For instance, because all humans are of the same species, and all can procreate, racial hybridity theories were contested. Indeed, Darwin argued phenotypic variation within a species is essential to survival and occurs gradually over millennia. In addition, Darwin found intelligence indicates how particular populations adapt to the environment to ensure survival and is relative, adaptive, and contextually specific. Hence, according to Darwin's theory, race does not determine intelligence, nor can it explain social inequality.

Numerous scholars have praised Darwin for his Christian-influenced humanitarian ideology that contested scientific racism (Banton, 1998; Gould, 1996; Hannaford, 1996; Kaye, 1997; Malik, 1996). Yet, praise for Darwin often excludes or justifies his depictions of non-White people and all women as naturally primitive. Darwin did argue less civilized societies are a result of natural evolutionary processes, but he did so while maintaining primitive states are unequivocally intellectually inferior to advanced societies:

When civilized nations come into contact with Barbarians the struggle is short, except where a deadly climate gives its aid to the Native race ... We can see that the cultivation of the land will be fatal in many ways for savages, for they cannot, or will not, change their habits ... and so it may be with the evil effects of spirituous liquors, as well as with the unconquerably strong taste for them shown by so many savages. (Darwin, 1871/2000, p. 70)

Referring to women, Darwin (1874) stressed in The Descent of Man:

It is generally admitted that with women the powers of intuition, of rapid perception, and perhaps of imitation, are more strongly marked than in man; but some, at least, of these faculties are characteristic of the lower races, and therefore of a past and lower civilization. The chief distinction in the intellectual powers of the two sexes is shown by man attaining to a higher eminence in whatever he takes up. (p. 563)

Here, Darwin constructed all women and non-White men as primitive, intuitive, weak, prone to addictions, and irrational compared to White

men. At the same time, it is undeniable that Darwin's theory of evolution challenged scientific racism in profound ways.

Social Darwinism and eugenics

Unlike Darwin, social Darwinists argued that the natural superior positioning of the White race could be accelerated through institutional policies and laws. These applications of Darwin's ideas, forwarded by philosophers and scientists such as Herbert Spencer, were shaped by "the intellectual and political climate of mid to late Victorian England, and not the theory of evolution itself" (Malik, 1996, p. 90). Essentially, social Darwinists argued that White superiority and racial class-based hierarchies are natural outcomes of evolution and therefore social policies that protect White dominance are practical and ethical. For example, British imperialist Karl Pearson "employed the language of Social Darwinism to promote and justify Anglo-Saxon expansion and domination of other peoples" (Perry et al., 1991, p. 215). Those who invested in what is now referred to as "social Darwinism" did not use the term. Rather, it is a modern label referring to the general processes of utilizing scientific racism and manipulating Darwin's theory of evolution to naturalize the institutionalization of White dominance.

Banton (1998) explained, "It is difficult to find among the various [social Darwinist authors any group who shared a common set of principles, apart from those who were supporters of the Eugenics Society" (p. 91). According to McLaren (1990), "Old-fashioned social Darwinists were ... willing to let the struggle for existence continue; the eugenicists called for a halt" (p. 18). Francis Galton, a cousin of Darwin, introduced the term "eugenics" as "the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage" (1904/2000, p. 79). Galton was concerned with controlling the reproduction of all assumed inferior humans, including so-called inferior segments of the White race (Dennis, 1995). For eugenicists, it was believed that a strong White population would protect the superior racial stock when at war. Eugenicists sought to not only preserve White dominance but to also eliminate or control White-racialized people deemed undesirable, such as the disabled, mentally ill, elderly, poor, non-Christians, criminals, and homosexuals.

Much of the eugenicists' agenda centered around controlling the production of so-called unfit populations through sterilization and the regulation of sexual relations. Unlike Darwin, who argued high reproduction rates and racial mixture were beneficial to evolution, eugenicist ideology was informed by race science and thus argued that high

birth rates amongst undesirable populations led to human degeneracy. Malik (1996) explained, "For social Darwinists, and in particular for eugenicists, the problem was that the 'unfit' — most notably the working class — seemed to be more fertile than the 'fit'" (p. 91). Propagated by the notorious Nazi extermination program as racial hygiene and cleansing (Joseph & Wetzel, 2013), eugenicist societies originated first in the United States and were foundational to Canadian colonization processes.

