

Phrenology, Physical Anthropology and Ethnology:
Nineteenth-Century Race Science and the Foundations of Eurocentrism

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In 1735, Carl Linnaeus published *System of Nature*, and in 1776, Johann Friedrich Blumenbach published *On the Natural Varieties of Mankind*.¹ These two works became the foundation of science and pseudoscience of race for the next three centuries. In *System of Nature*, Linnaeus created the binomial system of classification used today to refer to all creatures, living and nonliving.² He gave humans the genus *Homo* and the species *sapiens* and included them in the animal kingdom, while simultaneously dividing humans into racially hierarchized subgroups.³ Blumenbach extended Linnaeus' subdivisions, yet created five not four; the subdivisions *europaeus*, *americanus*, and *afer* remained the same, while *asiaticus* was further divided into the Mongolian and Malay subgroups.⁴ Ultimately, these works highlighted racial divisions and significantly influenced the racist ideology that drove physical anthropology and ethnology, as well as phrenology and other pseudoscientific disciplines.

Phrenology rose to prominence primarily in the nineteenth century with the works of Franz Joseph Gall, Johann Gaspar Spurzheim, and George Combe. Phrenology referred to the “science” of reading bumps on one’s head to determine different personality characteristics and bodily functions. Each area of the brain was thought to correspond with a specific trait and initiated the belief of localized brain functions. Phrenology was later misinterpreted and used in tandem with Linnaeus’ and Blumenbach’s beliefs to create a theory of criminality and racial inferiority through which scientists and doctors would diagnose aboriginal population and non-white people with different conditions merely based on a bump on one’s skull. These views were not medically grounded and, instead, were based on false assumptions; however, they remained

¹ C. Loring Brace, *“Race” is a Four-Letter Word: The Genesis of the Concept* (New York: Oxford University Press, 2005), 24-25 and 44.

² *Ibid.*, 25.

³ *Ibid.*, 25-27.

⁴ *Ibid.*, 27 and 44.

widely popular until the deaths of Gall, Spurzheim, and Combe. Despite dying with its enthusiasts, phrenology remained a building block of racist and incorrect beliefs, subsequently influencing physical anthropology and ethnology.

Physical anthropology and ethnology, advocated for by James Cowles Prichard and Samuel George Morton, were both disciplines that studied human physiological characteristics and the differences between those various characteristics across groups of people. These disciplines effectively became race sciences, perpetuating a lasting phenomenon of perceived racial differences that placed people with darker skin tones below others. Both physical anthropology and ethnology, like phrenology, rarely promoted new ideas; ultimately these sciences relied on social constructs which were believed to be based on empirical evidence. The nineteenth century was characterized by these false, albeit pervasive, ideas.

The racist belief of European superiority created the underlying, hidden basis for all of these practices. With the beginning and rise of colonization and exploration, many theories arose regarding Europe's place in the world: how Europeans "were better" because of their skin color, beliefs, and culture, and how European civilization "saved the others." Subjective and detrimental, these ideas infected society and heavily governed Western beliefs, sciences, medical practices, and the everyday lives of human beings. Eurocentrism changed the global environment and persists today.⁵

Many disciplines influenced similar phenomena, and an exhaustive list of Eurocentric and racist scientists is beyond the scope of this study. Instead, the goal of this project is to identify the most influential nineteenth-century works that contributed to centuries of scientific and cultural racism and further led to a false sense of European superiority in the sciences and to

⁵ J. M. Blaut, *The Colonizer's Model of the World: Geographical Diffusionism and Eurocentric History* (New York: The Guilford Press, 1993), 51.

deconstruct those ideas. In this thesis, I examine works from Gall, Spurzheim, Combe, Charles Darwin, and others to show how these ideologies became popular and promoted popular perceptions of differences between the West and the rest. I argue that the nineteenth-century climate created and preserved racist ideologies to promote European supremacy over the rest of the world. As sister disciplines, phrenology, ethnology, and physical anthropology created a network that promoted inequality and left lasting consequences in its wake. These socially constructed sciences provided Europeans with justifications to prevail over other cultures, so consequently by calling out these nineteenth-century beliefs, victims of European superiority can find justice.

While the world has largely been and continues to be plagued with racially discriminatory policies, the practices created in the nineteenth century were particularly influential to society then, and continue to alter modern-day life. This thesis will, therefore, focus on the works of Linnaeus and Blumenbach to exhibit the birth of race science while also highlighting the continuation of such ideals into the twentieth century, after the ideas of Franz Weidenreich and Carleton Coon ignited a rebirth of science driven by power politics. Phrenology, physical anthropology, and ethnology were products of Eurocentrism and influenced many immoral practices.

Literature Review

There is a general agreement among contemporary historians that the practices of phrenology and race science contributed to a world of racism and hierarchy that preyed on the differences of others to elevate the status of Europeans. This section will contextualize the existing historiography on Eurocentrism, phrenology, ethnology, anthropology, and race;

however, in highlighting some of the most important work, the intent of the following literature review is not to be exhaustive.

Eurocentrism

Many scholars have debated why and when a “European Miracle” occurred to allow Europe to surge past the rest of the world. However, J. M. Blaut was among the first to reflect on whether a miracle even occurred in the first place.⁶ Blaut ultimately argues against the European historical advantage, “the miracle,” and the idea that Europe led and the rest of the world lagged behind.⁷ While there was no actual miracle, Blaut credits the rise of European superiority to the very end of the fifteenth-century, and the beginning of colonization and exploitation.⁸ This resulted in the conclusion that from the beginning Europe prevailed.⁹ From this idea grew biological, cultural, and scientific racism.

Eurocentrism continues to enjoy popularity today. Many museums display items and articulate histories that place Western society at the top. Angela Saini uses the artifacts in the British Museum to explain the struggle of the rest of the world against Britain and their perceived superiority.¹⁰ She details what led to the European, and specifically British, power hierarchy, and what allowed the British to continue this belief and take from others.¹¹ Like Blaut, Saini does not believe in the European Miracle, and believes that small events eventually contributed to the widespread belief. She gives an entire history of race in regards to

⁶ Blaut, *The Colonizer's Model of the World*, 51.

⁷ *Ibid.*, 1-2.

⁸ *Ibid.*, 51-52.

⁹ *Ibid.*, 59.

¹⁰ Angela Saini, *Superior: The Return of Race Science* (Boston: Beacon Press, 2019), x.

¹¹ *Ibid.*, xiv.

Eurocentrism and fears the research being produced by a society that is clearly racist, because “research never goes well when society is racist.”¹²

Phrenology, Ethnology, and Anthropology

Scholars critically examined the nineteenth-century sciences of phrenology, ethnology, and anthropology for their strengths and weaknesses because they aided in the perseverance of the idea of European superiority. Many scholars agree that these disciplines created a perceived difference in racial groups and were ultimately based on social constructs. Andrew Bank argues that British officials easily embraced phrenology because of their disdain with the Africans of the Eastern Cape.¹³ He notes that the British believed phrenology was an acceptable science with no flaws and later applied it to justify their racial and criminal practices.¹⁴ Racially driven sciences were widely accepted at the time.

Unlike some scholars, Roger Cooter acknowledges one area that phrenology had a positive effect. Cooter identifies Franz Joseph Gall to be the first to pull the location of human passions and mental phenomena away from the heart, and place it in the mind.¹⁵ Gall’s belief about localized functions later had significant impacts on psychology with Paul Broca’s findings.¹⁶ Cooter further identifies two approaches to phrenology: whig and revisionist.¹⁷ The whig approach, he claims, was pioneered by Herbert Butterfield and stated that “nothing can be true in the past that conflicts with what is known in the present,” thus this interpretation looked

¹² Ibid., 124.

