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Alexa Victoria Dantzler March 20, 2017

British Colonial Blood Banks: Transfusing Blood and Racial Science Ideologies in Colonial Kenya (1930s-1950s)

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Abstract

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This thesis explores the intersection of race, empire, medicine and pseudoscientific ideology during the height of British rule in colonial Kenya from the 1930s to the 1950s. British scientists and physicians moved to colonial Kenya and brought with them new life-saving European scientific technologies, such as blood transfusions. They also brought with them widely accepted racial scientific ideologies that influenced medical experimentation expeditions to find empirical biological evidence for the hierarchy of race. These scientific ideologies quickly influenced the deliberate racialization of blood transfusion services that reflected the highly racialized order of colonial Kenyan society segregated into communities of Europeans, Africans, and Asians (Indians). Each racial group had access to its own blood bank, yet not all blood banks functioned equally. Using primary sources, I illustrate how the highly racialized nature of blood banks diminished the life-saving power of blood transfusion technologies by putting the health of patients at risk. Additionally, I explore how British colonial medical authorities justified the segregation of colonial blood banks using pseudoscientific evidence and rhetoric from the eugenics movement (which began in Kenya in the 1930s). This pseudoscientific research sought to prove African "backwardness" and European racial superiority while legitimizing British occupation in colonial Kenya and facilitating the racial agenda of the British colonial empire. Finally, I argue the racialization of blood banks defeated the humanitarian role of the British physicians who came to practice medicine in colonial Africa.

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Chronology

1863	Dr. James Hunt established the Anthropological Society in Britain to sustain research that could provide evidence for the speciation of human races.
1895	The British government gains control of British East Africa
1901	Karl Landsteiner discovers the ABO blood grouping system in Austria
1905	White settlers move into the White Highlands in Kenya
1918	First successful blood transfusion in East Africa; end of World War I
1930	British Colonial Administration enacts the Native Land Trust Ordinance to designate African areas in Kenya
1932	British Red Cross establishes the first transfusion center in Nairobi
1933	Kenyan Society for the Study of Race Improvement (KKSRI) is established
1934	Colonial Medical Service is established in Kenya
1936	Dr. Eldson-Dew embarks on research to classify race by blood groups
1945	End of World War II; more resources diverted to colonies for African services
1955	British Red Cross proposes creation of a Multi-Racial blood bank (blood still segregated but stored in one facility)

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Introduction

This thesis explores the intersection of race, pseudoscience and medicine in colonial British East Africa from the 1930s to the 1950s. I focus on three main issues. First, I explore the development of racial science ideologies in Britain and their influence on new medical technologies, such as blood transfusions, in colonial Kenya. The second aim is to understand the pseudoscientific justification for Kenyan medical officers' racialization of colonial blood banks and the manipulation of science to facilitate the racial agenda of colonial Kenya. Lastly, I explore the consequences of the racialized blood banking system on the African and Asian communities. I argue that the racialized organization of colonial blood banks influenced by the Kenyan eugenics movement contradicted the humanitarian goals of the British to "improve" the health of Africans.

This thesis explores a paradoxical period during which the rise of advanced scientific technologies intersected with the emergence of racial scientific ideologies in Europe. As Britain expanded abroad and encountered new peoples, British scientists became preoccupied with producing empirical evidence to support the biological separation of race and to justify racial science ideologies. Meanwhile, as the British empire expanded into Africa, colonial administrators and medical officers sought to provide medical care and other services to Africans as part of their "civilizing mission." They sought to "improve" the lives of Africans while also maintaining highly segregated communities and medical services. British colonial settlers, who wielded enormous political power in colonial Kenya, insisted on implementing racial ideology in every facet of colonial life. The practice of racialized medicine, however, had severe consequences. In times of medical emergencies, the British Red Cross and Colonial Medical Officers refused to transfuse blood from donors to recipients of different races. This thesis

explores this paradoxical nature of the lifesaving delivery of blood transfusions under a system of racialized medicine.

In Kenya and in other African colonies, European research expeditions sought to produce scientific evidence to justify racialized claims of the eugenics movement that originated in 1930s Britain. Some European scholars considered Africans "less intellectual," and pseudoscientific research produced from this era claimed African brains were generally smaller than those of any other race. Eugenics research claimed that blood groups could define racial groups. This "evidence" may have justified colonial efforts to segregate the blood supply. While many colonial doctors and scientists knew this so-called empirical "evidence" was flawed, they continued to adhere to segregationist policies of the British government and maintained racial separation of the blood supply. Using primary evidence and reports from key figures who oversaw Kenyan transfusion services and the British Red Cross, I seek to understand the logistical plans, conversations, and language that participating parties used to ensure the continuation of segregated Kenyan blood banks. I pay special attention to how colonial medical officers and the British Red Cross appealed to various racial groups to donate blood. Lastly, primary evidence revealed plans in the colony to produce a centralized yet segregated interracial blood bank. I pay special attention to which groups had the most influence on the development of these plans and determine the extent that racial ideologies, such as eugenics, had on their implementation.