Contemporary scientific racism

Constituting a key foundation of modern White supremacist ideology, race science was central to Canadian nation-building. As stressed previously, it was not until after the Second World War, when the horrors of the Nazi regime were witnessed globally, that world-renowned scientists spoke out collectively against race science and race itself through UNESCO's *The Race Question in Modern Science* (1956). This renunciation, however, has not eliminated structural racism or White dominance. Rather, as Margaret Mead predicted in 1968:

As long as genetic markers — pigmentation, hair form, facial configuration — are used to identify, stigmatize, or glorify certain portions of the population in ways that give them differential access to education, to economic resources, and to deference, the biological knowledge of the inheritance and significance of such characteristics will be socially and politically important. (p. 169)

Racial theories have rationalized genocide, dispossession of land, and human bondage, as well as catastrophic impacts on the environment and ecosystems. The idea of race as a biological reality, though disproven, is a mythology that lives on through well-intentioned practices, such as paternalism, that nevertheless secure White patriarchal dominance. Overt scientific racism, however, has not disappeared from academic research (Rutherford, 2021; Saini, 2019) and continues to inform White supremacist movements. White supremacy remains an urgent threat to Canada and differs substantially from normalized race-neutral institutionalized racism. Yet, whether White supremacist racism, which is overtly misogynist and anti-democratic, or the unconscious race-neutral racism of those who care about equality and reconciliation, each system of racism is informed by historical race theories.

IMPLICATIONS FOR ANTI-RACIST TEACHER EDUCATION

I agree with Lentin (2020) and Rutherford (2021) who have argued that stating race is a social construct is not an effective anti-racist practice. Learning about the history of race, however, can enhance capacities to

understand and dismantle systemic racism (Hannaford, 1996). Identifying the ideological building blocks of race in changing political discourse, through institutions, and through social practices is a critical component of anti-racist practice. Drawing from my experience as an anti-racist teacher educator, I have found that instruction regarding the history of race has strengthened teacher candidates' anti-racist comprehension. The following sections identify starting points that can be extended and applied to anti-racist dialogue and practice within, and also outside of, K-12 schools. I anticipate the following arguments may generate debate and I look forward to continued conversations.

Who benefits from racism?

Effective anti-racist education must begin with accurate definitions of racism. As reviewed in this article, racism consists of an ideology grounded in false notions of race and White superiority that is enacted through policies, laws, and practices safeguarding White social, structural, and institutional power and authority. Racism is not natural (Blum, 2002; Fenton, 1999; Hannaford, 1996; Omi & Winant, 1993). Grounded in pseudoscientific claims of White male intellectual and moral superiority, racism has always served the interests of White patriarchal communities. Understanding the history of race can prevent false accusations of reverse racism — that White people are targeted by racism. White people are oppressed by other systems of domination, and the hatred of all White people is a prejudice that can lead to White-targeted hate crimes, but the purpose of racism is to preserve White heteropatriarchal dominance.

Not all White-racialized people, however, are advantaged in similar ways. White individuals who actively support anti-racism can lose full access to their White status. Multi-racial White-presenting people often experience fluctuating access to White-racialized bodies (Harris, 1993; Ladson-Billings & Tate, 1995). For example, at one time classified as White, "the social construction of Whiteness relegates Latinos, as a multi-racial people, to an inferior status on the social hierarchy" (Hidalgo, 1998, p. 104). Class, gender, sexual orientation, and physical ability also converge with so-called racially pure White identities, regulating access to intergenerational social, economic, and political power (Frankenberg, 1993; Gilman, 1985; Hodes, 1999).

For instance, racial theorists ascribed to White women lower intelligence than White men, or simply excluded women from their hypotheses due to their legal status as non-human (Gould, 1996; Smedley, 1999). The inferior racial positioning of White women serves to control reproductive

rights and safeguard White purity (Bjork-James, 2020). Considering class, the construct of race situates poor, working, and middle-class White people as having more in common with White elites than non-White racialized people of similar socio-economic standings. As Derrick Bell (1988) has argued, the creation of a "Black sub-class enabled poor Whites to identify with and support the policies of the upper class" (p. 40). This superficial alignment has led many lower-class White people — though never attaining the same status as those they support — to vote in ways that sustain their economic subjugation.

Facilitating cross-racial anti-racist alliances, therefore, requires a willingness to seriously examine and counter injustices experienced by White-identified people. It is the artificiality of separate races that sustains disunity regarding racial justice advocacy. At the same time, it is essential to stress within anti-racist education that only White-identified people are structurally advantaged by racism.