¹³ Andrew Bank, “Of Native Skulls and Noble Caucasians: Phrenology in Colonial South Africa,” *Journal of Southern African Studies* 22, no. 3 (September 1996): 388, accessed February 28, 2020, <https://www.jstor.org/stable/2637310>.

¹⁴ Ibid., 389-390.

¹⁵ Roger Cooter, *The Cultural Meaning of Popular Science: Phrenology and the Organization of Consent in Nineteenth-Century Britain* (New York: Cambridge University Press, 1984), 3.

¹⁶ Ibid., 20.

¹⁷ Ibid., 16.

condescendingly onto the phrenology of the past.¹⁸ The revisionist approach saw phrenology for its merits, and rejected the whig idea that *all* believers of phrenology were naïve.¹⁹ While both groups believed that people eventually strayed from their phrenological beliefs, they had different views of the people who believed in this practice.²⁰

Stephen Jay Gould, like Bank, believes that these practices were “scientifically weak and deeply political.”²¹ He criticizes Samuel George Morton for his deterministic ethnology, and does not believe in the objectivity of this science.²² Despite agreeing with Gould on the problems of phrenology and ethnology, Mitchell Paul Wolff criticizes Gould for misidentifying where Morton had been biased, and re-identifies Morton’s biases.²³ Wolff discusses a study done a few decades after Gould’s that determined that Morton’s measurements of skulls were unbiased; however, that Morton was extremely biased in the interpretation of his data and the science he applied to the living beings based off the skulls.²⁴ Wolff’s rediscovery highlights some of the drawbacks of phrenology and ethnology.

When phrenology began to diminish in 1858, it left physical anthropology in its place. Paul Erickson has argued that phrenology was “inaccurate and easily falsifiable,” yet its beliefs about the brain structures gave clues to human behavior that were later mirrored by anthropologists who believed similar things.²⁵ Because physical anthropology quickly followed phrenology, the two disciplines had a lot of crossover in the beginning. In *Men Among*

¹⁸ Ibid.

¹⁹ Ibid., 20.

²⁰ Ibid., 20-21.

²¹ Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton and Company, 1996), 53.

²² Ibid., 53-57.

²³ Mitchell, Paul Wolff, “The Fault in His Seeds: Lost Notes to the Case of Bias in Samuel George Morton’s Cranial Race Science,” *PLoS Biology* 16, no. 10 (October 4, 2018): 3.

²⁴ Ibid.

²⁵ Paul A. Erickson, “Phrenology and Physical Anthropology: The George Combe Connection,” *Current Anthropology* 18, no. 1 (March 1977): 92, accessed February 7, 2020, <https://www.jstor.org/stable/2741226?seq=1>.

Mammoths, A. Bowdoin Van Riper argues that paleoanthropology, archeology, ethnology, geology, etc. all emerged as interdisciplinary subjects to piece together early human history.²⁶ These sciences and their discoveries challenged long held beliefs about human history, and aimed to completely restructure the human understanding of the past.²⁷ He removes himself from other people who study nineteenth-century science because, Van Riper argues that some of these scientists were less problematic and racially driven since the idea of ‘men among mammoths’ had been proposed many times beforehand.²⁸ The idea of ‘men among mammoths’ would thus refute many biologically racist beliefs because human skulls now dated back farther than previously believed.

George W. Stocking Jr. discusses the race hierarchies created by these sciences, and believes that these practices reclassified ‘savage’ people and gave them a new, bad framework for being divided.²⁹ He claims that this type of evolutionism divided the world into “savage” and “civilized” men. Stocking outlines a history of civilization and culture from 1750 through 1980 and highlights where the sciences fell short and created race hierarchies. Phrenology, physical anthropology, and ethnology were just some of the mediums by which scientific and biological racism was distributed.

Race Science

Other scientists have addressed the history of race sciences. These sciences fed on the social construct of race to promote European superiority, and oppress members from other

²⁶ A. Bowdoin Van Riper, *Men Among Mammoths: Victorian Science and the Discovery of Human Prehistory* (Chicago: University of Chicago Press, 1993), 2-3.

²⁷ *Ibid.*, 9 and 29.

²⁸ *Ibid.*, 222.

²⁹ George W. Stocking Jr., *Victorian Anthropology* (New York: The Free Press a Division of Macmillan Inc., 1987), 64 and 108.

geographic areas. Charles Quist-Adade differentiates between the terms “race” and “racism.” He defends that “race” does not exist, and never has existed, and is merely a social construct.³⁰

Quist-Adade describes the need for different types of pigment chemicals in bodies for people in different sections of the earth—like vitamin D versus melanin—and explains how these are only physical skin type differences, not biological.³¹ Lastly, he explains how there is no method to pinpoint where on a globe one race ends, and another begins, therefore proving that race was socially constructed.³² Taking a similar approach, Brent Henze examines how the problem of race, today and in the nineteenth century, is so closely connected to language used to describe different race concepts.³³ He argues that awareness of language is important when speaking about race, and that these practices were not always so racially biased: “as the eighteenth gave way to the nineteenth century, attention to the causes and effects of human difference had both intensified and broadened.”³⁴ Even in the twentieth- and twenty-first centuries race differences are perceived.

Furthermore, John S. Haller, along with agreement from most scholars, attributes the original divide of racial subspecies to Carl Linnaeus and Johann Friedrich Blumenbach. Linnaeus’ divisions were primarily based on skin color, while Blumenbach’s categories were based on multiple characteristics—hair, skin color, and face shape.³⁵ Future researchers that

³⁰ Charles Quist-Adade, “What is “race” and what is “racism”?,” *New African*, December 2005, 52-53.

³¹ *Ibid.*, 53.

³² *Ibid.*

³³ Brent Henze, “Scientific Definition in Rhetorical Formations: Race as “Permanent Variety” in James Cowles Prichard’s *Ethnology*,” *Rhetoric Review* 23, no. 4 (2004): 311, accessed February 7, 2020, <https://www.jstor.org/stable/20176631>.

³⁴ *Ibid.*, 312.

³⁵ John S. Haller, “Concepts of Race Inferiority in Nineteenth-Century Anthropology,” *Journal of the History of Medicine and Allied Sciences* 25, no. 1 (January 1970): 41, accessed February 7, 2020, <https://www.jstor.org/stable/24622178>.

drew on the concepts of race all agree with Haller and other scholars who have greatly criticized Linnaeus and Blumenbach for their divisions of the human species.

In a study of 365 physical anthropologists, Matt Cartmill uncovered that when asked if they agree with the statement “there are biological races within the species *Homo sapiens*,” 181 responded “yes” and 148 disagreed.³⁶ This study reveals how prevalent ideas of racial differences are, even today, despite that many scholars have worked to remove this belief from society. Many works after this study have attempted to further reveal that race is a social construct.

In *Science, Race Relations, and Resistance: Britain 1870-1914*, Douglas Lorimer argues that the question of race in the nineteenth-century heavily influenced race conceptions in the world today. He discusses how anthropologists believed they revealed differences in intellectual and moral attributes of people, yet never considered other attributes, like people’s values and morals.³⁷ They purely divided the world into factions and claimed certain ones to be better than others.