Throughout much of the nineteenth century, the concept of race ruled the daily operation of colonial life. Anxieties over the preservation of racial order dictated how science and medicine operated. By dictating how blood banks were organized, the colonial medical authorities and British Red Cross in Kenya adhered to these concepts of race and maintained the

racialized delivery of medicine. By doing so, they constructed the social and racial order of society. Colonial doctors practiced medicine by utilizing emerging European technologies that inadvertently became subject to the racial ideology of the day. Empirically scientific theories succumbed to racist agendas, and the scientific method acquiesced to the demands of the empire. During this time in Europe, new technologies emerged that had the potential to drastically improve the quality of human life. Yet, in the African colonial setting, these technologies transformed the mere delivery of medicine from a fundamentally humanitarian practice to a racialized "service" in the colony. Ironically, the delivery of racialized medicine may have cost human lives, all at the expense of maintaining a certain racial and social order in colonial Kenya.

The Origins of the State and Race in Kenya

In the 1880s, European nations wielded their imperialistic power within Africa to lay claim to the continent's abundant natural resources and to profit from its numerous trading routes. Britain too hoped to expand her empire and profit from these resources in Africa. Britain used brute force during the formation of the Kenyan colony, also referred to as the "conquest state."[1] Britain began to occupy Kenya in a series of events. In 1887, the sultan of the island of Zanzibar granted a concession to the British East Africa Company that was created to "occupy the British sphere of influence."[2] This agreement entitled the company to "full judicial and political authority" over the sultan's mainland possessions in coastal East Africa. In exchange, the company agreed to pay him a proportion of collected customs dues.[3] After acquiring over 200 miles of territory in 1888, the Company officially became known as the Imperial British East

[1] John Lonsdale, "The Conquest State, 1895-1904," in *A Modern History of Kenya: 1895-1980*, ed. Bethwell Allan Ogot and William Robert Ochieng' (London: Evans, 1989), 6-28.
[2] Ibid.
[3] Christine Stephanie Nicholls, *Red Strangers: The White Tribe of Kenya* (London: Timewell Press, 2005), 16.

Africa Company (IBEAC). The IBEAC encouraged the movement of white European settlers, who utilized the land for agriculture and commercial ventures. In 1895, the British government gained control over the company's territory in British East Africa, and the area became known as the East Africa Protectorate (later known as Kenya). Following its occupation of the Bugandan road and the Nile headwaters, Britain began to occupy the "highland core of modern Kenya" in their "final and most violent stages of conquest."[4]

In their conquest of Kenya and the highlands, Britain formed alliances with the Maasai to conquer other groups such as the Kalenjin highlanders, the Nandi, and Bakusu Luyia, to name a few.[5] The formal "politics of conquest" ended with the movement and consolidation of Maasai people between 1904 and 1911.[6] In the words of Lonsdale, "allies of conquest were never more fully discarded."[7] In fact, three-quarters of the area where white settlers would live, commonly referred to as the "White Highlands," was once Masaailand. The British considered any area over 5,000 feet and devoid of African populations to be part of the White Highlands.[8] In 1905, an increasing number of white settlers moved into this area, and in 1926 the Governor and Sub-Committee of the Executive Council mandated the enlargement of the White Highlands.[9]

The English gentry comprised a majority of the British settler population who used their lifestyles to further perpetrate the stereotype of Africa as a land used for their exotic adventure.[10] British settlers viewed Africans as "childlike yeomanry" who needed authority and instructions

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[4] Christine Stephanie Nicholls, *Red Strangers: The White Tribe of Kenya* (London: Timewell Press, 2005), 29.
[5] Ibid.
[6] Ibid.
[7] John Lonsdale, "The Conquest State, 1895-1904," In *A Modern History of Kenya: 1895-1980,* edited by Bethwell Allan Ogot and William Robert Ochieng, (London: Evans,1989).
[8] W. T. W. Morgan, "The 'White Highlands' of Kenya," *The Geographical Journal* Volume 129, Issue 2 (1963): 140–155.
[9] Ibid.
[10] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007).

from Europeans to live. However, racial relations between Africans and Europeans were tense, sinister, and overwhelmingly characterized by violence and brutality. David Anderson notes:

> By the early 1920s, the deaths of several African servants from beating at the hands of their European masters earned Kenya's white settlers an unenviable reputation for brutality...Physical violence was an integral and characteristic part of European domination in Kenya from the beginnings of colonial rule, and by the 1920s it was largely engrained as part of Kenya's 'race relations'. Happy Valley...as some liked to call the White Highlands, was always a violent place if you were an African.[11]

According to Tilley, "colonial states in tropical Africa were racial states from the outset."[12] The formation of this "racial state" was in direct response to the increasing diversity in the colony as the European, African, and Indian populations continued to grow. From the late nineteenth century onwards, the Indian population in East Africa rose dramatically. Indians had traded along the Swahili coasts with African for centuries. During the same time as British expansion in East Africa, Indian merchants increasingly pushed further into the interior. As Indian traders and laborers relocated to this area, they formed the middle-class of the East African Protectorate.[13] In addition to legally, politically, and economically oppressing African groups, British colonial authorities took great measures to suppress the growing power of this Indian population, which by the 1930s had doubled in comparison to whites. The settlers of the White Highlands, who deemed their area to be suited for whites only, countered the push for Indian settlement in these areas and suppressed their demands for legal representation in the local government.