Who can be racist?

After reviewing the history of race, it is clear that racism stems from ideology based on false and manipulated evidence. Therefore, it is incorrect to argue that only White people can be racist. Rather, everyone can internalize often unconscious beliefs in White intellectual and moral superiority. Just as all people can erroneously believe women are biologically inferior to men, and women can contribute to patriarchal power and misogyny, all people can hold racist viewpoints — that is, internalize and act upon conscious or unconscious beliefs that racial identity determines how humans learn, think, and behave. Numerous anti-colonial and critical race scholars have theorized this phenomenon (e.g., Adams, 1975; Anzaldúa, 1987; Bell, 1992; Fanon, 1952/2008; Lawrence, 1987; Peller, 1990).

The recognition that all people, regardless of how one is racialized, can hold or mimic assumptions of White superiority and participate in racism contradicts common mainstream definitions that claim racism equals prejudice and power, or that only White people can be racist. According to this interpretation, Indigenous, Black, and people of colour cannot be racist due to a lack of access to institutional and social power. This line of reasoning is dangerous for several reasons. Although Indigenous, Black, and people of colour do not hold institutional power to the same degree as White individuals due to racism, this lack of power is not absolute. For instance, Indigenous teacher educators, such as myself, hold power and can consciously or not enact Whiteness. Unexamined beliefs in White intellectual superiority, held by members of any racialized group, secure

White structural advantages. In addition, many multi-racial people present as White and suggesting that such individuals, myself included, cannot contribute to racism enables the bypassing of investigating White privilege. False assertions that only White people can hold social and institutional power, and thus be racist, may also prevent those racialized as non-White from identifying unconscious racism, supporting anti-racist education, and building cross-racial coalitions.

Yet — returning to the discussion regarding who benefits from racism — even when people racialized as non-White conform to racist practices, this process advantages White communities en masse (Bell, 1992). For example, when Black, Indigenous, and people of colour reprimand employees who challenge institutional racism, or choose to benefit socially from harassing individuals racialized as non-White through lateral violence, these practices preserve a White racial hierarchy. Inaccurate understandings of race and racism limit abilities to effectively challenge common present-day hegemonic myths that indirectly but nevertheless reify Whiteness — such as "only White people can be racist" or "White people are subordinated by racism, too."

Deficit and essentialized racist practices

Anti-racist education includes the study of racism and how to counter it as it manifests and adapts within changing conditions through an "action-oriented strategy" (Dei, 1996, p. 25). A firm understanding of the history of race can further strengthen anti-racist pedagogy through identifying school-based practices informed by normalized race thinking. As discussed, racial theorists constructed humans as biologically intellectually superior or inferior. Multiple studies over numerous decades have demonstrated how racialized assumptions about the intellectual and moral degeneracy of Indigenous, Black, and students of colour normalize teachers' racialized expectations, instruction, discipling, and academic streaming, thereby preserving White dominance (e.g., Irizarry, 2015; Liou & Rojas, 2019; Massey et al., 1975; Riley & Ungerleider, 2012; Shiller, 2010; Yosso, 2005). When well-intentioned teachers understand how such practices are directly informed by race science, this knowledge holds potential to disrupt deficit practices.

Also informed by race science, and intertwined with deficit racism, are assumptions regarding racial purity and cultural authenticity, expressed through biological essentialism. Race essentialism falsely claims that members of races must look a certain way, practice specific traditions, speak ancestral languages, and ascribe to knowledge systems associated with one's racialized identity (Grillo, 2003; Wetherell & Potter, 1992).

The racialization of culture is rooted in historical racial theories that constructed racial populations as pure, with innate traits passed on intergenerationally through biology. Schools reify essentialism through circulating false assumptions about students' cultural knowledge and identity. For example, rather than challenge systemic deficit racist practices that advantage White students, teachers might claim that Indigenous students have lower graduation rates because they do not know their cultural identity or cannot access their culture in school (St. Denis, 2007). Such beliefs are also taught through the curriculum when Indigenous people are associated only with static racialized conceptions of culture. Familiarity with the history of race science can support anti-essentialist and culturally responsive decolonial education. Zack (2001) has stressed, however, that "the elimination of essentialist racial ideology is not a question of changing words but of changing meanings" (p. 462). Changing how teachers talk about culture will not necessarily eliminate essentialist beliefs grounded in scientific racism.