Another scholar who argues for race as a social construct is C. Loring Brace. Brace explains how there is no biological entity that connects to the term “race,” and instead, proposed that there are only “clines,” graded variations of skin color that are based geographically, not racially.³⁸ Brace separates himself from other scholars by explaining race in this fashion, and not just with the ‘social construct’ argument. Kay Anderson’s book looks at the rise of Anglo-American thought in the nineteenth-century and how that contributed to, and created, rigid

³⁶ Matt Cartmill, “The Status of the Race Concept in Physical Anthropology,” *American Anthropologist* 100, no. 3 (September 1998): 652, accessed February 7, 2020, <https://www.jstor.org/stable/682043>.

³⁷ Douglas Lorimer, *Science, Race Relations, and Resistance: Britain 1870-1914* (New York: Manchester University Press, 2013), 72, accessed March 5, 2020, <https://www.jstor.org/stable/j.ctt18mbg42>.

³⁸ Brace, “Race” is a Four-Letter Word, 1-5.

hierarchies of man.³⁹ Anderson provides the historiography of colonial racism and, also racial determinism.⁴⁰ She blames the Enlightenment and the Western world's inflated sense of self for this rise of race science, and how race came to undermine power.⁴¹

Creating a divergence between conventional Biblical thought and race conceptions, Colin Kidd argues that Pre-Adamite people existed, that is, people who existed before Adam and Eve and were thus not part of that bloodline.⁴² Kidd begins by analyzing that if the Bible is colorblind, why do Christian explanations get extrapolated and applied to race?⁴³ He deeply examines the possibilities of Adam's skin color, and the potential effects if he had not been white.⁴⁴ Kidd's argument explains exactly where white supremacy began.

Ultimately, among historians there is a consensus about the perceived superiority of European values and lifestyle, and an agreement that the relation between the differences of each racial subcategory came directly from European scholars trying to manipulate their narrative. These sciences took on radical forms in the nineteenth century, and have dwindled, yet, still have an impact today. These disciplines did have some positive effects on later areas of study, despite their inherent fallacies. However, had these beliefs not been so popular at the time, we may have currently lived in a world that treated different individuals much more kindly and humanely. Maybe one day all forms of scientific, biological, and cultural racism will cease to exist, and everyone will be on an equal playing field. Eighteenth-century beliefs set the foundation for the coming centuries' ideas about science, race, and inferiority.

³⁹ Kay Anderson, *Race and the Crisis of Humanism* (New York: Routledge Taylor and Francis Group, 2007), 4.

⁴⁰ *Ibid.*, 1-2.

⁴¹ *Ibid.*, 6, 17, and 31.

⁴² Colin Kidd, *The Forging of Races: Race and Scripture in the Protestant Atlantic World* (New York: Cambridge University Press, 2006), 34.

⁴³ *Ibid.*, 3.

⁴⁴ *Ibid.*, 32-33.

Influences on the Nineteenth Century

Two of the most influential people of science who radically shattered the human understanding of man were born in the eighteenth century. A whole century before Charles Darwin's theory of evolution, these two men gave more meaning to the creation of man. Linnaeus' system of binomial nomenclature and subsequent classification of all living creatures dramatically affected our understanding of the world because he devised a system to simply, and problematically, organize living society.⁴⁵ While all of Linnaeus' human classifications are still used today, certain groupings of species were later misconstrued and created the justification for racially based sciences. The shared strictly biological characteristics, between humans and ape-like creatures, warranted this classification. However, by grouping humans in the order of classification of primates, racial comparisons to apes and monkeys became common. Despite Linnaeus' attempt to not indicate common ancestry between the two, people later imposed the social construct of race onto non-white people, and used those shared human and ape biological traits to compare one to the other; thus, creating a hierarchy of races because people of color were lower and shamed since their skin tone more matched the animal depiction.⁴⁶ That grouping made many uncomfortable, yet the idea lingered and led to Linnaeus' human race divisions. He recognized four varieties of human race—*europaeus*, *americanus*, *afēr* and *asiaticus*—which reflected the four humors, or elements, because he believed the skin color differences were attributed to an excess of that humor.⁴⁷ Carl Linnaeus also studied “wild, savage men” who he believed fit into the larger chain of life, and were designated to be subhuman.⁴⁸ These

⁴⁵ Brace, “Race” is a Four-Letter Word, 24.

⁴⁶ Ibid., 26.

⁴⁷ Ibid., 27.

⁴⁸ Ibid.

hierarchical divisions led Johann Friedrich Blumenbach into his race science discoveries and to identify Europeans as a superior human race.

Johann Friedrich Blumenbach was heavily influenced by Carl Linnaeus and further divided Linnaeus' four human varieties. Blumenbach split Linnaeus' *asiaticus* group into Mongolian and Malay subgroups, thus creating five human varieties.⁴⁹ Even after Darwin's groundbreaking publication in 1859, many continued to use Blumenbach's divisions to describe men.⁵⁰ However, Blumenbach's most distinct and well-known contribution to race science was his use of the term "Caucasian," which described who he determined to be the most beautiful people in the world. This term referred to people from the region surrounding the Caucasus mountains, where Russia meets Georgia separating the Black and Caspian Seas.⁵¹ Blumenbach thus "assigned the greatest beauty to a particular people, gave them the honor of being the original humans, and bequeathed a name to his premier races that stands even today as a potent marker of privilege."⁵² This region has been credited with this honor because it is the site where Noah's Ark landed according to the Christian Bible; it lies in the "temperate zone" that "formed the most perfect humans"—according to an ancient theory of the four humors—which encompassed an area that spanned from Spain, France, Southern Germany, Italy, Greece, Georgia, and the Caucasus Mountains.⁵³ *Caucasian* became the superior of all varieties, and thus, allowed for detrimental beliefs to form.

Blumenbach's race theory was based on the process of degeneration. These degenerations were caused by different factors—environment, nutrition, etc.—and while they did not remove

⁴⁹ Ibid., 44.

⁵⁰ John Haller, *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900* (Chicago: University of Illinois Press, 1971), 6.

⁵¹ Ibid., 44-45.

⁵² Londa Schiebinger, *Nature's Body: Gender in the Making of Modern Science* (Boston: Beacon Press, 1993), 129.

⁵³ Brace, "Race" is a Four-Letter Word, 45; Schiebinger, *Nature's Body*, 130.

any human variety from membership in *Homo sapiens*, they did create the foundation for the beliefs of inferiority and superiority because of the departure from the ideal *Caucasian* status.⁵⁴ He believed that all humans were born “nearly red” and, with time, skin color altered to black, white, yellow, or remained red.⁵⁵ He acknowledged that these divisions were arbitrary, but still claimed that *Caucasian* was “better and preferable to another” and that it was easier for light skin to degenerate to dark skin, but not vice versa.⁵⁶ While Blumenbach did not credit his home region of Germany, nor any strictly European region, to be the origin place of the most beautiful humans, he enabled the systematic exclusion of non-*Caucasian* people from contributing to science, society, and from living a free life.⁵⁷ Blumenbach’s ideas were just some that reflected eighteenth-century scientific racism.

Eighteenth-century natural history, as described by Londa Schiebinger, has often been portrayed in an innocent light, yet it occupied an “essential component of Europe’s commercial and colonial expansion.”⁵⁸ Science during this century became a medium for exclusion that blocked certain perspectives from being heard. Anatomists, anthropologists, and natural historians were all in agreement that those with compressed skulls, black skin, or female anatomy were unable to pursue academic science.⁵⁹ Because of that exclusion, the system inherently perpetuated exactly what justified the exclusion of those people. By not allowing new perspectives into the scientific field, Europeans crafted a narrative of dominance that lasted for centuries. Eurocentrism contaminated society and constructed a continent of ethnocentric people.

⁵⁴ Brace, “Race” is a Four-Letter Word, 46.

⁵⁵ *The Anthropological Treatises of Johann Friedrich Blumenbach* (Boston: Milford House, 1973), 108.

⁵⁶ *The Anthropological Treatises of Johann Friedrich Blumenbach*, 264; Schiebinger, *Nature’s Body*, 129.

⁵⁷ Schiebinger, *Nature’s Body*, 130.

⁵⁸ *Ibid.*, 4.

⁵⁹ *Ibid.*, 7.

European superiority, or the dominance of the West, has been one of the most powerful beliefs for centuries. This belief was made possible by exploration, colonization, and exploitation of non-European peoples and was reinforced with the occurrence of the Industrial Revolution.⁶⁰ The sciences of the eighteenth-century, plus Mendelian genetic discoveries in the nineteenth century, allowed scientists to fuse together previous racist beliefs and incorrectly “prove” their superiority.⁶¹ J. M. Blaut worked to undermine this belief system and proved the fallacies in each argument supporting Eurocentrism. The British Museum provides a perfect example for the belief of European superiority. The museum holds eight million objects that have been taken from all over the world, to remind humans “of Britain’s place in the world” and serve as a reminder of “the struggle for [European] domination to possess the deep roots of civilization itself.”⁶² White people sat at the top of the power-hierarchy believing they were the “heirs of the great ancient civilizations” and that they were the “proprietors of thought and reason.”⁶³ Enlightenment thinkers were naïve, and thus defined humanity “in the contexts of their experiences” which inherently left others out.⁶⁴ These scientific influences have been a long chain of techniques and practices continued by some of the most well-known Western men. Linnaeus followed Aristotelian logic in classifying his system, Blumenbach followed in Linnaeus’s footsteps and taught Alexander von Humboldt, and Humboldt inspired Darwin.⁶⁵ These chains of influence allowed these ideals to seep into some of the most profound scientific discoveries which govern our modern lives. Phrenology, physical anthropology, and ethnology were the nineteenth-century instruments of racism.

⁶⁰ Blaut, *The Colonizer’s Model of the World*, 1-2.

⁶¹ *Ibid.*, 62.

⁶² Saini, *Superior*, ix-x.

⁶³ *Ibid.*, xi-xiv.

⁶⁴ *Ibid.*, 10.

⁶⁵ Brace, “*Race*” is a Four-Letter Word, 44.

Phrenology

Franz Joseph Gall, Johann Gaspar Spurzheim, and George Combe played an important role in nineteenth-century science. Gall originally became interested in physiognomy from an early age when he noticed how all the people in his life excelled in different areas.⁶⁶ He developed theories regarding prominent character traits that arose from proportionally larger sections of the brain, which eventually led to the belief of localized brain functions. Gall's primary interest was these configurations of the head that created different powers of mind; however, in the beginning of the nineteenth-century Gall partnered with an assistant who radically altered Gall's work and the following years.⁶⁷ Johann Gaspar Spurzheim began working for Dr. Gall after attending one of his lectures in Vienna and the two started to co-publish work.⁶⁸ However, due to major disagreements surrounding their beliefs, the two split in 1813.⁶⁹ Their beliefs were fundamentally similar, but diverged in name and created a rift between the two, which promoted a competition to be the most accurate.⁷⁰ Gall and Spurzheim's, and soon to follow Combe's, beliefs about phrenology preserved the ideals of the eighteenth-century, created another medium to categorize people based on their differences, and excluded some populations from contributing to society.

Throughout the nineteenth century, phrenology developed into a popular science of body and mind. In phrenology, each localized region of the brain corresponded to a specific trait that a phrenologist could determine by examining the bumps on one's head. Gall observed that the

⁶⁶ Franz Joseph Gall, *On the Functions of the Brain and Each of its Parts* (Boston: Marsh, Capen, and Lyon, 1835), 2.

⁶⁷ *Ibid.*, 5.

⁶⁸ Harry Whitaker and Gonia Jarema, "The Split Between Gall and Spurzheim (1813-1818)," *Journal of the History of the Neurosciences* 26, no. 2 (Spring 2017): 217.

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*, 218-219.

respective organ was “always highly developed” when someone possessed great, innate talents.⁷¹ The theory proposed that an individual’s strong traits would cause a bulge in the brain matter that would create a bump in the corresponding region. However, phrenology was based more on observations and correlation, not empirical science. Gall, Spurzheim, and Combe all agreed that the prominence of the trait, on the skull and in the personality, was dependent on size of the region. The appearance of each trait depended on the relative proportion of the size of the region in relation to other parts of the brain, not the absolute size, because development was different for many people.⁷² While phrenology reported that it was the relative size in comparison with other “bumps” that could be credited for a trait, the findings of phrenology were drastically distorted. Areas delineating few traits began to systematically categorize members of society and create hierarchies based on those desired traits. These hierarchies excluded many members of society, perpetuated racism and ethnology, and were not accurate. Phrenology’s main goal was simply to understand the brain and its relation to outside characteristics, yet the cranium itself began to serve an important function in this practice.⁷³ The external cast of the brain allowed phrenologists to extrapolate data on the brain, but in doing so, it permitted a physical characteristic to become a manipulative social tool. Over time, Gall’s brain science transformed to be less about the brain itself, and more about the manifestation of desirable traits. Phrenology was inherently less of a science, and more a reflection of the desires of the nineteenth-century.

At its core, phrenology was a device used to categorize people and understand man’s role in society. Phrenology’s popularity showcased “the search for truth about man’s place in nature”

⁷¹ J.G. Spurzheim, *Outlines of the Physiognomical System of Drs. Gall and Spurzheim, Indicating the Dispositions of Manifestations of the Mind* (London: Baldwin, Cradock, and Joy, 1815), 10.

⁷² Spurzheim, *Outline of the Physiognomical System of Drs. Gall and Spurzheim*, 18 and 40; Laura Otis, *Literature and Science in the nineteenth-century: An Anthology* (New York: Oxford University Press, 2002), 328 and 380.

⁷³ Gall, *On the Functions of the Brain and Each of its Parts*, 18.

and illuminated that “social and ideological meanings are implicit in science.”⁷⁴ As a product of its time, phrenology revealed the lengths in which the medical field and science were trying to understand our world. The way these scientists conducted their practices highlighted the inequality and bias that plagued the discipline, because they categorized differences then excluded people for having traits one could not control. Classifying people in this manner created more problems than great scientific discoveries. Phrenology was seen as a respectable science in Britain, especially, because it played a role in the transition to understanding man as “a biological being,” influenced by the biological laws of nature.⁷⁵ These scientists, however, believed in the superiority of the white “race” so biological laws differed for different people. Even though inherently everyone was a human being, certain people were classified as lower on the hierarchy because of the “truth” that European men found in the bumps on their heads. The science mirrored many other efforts of the nineteenth-century. It was an “attempt to bridge the void” between biology and sociology, which was based in false premises to begin with, and was advocated for by people who sought to go beyond what the measurements could realistically provide.⁷⁶ Scientists used data from examining heads and skulls to promote arbitrary divisions based on race. By filling this void, scientists made the goals of the nineteenth-century counter-intuitive because in trying to understand man, they damaged man. Phrenology awakened people to the harmful effects of science.