Challenging deficit and essentialist school-based racism includes identifying practices informed by often subconscious beliefs in White intellectual superiority and purity. This process holds potential to strengthen all aspects of racialized schooling, such as curriculum development, assessment, disciplinary practices, parent engagement, funding, hiring and promotion, and school counselling. Racism adapts to survive as White dominance is countered, and therefore interrupting racist practices is central to racial justice (Bell, 1992).

K-12 curriculum connections

It is essential to introduce students to the history of race in age-appropriate ways prior to teaching about racism. Lessons about the history of race can be taught as early as Grades 2 and 3 through literature such as *Our Skin*: A *First Conversation about Race* (Madison et al., 2021). I have also taught Grade 4 and 5 students about the falsities of Linnaeus's and Blumenbach's race models. Students have found this history helpful in understanding racist societal outcomes they observe and experience. I also teach students about Canadians of all racialized identities who have resisted racism and emphasize racial justice progress that has resulted from the sacrifices of individuals, and that we as Canadians can be proud to continue this historical legacy.

Numerous resources also assist with upper-level instruction, such as the three-part series *Race: The Power of an Illusion* (Adelman, 2003). This American resource can be applied to examine Canadian racist laws and policies through historical inquiry projects. As teachers build on this

foundational knowledge, students begin to recognize similar racialized dynamics in the present. When teaching students about Canadian residential schools, for example, explaining that the horrendous policies were legitimized by social Darwinism (McNeil, 1999) assists students with recognizing how White settlers benefitted, how the institutions were legitimized, and why Canadians must continue to challenge colonial violence.

All colonial and racist immigration laws in Canada were justified by pseudoscientific theories of race, which were taught in Canadian schools until the 1980s (Willinsky, 1998). Many Canadians, primarily in Alberta and British Columbia, also supported the Eugenics Society of Canada in the 1930s. Once students have investigated this history, they can make connections to similar processes, such as racialized involuntary sterilization, that continue. Reflecting racial scientists' construction of hybridity as degeneracy, curricula regarding Indigenous Peoples often exclude Métis, who continue to be racialized as mixed-race. Unlike the United States, racial mixture was not illegal in Canada, but mixed-raced unions were discouraged and condemned (Backhouse, 1999).

Knowledge about the history of race can be integrated into every subject area. Connections can be made between stories about racism and false theories of race. Racism in sports was and is authorized by scientific racism. Students can learn about the mental and physical health impacts of institutional racism. Math teachers can educate students about race science when examining inequitable racialized statistics. Fine arts teachers can dismantle the historical building blocks of race through drama, dance, music, and visual arts. Educators can explain how scientific racism justified barriers that prevented people racialized as non-White from entering and being recognized within their teaching subject areas. Within science education, multiple opportunities exist to teach students how to dissect pseudoscientific race theories (Gill & Levidow, 1987; Humanists UK, 2019). Significantly, connecting the history of race with modern-day expressions of racism enriches capabilities to uphold Charter, Indigenous, and human rights. Learning about scientific legitimacy can also counter the dangerous threat of White supremacist online disinformation that seeks to undermine scientific research.

CONCLUSION

Whether outright White supremacy or unconscious racist implementations of race-neutral practices within Canadian institutions, racism is informed by irrational beliefs in race. Learning about the history

of race can assist with identifying and challenging racism in the present without resorting to calls for the dismantling of liberal democratic institutions, the destruction of which complements far-right White supremacist agendas (Miller-Idriss, 2020). Scholars have theorized that because race is a construct, it is unstable and thus reinvented and reified over time to preserve White colonial power (Omi & Winant, 1986). Racism is increasingly upheld through anti-democratic illiberal discourse, and it is essential that anti-racism does not uncritically contribute to this process. Theorizing the artificiality of racial categories and hierarchies, White male intellectual superiority, and racial purity within Canadian anti-racist teacher education holds potential to actualize institutional racial justice.

As imperfect as he was, it seems fitting to end with the words of Charles Darwin (1839/1909), whose contributions to scientific knowledge are undeniable. Writing about slavery as a young White man, Darwin stressed, "It makes one's blood boil, yet heart tremble, to think that we Englishmen and our American descendants, with their boastful cry of liberty, have been and are so guilty" (p. 503). Nearly 200 years ago, Darwin was aware of the ethical contradiction that sustains racism. Confronting and transcending this hypocrisy remains a pressing objective and can be achieved, in part, through remembering the history of race in anti-racist education.

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