The rise of race sciences and human classification to find truth began in the eighteenth century and was reinforced by phrenology. This opened the public’s eyes up to the idea that “human behavior was capable of classification” based on pathology or a lack of some trait.⁷⁷

⁷⁴ Cooter, *The Cultural Meaning of Popular Science*, 8-9.

⁷⁵ Bank, “Of Native Skulls and Noble Caucasians,” 389.

⁷⁶ Haller, “Concepts of Race Inferiority,” 44-46.

⁷⁷ Cooter, *The Cultural Meaning of Popular Science*, 37 and 271.

There was a desperate craze to find and classify all that could be known, and phrenology contributed to that. Behavior and signs of behaviors, like the bumps of bulging brain matter, became more important than people themselves, and made having specific traits a race-wide biological problem. By accentuating differences and using that to try to understand our world, phrenologists destroyed the exact beauty of our species: our uniqueness. These abnormalities extended beyond race. Phrenology was used to determine the likelihood of one engaging in criminal behavior, and helped facilitate the Foucauldian idea of power surveillance.⁷⁸ Classifying dozens of individuals with these traits, phrenologists observed society in new and detrimental ways. These practices created a hierarchy of power because by spreading the beliefs of the ideal traits that corresponded only to European individuals, people of other skin colors were subjected to ideas that mocked the traits they were born with, and not given the chance to show that they, too, were people. Phrenology articulate with power, and had extensive influences on popular beliefs that shaped human history.

Phrenology's most notable effects on society were detrimental despite the importance its supporters believed it had. Gall and Spurzheim argued that the history of science exhibited "men of a superior order" who devised, developed, and applied bold ideas to leave an enduring influence on "all professions in society and with all actions of man."⁷⁹ Even though phrenology was only practiced by an exclusive group of people, its ideas trickled down and affected everyone. It aided in establishing the superiority of modern Western science and European people, and encouraged the exclusion of non-white members of society. Phrenologists and other medical professionals saw their studies as an essential key to society. Gall and Spurzheim further

⁷⁸ Bank, "Of Native Skulls and Noble Caucasians," 390; J.G. Spurzheim, *Phrenology or the Doctrine of the Mental Phenomena* (Boston: Marsh, Capen, and Lyon, 1832), 13.

⁷⁹ Gall, *On the Functions of the Brain and Each of its Parts*, 44; Spurzheim, *Outlines of the Physiognomical System of Drs. Gall and Spurzheim*, 325.

believed that all people who studied the nervous system or brain were “especially called upon to contribute to the advancement of the knowledge of man.”⁸⁰ However, it did not cross their minds that their beliefs and studies were narrow-minded, racist, and intolerant. The notion of the duty to contribute to the knowledge of man generated many inaccurate beliefs about man’s place in the universe and has continued to contribute to the decline in understanding of certain populations. The assumptions of phrenology were very deterministic. In one of Spurzheim’s books, he discussed criticisms of the belief being fatalistic, and utterly disagreed because he claimed the laws of nature were fixed by creation, despite that the science eventually became known for being inaccurate and easily falsifiable.⁸¹ Spurzheim’s disagreement logically did not follow the criticisms of the science because phrenology was based on incorrect observations, and ethnic differences. Each person was created by the same being or event, all equally; despite the laws of nature at play phrenology was fatalistic because the results of the science preached that individuals with proportionally smaller regions of the brain were inferior. One cannot change their overall abundance, or lack, of brain matter, therefore phrenology predetermined what life would be like for those it deemed inferior. Spurzheim and Combe were notably interested in phrenology’s application to “the reform of society and morals,” thus one cannot deny the harmful effects of phrenology on society.⁸²

Phrenology had many errors and negatively affected society; however, paradoxically there were two benefits to the discipline that emerged as inadvertent byproducts. Franz Joseph Gall was the first to treat mental operations and the human desires as “purely organic problems”

⁸⁰ Spurzheim, *Phrenology or the Doctrine of the Mental Phenomena*, 18.

⁸¹ Spurzheim, *Outlines of the Physiognomical System of Drs. Gall and Spurzheim*, 285-287; Erickson, “Phrenology and Physical Anthropology,” 92.

⁸² Cooter, *The Cultural Meaning of Popular Science*, 7.

of neurophysiology.⁸³ While many before Gall had proposed and studied the link between the brain and the mind, no one treated the brain, its anatomy, and its functions the way Gall did. His studies had profound effects on later neuroanatomical findings, such as Paul Broca's discovery of the language region, which became known as Broca's area and the second benefit of phrenology. The assumptions and general premises of phrenology were unsound, yet decades later Gall's notion of localized brain functions was proved true. The minimal beneficial influences that phrenology had on the medical and scientific fields does not negate the horrendous consequences of the belief. Furthermore, many may see phrenology as an isolated ideology within the most influential century that shaped the world we live in today. However, phrenology, along with other nineteenth-century sciences, created a network of discrimination that popularized racism and severely damaged society.

Spurzheim's Papers

Filed away in the archives of National Library of Medicine in Bethesda, Maryland, are the transcripts of eighteen lectures given by J.G. Spurzheim in London. The transcripts of these lectures were meticulously recorded by Henry Bromley in 1825 where Spurzheim taught the public about "his favorite science."⁸⁴ The beginning of the transcription highlighted Spurzheim's excitement about the size of the crowd in front of him, believing that the size revealed a reduction of the prejudice that accompanied phrenology.⁸⁵ Spurzheim saw phrenology as a human need to explain the essential nature of the mind, because phrenology was vital to

⁸³ Ibid., 3 and 21.

⁸⁴ National Library of Medicine, "Lectures on Phrenology, of J.G. Spurzheim," (London, 1825)/ notes by Henry Bromley, unique ID: 2932076R, 9, accessed 24 April, 2020 <http://resource.nlm.nih.gov/2932076R>. These are handwritten notes of one of Spurzheim's lectures.

⁸⁵ Ibid.

overcome diseases of the mind, making up for our lack of knowledge.⁸⁶ He believed phrenology was crucial to all natural sciences, anything related to the study of man, and the education system because it could provide a fuller understanding of man's capabilities.⁸⁷ The beginning of this document revealed how prevalent the beliefs of phrenology were in society. Regardless of if Spurzheim's plan to have phrenology permeate every aspect of society was fully manifested or not, the idea of it being within every major discipline proved that it had a large effect on society. Especially considering that there were public lectures on the topic, the belief was meant to reach every person and be adopted into one's general understanding of their mind. Phrenology's impact spanned a larger time-period than Spurzheim would have anticipated.

The document continued to describe the importance of phrenology. Spurzheim indicated that his process of examining and accepting truth was: to see if anatomy, physiology, or pathology were in harmony with one another.⁸⁸ If he saw correlations between either of the two, he would accept whatever doctrine that examination produced as true. However, after that explanation he immediately made a statement where he claimed that one "must always make facts, although you may not completely understand their impact, but you must distinguish between facts and influences."⁸⁹ As a medical professional and natural scientist, one should never state anything as truth unless it can be empirically verified. Even if it were clear that facts and influences were separated, an entire scientific discipline should not champion an idea that was skeptical of its impact. That statement in his lecture divulged that uncertainties about his and other phrenologists' findings existed, which verified that the general premises of the doctrine were not entirely sound. Spurzheim and other phrenologists were merely teaching their opinions

⁸⁶ Ibid., 10.

⁸⁷ Ibid., 10-11.

⁸⁸ Ibid., 25.

⁸⁹ Ibid.

about the faculties of mind to the public. This statement had a profound impact on the science because in comparing the proportionate sizes of the bumps on one's skull, these opinions generalized and hierarchized groups of people. Bromley later recorded a statement by Spurzheim where he criticized a group of people for making "nature bend to their opinion, thus destroying practical views of science."⁹⁰ However, phrenologists also made nature—the shape and function of the brain—bend toward their opinions of the nature of man, and influence their perspectives of groups of people. These explanations were drastically detrimental to non-white people and criminals.

Spurzheim continued throughout the series to discuss the basic tenets of phrenology. The majority of each lecture was spent identifying each faculty, discovering how to locate it, and describing its main function. In breaking down each faculty of the mind, Spurzheim generalized conclusions to larger audiences than they could be applied to. He claimed that groups of people in some nations may have had the same powers, but that "these powers may be stronger in some nations than others," and that once phrenologists found "the same manifestations connected with certain parts in different persons, sexes, and nations" then they were "set down as truths."⁹¹ However, when these connections were seen as positive they were applied to Europeans; only the negative connections were noticed in the non-white populations. These "truths" were believed to have been empirically verified, but, as stated above, were not and had harmful effects on "the other." Despite phrenology not being physically invasive on the body, it invaded the mind and created a falsified belief system that demoted certain human beings to the bottom of the hierarchy.

⁹⁰ Ibid., 36.

⁹¹ Ibid., 41-45.

There were many instances in which Dr. Spurzheim made problematic statements that were based only on observation. In lecture seven, while characterizing benevolence, Spurzheim brought out a skull of a person who practiced Hinduism and said “benevolence would not be predominant in my opinion in such a skull as this.”⁹² It is evident, again, that these claims were dominated by Spurzheim’s opinion, not supported with actual evidence, and were clearly very racially and ethnically driven. By merely stating that such a skull was not capable of obtaining this characteristic, he degraded an entire population and simultaneously slyly placed Europeans on a pedestal. There were areas of the document that mentioned “the laws of propagation” perfecting man and how man wishes to become “the master.”⁹³ These types of statements were evident throughout history with radicalized leaders who diminished the influence of ostracized groups and made scapegoats of the innocent. The notion of “a perfect man” implies the existence of an imperfect being, which was always ascribed to the non-European. Thus, these arguments aided in perpetuating and maintaining the concept of European superiority. The most blatantly catastrophic proclamation came in lecture eleven. While discussing the size of foreheads in relation to intellectual power, he defended that “an African is inferior in intellect to a European, and one European is inferior to another.”⁹⁴ These comments implied a rigid hierarchy based on skin color and ethnicity. Phrenology encouraged these societal divisions because, at its roots, it was a discipline that compared individuals to another to determine what was right and what was wrong. But, that does not diminish the fact that it was unnecessary to use this “science” to characterize people in this way. The beliefs of phrenology played a direct role in influencing the theories of the nineteenth-century, and beyond, to be means of domination that promoted racism.

⁹² Ibid., 105.

⁹³ Ibid., 125-126.

⁹⁴ Ibid., 175.

In a brief moment in lecture eleven Spurzheim aligned himself with some of his predecessors. He stated that the belief of separate human species was incorrect, but that there were different human varieties.⁹⁵ He aligned himself with Linnaeus and Blumenbach, which further highlighted the impact of their beliefs. With Spurzheim promoting the belief of separate human varieties more problems with phrenology became evident because it illustrated the desire to divide humanity based on differences, rather than accepting everyone for our inherent similarities. This further gave Spurzheim the ability to differentiate between phrenological traits that aided Europeans, and hindered non-Europeans, while using a similar belief system as the eighteenth-century scientific and medical leaders. Dr. Spurzheim also contradicted himself during his lecture series.

He was concerned with convincing the public that phrenology was not a dangerous subject, and that it was grounded in truth. He told the audience that in previous years many beliefs were first considered dangerous before declared true—like the beliefs of Copernicus—but that if something was founded in truth it could not be dangerous.⁹⁶ However, he claimed that he knows of no discipline “as dangerous as phrenology,” even though a discipline like this being declared dangerous was to accuse the Creator.⁹⁷ How could a belief simultaneously be dangerous and not dangerous, but also criticize the Creator, the author of truth? Spurzheim’s attempts to make the public wholeheartedly support phrenology was confusing and proved to be more detrimental than beneficial. However, it was still evident that the public and certain professionals believed phrenology was false, even if there were widespread phrenological societies across Europe and North America.

⁹⁵ Ibid.

⁹⁶ Ibid., 255.

⁹⁷ Ibid.

This series of lectures did not provide the length of time that they occurred over, other than just throughout 1825; but the existence of this document proved that there was interest in the subject despite its falsehoods. 1825 was in the middle of the height of the period of phrenology, and it continued to be popular until the death of Combe in 1858. Phrenology led into physical anthropology and ethnology, and gave the world doctrines of discrimination.

Physical Anthropology and Ethnology

With the dissolution of phrenology, the rise of physical anthropology and ethnology came easily. The disciplines were like sister subjects and essentially amounted to a continuation of phrenology, which provided the foundation that the new ideas were built upon.⁹⁸ With the transition, measuring the size of the head moved from external skull measurements to internal skull capacity—typically using lead shot or mustard seed.⁹⁹ Formally, ethnology was the science of races and the study of the differences between people.¹⁰⁰ Physical anthropology was essentially a derivative of ethnology, but focused on biological and physiological traits in a group of people. Anatomical measurements, in the nineteenth-century, were the focal point of the study of man for anthropologists.¹⁰¹ The latter half of the nineteenth-century highlighted new ways people could differ, and deepened the wounds that came from hierarchizing people. Race science continued to perpetuate Eurocentrism and came to be a distinguishing feature of the Victorian era.

The nature of these sciences required that scientists cooperated with one another, in order to generalize these far-reaching statements. Paleoanthropologists attempted to answer the

⁹⁸ Erickson, “Phrenology and Physical Anthropology,” 92.

⁹⁹ Haller, *Outcasts from Evolution*, 17; Gould, *The Mismeasure of Man*, 84.

¹⁰⁰ Henze, “Scientific Definition in Rhetorical Formations,” 313.

¹⁰¹ Haller, *Outcasts from Evolution*, 3.

pressing questions about our human ancestors, and did so by analyzing the “broader intellectual context” of our species.¹⁰² This multi-disciplinary science fed off the unreliable beliefs of deceitful scientists. However, phrenology, ethnology, and physical anthropology were entirely dependent on the digging up of ancestral skulls to survey. The efforts of “evolutionary-minded synthesizers” were placed into determining the “relative value of the races of man” to thus “delineate social categories.”¹⁰³ These categories created beliefs to justify prejudice and ultimately exploited natural characteristics, making a whole section of society inferior to Europeans. The scientific synthesizers were working to make meaning out of human differences, and came up with multiple possible theories that would explain human skin color and phenotypic differences.

However, reconciling Biblical beliefs with observations was difficult. A theory had arisen that people existed before the creation of Adam and Eve, known as pre-Adamites. Pre-Adamism explained the existence of “earlier lesser beings,” yet also did not contradict the Bible in that pre-Adamism did not advocate for the theory of multiple human origins.¹⁰⁴ Some people recognized pre-Adamism, others did not. However, it allowed for a new interpretation of human origins that was still grounded in the Bible to exist. This belief did not generate equality among the races, yet gave an official way to assert that the races were fundamentally different. One scientist noticed that some Egyptian tombs contained bodies of “blacks and Caucasians” and concluded that races were separate from the beginning of time since it was unlikely that such an extreme differentiation of skin color occurred between the landing of Noah’s ark, and the date of the Egyptian tombs, yet had not continued to change more between the tomb date and the

¹⁰² Van Riper, *Men Among Mammoths*, 2 and 12.

¹⁰³ Haller, *Outcasts from Evolution*, viii-ix.

¹⁰⁴ Van Riper, *Men Among Mammoths*, 169; Haller, *Outcasts from Evolution*, 90.

nineteenth-century.¹⁰⁵ Pre-Adamism was an integral aspect of anthropology because it allowed them to foster the racial differences and create the hierarchies, even though the interpretations of the inequality were incorrect. Pre-Adamism mixed with Darwin's evolutionary science intensified the beliefs that were perpetuated by these pseudo sciences. One of the most famous physical anthropologists and craniologists was Samuel George Morton.

Even though these sciences defied objectivity and proved to be deterministic, they all had a large following of supporters. Morton had a collection of over 1,000 skulls—differing between all types of human race varieties—in which he used to measure the internal capacity of each to determine the intelligence of that type of being.¹⁰⁶ Because of the size of his collection and his dedication to discerning the differences, Morton was praised as a scientist, received great recognition, and had a good reputation among others. While he was an American, he embodied the same ideals as European race scientists and aided in extending Western superiority to America. Morton occasionally struggled with keeping the data to his experiments accurate. His goal was to rank races by the size of their internal skull, since it was indicative of the brain that once was there. Therefore he used mustard seed to fill the cavity, then poured it into a graduated cylinder to take its volume.¹⁰⁷ He realized that the volume was rarely a consistent number when he repeated measurements on the same skull, thus he switched to using lead shot, which was much more capable of packing into the skull and did not have size variation in the substance itself.¹⁰⁸ The lead gave him more consistent measurements and he measured the *Caucasian* skull to have a mean of 87 inches cubed (in³), Mongolian 83in³, Malay 81in³, American 82in³, and

¹⁰⁵ Gould, *The Mismeasure of Man*, 84.

¹⁰⁶ *Ibid.*, 83-85. A catalogue of Morton's skull collection can be found here: Samuel George Morton, *Catalogue of Skulls of Man and the Inferior Animals* (Philadelphia: Merrihew and Thompson, 1849).

¹⁰⁷ *Ibid.*, 85.

¹⁰⁸ *Ibid.*, 85.

finally Ethiopian 78in³.¹⁰⁹ These measurements indicated the exact thing Morton had wanted: that the *Caucasian* had the largest skull capacity, and thus was the most intelligent. However, in the data itself it became evident that Morton manipulated the numbers and conclusions to fit his preconceived notions.¹¹⁰ Like some phrenological applications, the data and the conclusions just did not follow. There was no possible way to empirically verify these conclusions, because it was likely that for the *Caucasian* skull Morton packed more lead into it, and it was impossible to try to measure living being's internal skull capacity to compare. Morton's ethnological counterpart was James Cowles Prichard.

Prichard set the foundation for ethnology by breaking down the difficult and central questions of human diversity.¹¹¹ His goal was to “present the physical history of every human population that then existed or that had once existed.”¹¹² This relied on more than the physical characteristics of populations; ethnologists analyzed migration patterns, languages, psychology and more to compile their theories of human differences. Hence why it gave birth to anthropology and provided a more holistic interpretation of race science than phrenology did. This deeply entrenched race relations into the science and provided more areas to include in the hierarchy of man, than just skull size. Ethnology was Britain's “most general scientific framework for the study of the linguistic, physical, and cultural characteristics of dark-skinned, non-European, uncivilized people.”¹¹³ Ethnology was not objective at all, and compromised pure science. This study became highly specialized and fascinated with the hierarchies, thus it became

¹⁰⁹ Ibid., 86. This chart was reproduced by Gould based on Morton's surviving data.

¹¹⁰ Ibid.; Wolff, “The Fault in His Seeds,” 1.

¹¹¹ Henze, “Scientific Definition in Rhetorical Formations,” 313.

¹¹² Ibid., 314.

¹¹³ Stocking Jr., *Victorian Anthropology*, 47.

one of the most well-known of these racialized practices. Ethnology was a continuation of the network of racist sciences that created the world of scientific racism.

One of Morton's most significant contributions to the field was in his book *Crania Americana*. In this piece, he described all the different possible varieties of races to examine if different races existed, but focused mostly on American aborigines.¹¹⁴ While this essay primarily focuses on European scientists, Morton's contributions to the field heavily influenced the studies and he simultaneously drew ideas from his European counterparts. He held American descendants from European ancestors in high regard, but condemned Native Americans for their savagery and lawlessness. The language Morton used in *Crania Americana* to describe certain populations revealed his views toward those people, and revealed more about nineteenth-century scientists' minds. He described manners and institutions in Asia to be "far inferior to the European standard," and claimed that Native Americans have remained "miserable, wandering, houseless and lawless savages" like their ancestors, despite being surrounded by "European knowledge, enterprise, and energy."¹¹⁵ These statements made it evident that "the European standard" was above that of every other nation, and could not be reached. Groups of people were criticized for not fitting the European mold, and being what they were. These ideals tore humanity apart from itself, thus destroying people instead of honoring differences. The curiosity to know more about ourselves and others created a sense of alienation that divided humanity.

Race

¹¹⁴ Samuel George Morton, *Crania Americana, or a Comparative View of the Skulls of Various Aboriginal Nations of North and South America* (Philadelphia: J Dobson, 1839), 9.

¹¹⁵ *Ibid.*, 285-286.

Before the Renaissance and the Enlightenment, “race” was less of a concern. However, the Renaissance and the Enlightenment, coupled with global exploration by sea, contributed to one of the most destructive ideas in human history: racism. The blending of pseudo sciences previously mentioned in this paper, with technological and medical advances in this time-period, created a widespread network of racism that has continued until our present day, and was ultimately based in incoherent and superficial beliefs. Basing their ideas off the phrenologists and physical anthropologists of the eighteenth- and nineteenth-centuries, Arthur de Gobineau, Franz Weidenreich, and Carleton Coon helped shape twentieth-century race relations. These overarching race themes were completely incoherent and a direct consequence of the pseudo sciences of before.

Arthur de Gobineau has become known as the father of ideological racism, because of his beliefs and work titled *The Inequality of the Races*.¹¹⁶ Contemporaneous with Darwin, Gobineau argued that the European races and their descendants were the most beautiful and that other races could “approach beauty, but not attain it.”¹¹⁷ These statements were completely in line with those of Blumenbach, Spurzheim, Morton, and more, and reflected Eurocentric beliefs of the standard of beauty. Because of Gobineau’s lack of resistance to claim Europeans as the most beautiful people, he was one of the first to promote what humans today think of as modern racism. Furthermore, these beliefs bled into those of Franz Weidenreich and Carleton Coon who pioneered the multiregional theory and wholeheartedly formed modern racism. Weidenreich suggested that studying all parts of the skull of living and non-living creatures made it possible to obtain somewhat precise measurements that could be used to “draw some conclusions as to the mentality and cultural stage” of those people, and that the races were no longer pure and had

¹¹⁶ Quist-Adade, “What is “race” and what is “racism”?” 55.

¹¹⁷ Arthur de Gobineau, *The Inequality of the Human Races* (New York: G.P. Putnam’s Son, 1915), 150-151.

degenerated by interbreeding.¹¹⁸ Promoting the multiregional theory and the degeneration concept allowed for racism to exist in conclusions drawn from this data. The science was not accurate and had larger cultural implications than should have been allowed for its inaccuracies. Continuing with Weidenreich's ideas, Coon tried to make sense of human diversity, yet focused more on human biological differences that do not make humans fundamentally different from one another. Coon had three major works that focused on race, all in which he articulated the differences between varieties, traced their racial histories, and argued for them being distinct subspecies.¹¹⁹ These volumes were all very similar and each articulated specific details about his theory on races. Coon was another proponent of the multiregional theory and a big advocate of racism. The ideas that began with Linnaeus and Blumenbach slowly filtered into all aspects of society for centuries, even though they were fundamentally wrong.

All the ideals of the men mentioned in this paper that correlate to race were fundamentally incoherent because scholars today agree that "race" is and was nonexistent. No biological trait appears to separate different races from one another, therefore "race" cannot exist but "racism" does.¹²⁰ While these eighteenth- through twentieth- century scholars may have tried to understand human differences and argue for the superiority of one type of human, their literal science has proven to be unfound. Yet, what they successfully created was a doctrine of hatred and bigotry that has implicitly and explicitly destroyed aspects of modern society and human lives. By dividing society into arbitrary factions, these men systematically excluded members of society and limited minds from contributing to societal progress. As Colin Kidd reminds us, race

¹¹⁸ Franz Weidenreich, *Observations on the Form and Proportions of the Endocranial Casts of Sinanthropus Pekinensis, other Hominids and the Great Apes: a Comparative Study of Brain Size* (Peiping, 1936) 5; Franz Weidenreich, *Apes, Giants, and Man* (Chicago: University of Chicago Press, 1946), 81.

¹¹⁹ Carleton Coon, *A Study of the Problems of Race Formation in Man* (Springfield, Illinois: Charles C. Thomas Publisher, 1950); Carleton Coon, *The Races of Europe* (New York, The MacMillian Company, 1939); and Carleton Coon, *The Origin of Races* (New York: Alfred A Knopf, 1971).

¹²⁰ Brace, *Race is a Four-Letter Word*, 1; Quist-Adade, "What is "race" and what is "racism"?", 52.

is simply a property of mind, not a physical trait of other's bodies, and is a "bogus scientific category" that belongs in the "realm of human subjectivity" not objective biology.¹²¹ These men could not avoid their personal biases, which deteriorated their own beliefs because science is no place for subjectivity. Sciences should be empirically based, and when it is not it proves to be a damaging force—like the nineteenth-century pseudo sciences that created lingering negative effects. In the words of Colin Kidd, "race is quite literally no more than skin deep."¹²²

Racial beliefs perpetuated by these scientists revealed an American and European sense of universally inflated self-regard.¹²³ "Race" became more of a cultural construction that imposed "discontinuities on the continuous physical variation of the world's peoples," and selected unstable, arbitrary features.¹²⁴ Physical characteristics change over time, and are thus not useful for systematic scientific discoveries that categorize groups of people. People should never be fundamentally categorized on their differences and ranked because every human being is valuable in their own way. Nineteenth-century pseudo scientists created and reinforced these superficial traits. Another belief to emphasize that race was a useless social construction was that there was no "clinical way to pinpoint where the 'black race' ended and where the 'white race' began."¹²⁵ Other than geographical borders there is no possible way to fundamentally determine where one variety of human starts and ends, thus even attempting to do so is ineffective. Instead of defining and classifying peoples' differences, they should be celebrated as an aspect of culture, not used to tear humanity apart. Race studies were inherently a struggle for power.

¹²¹ Kidd, *The Forging of Races*, 18.

¹²² *Ibid.*, 3.

¹²³ Anderson, *Race and the Crisis of Humanism*, 6.

¹²⁴ Kidd, *The Forging of Races*, 7-13.

¹²⁵ Quist-Adade, "What is "race" and what is "racism"?", 53.

These practices reflected larger global occurrences during these time periods. White, male scholars set the tone for academics and culture, thus creating an ideal power scheme for themselves, and undermining any non-European male. In their studies, phrenologists and physical anthropologists claimed to find differences in moral and intellectual capacity, yet gave no regard for the customs, practices, and daily lives of the current populations descended from their samples.¹²⁶ Scholars studying skulls from previous generations disregarded the current descendants of those peoples because, to them, their studies were merely an avenue for finding ways to prove their egocentric views of dominance. Race science in all its forms was full-scale societal manipulation to create a widespread hierarchy, from the people at the top dominating those at the bottom. In the time of extensive global expansion, history was not only being written by the winners, but was systematically molded to eliminate the perspectives of the “other.” This old-school idea of race and racism focused solely on power relations and how they played out.¹²⁷ With the application and results of these sciences proving false, the motivations behind these beliefs become more evident. These instances further exhibited that research and certain beliefs were incoherent and not always noble or in the majority’s best interest. While nineteenth-century pseudo-sciences may have had long term negative effects on society, they illuminated the consequences of human subjectivity and the human desire to understand concepts possibly beyond what man is supposed to know. The history of race sciences and pseudo sciences revealed the small gap between “believing in cultural superiority to believing in biological superiority,” and poses a new challenge to the twenty-first-century.¹²⁸

¹²⁶ Lorimer, *Science, Race Relations, and Resistance*, 72.

¹²⁷ Kidd, *The Forging of Races*, 2.

¹²⁸ Saini, *Superior*, 11.

Conclusion

The nineteenth century was arguably the most influential century for our modern lives. This century grappled with difficult questions about humanity, handled those questions poorly, and served destructive truths. The nineteenth century may have formed today, but today can reshape the future. Sciences in the nineteenth century were biased, had ulterior motives, and were based in fundamentally incoherent beliefs. Phrenology, ethnology, and physical anthropology were the most influential in creating perceived racial differences, and were some of the most popular “sciences of man.” These practices were fundamentally wrong and had more drastic effects than positives.

The current state of literature on nineteenth century sciences agrees that these practices were incredibly influential in harming modern society. These sciences, in tandem with other nineteenth-century events and European beliefs, aided in producing concepts like eugenics and helped academically support horrors like the Holocaust. Many see beliefs such as phrenology, and other race sciences, as isolated ideologies; however, they are incredibly intertwined with each other and formed a massive network of racism that continues to be prevalent today. Our society was plagued by these beliefs and has yet to overcome them, since they are so deeply entrenched in our lives.

Our desire to understand human nature and the world around us is precisely what has harmed us. In trying to classify human nature, men divided us upon our differences and created a deeply seated belief that allowed humanity to slowly deteriorate and face the consequences of these old European ideas. However, by ignoring human physical differences and trying to understand our innate similarities, we can, and will, learn to be kinder to one another and embrace the humanity within us. Society has a long way to go before becoming inclusive of all

people. But, by learning from the sciences of the past, and reframing those beliefs, we can become one and learn to love one another. As humans, we should embrace our similarities so everyone can be themselves and not fear being judged for their differences.

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