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[11] As quoted in Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 5.
[12] Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950* (Chicago: University of Chicago Press, 2011), 219.
[13] Ibid.

Kenya's increasingly diverse population forced the British to confront a unique racial scenario. According to the 1921 census, the population of Kenya was comprised of 9,651 Europeans, 22,822 Indians and 10,102 Arabs, and 2.5 million Africans.[14] However, the racial composition and distribution of power were numerically disproportionate. In colonial Kenyan society, Europeans comprised the upper class, Indians comprised the middle class, and Africans comprised the lower and service class. The British used their political power to maintain the physical separation of these racial populations. In May 1920, the Secretary of State for Colonies Lord Milner emphasized the rejection of Indian occupation in the highlands and concluded that "racial segregation of commercial and residential areas was advisable on the grounds of social convenience."[15] In 1930, the colonial administration enacted the Native Land Trust Ordinance to designate specific, lowland areas for Africans to reside. This racial segregation also manifested itself in the organization of most every facet of Kenyan colonial life, including the organization and delivery of medicine.

White Settlers' Encounter with Tropical Disease

White settlers also segregated themselves in the White Highlands for fear of contracting tropical diseases from Africans and the environment of the marshy lowlands that teemed with malaria (where the British designated Kenyans to live). Europeans were susceptible to many tropical diseases, such as malaria, yellow fever, and blackwater fever, to name a few. These endemic African diseases served as significant barriers to European colonization of Africa. In fact, the high prevalence of Europeans' susceptibility to disease earned Africa the epitaph, "The

[14] Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950* (Chicago: University of Chicago Press, 2011), 414.
[15] As quoted in Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007).

White Man's Grave."[16] During the colonial conquest of Africa, "the boundaries that historically separated these disease environments [Africa and Europe] were breached as new pathogens were exchanged on a scale far greater than ever before."[17] Due to their increased susceptibility to disease, Europeans viewed Africans as inhabitants of a "disease environment" teeming with pathogens and made assumptions about African hygiene. Since the environment was suitable for Africans yet lethal for Europeans, many turned to science to explain such "racial" discrepancies in susceptibility to disease.

According to Bewell, the ability to conquer disease wielded Europeans more imperialistic power.[18] Equipped with their technological advantage, European researchers utilized Africa to pursue their scientific curiosities using its land and bodies as subjects to understand and "cure" tropical diseases. Not coincidentally, British interest in studying tropical diseases emerged as the same time as the rise of colonialism. Investment in scientific technology that could lessen the vulnerability of Europeans to disease would inevitably further the economic and political agenda of European expansion in Africa. Science and medicine undoubtedly had political utility in Africa.

As settlers migrated to Africa, many British physicians who trained at prestigious European universities moved to the colonies to also study tropical diseases. Crozier writes that many physicians joined the Colonial Medical Service (established in 1934) as Colonial Medical Officers (MO) to serve in British East Africa for a variety of reasons. Crozier argues that

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[16] Kenneth J. Arrow, Claire Ponasian, and Hellen Gelband, Editors. *Saving Lives, Buying Time:Economics of Malaria Drugs in an Age of Resistance.* Washington (DC): National Academies Press. 2004. http://www.nap.edu/catalog/11017.html

[17] Ibid., 3.

[18] Alan Bewell, *Romanticism and Colonial Disease* (Baltimore: The Johns Hopkins University Press, 1999), 8.

physicians moved to Africa to "enroll into a certain lifestyle."[19] Many newly trained doctors saw Africa as a place of adventure and a place "to combine good works with an active participation in governance."[20] Participation in the Colonial Service (which directed the Colonial Medical Service) offered skilled British citizens "one of the first practical opportunities for those who did not want to be missionaries to work there."[21] In effect, practicing medicine in the colonies allowed physicians to both serve the needs of the colonial government and pursue their medical and scientific curiosities. According to Crozier, the British government portrayed the colonies to their citizens as a "political project...destined to last forever."[22] Doctors practicing medicine did not accrue considerable wealth, but the lifestyle allowed British doctors to "escape the workday concerns of home."[23] As a result, a distinct colonial medical officer identity developed within the colonies.

Initially, the Colonial Medical Officers in British East Africa served the needs of the Imperial British East Africa Company and provided health care exclusively to Europeans and their families. After World War I, the colonial agenda shifted and physicians began to serve Africans who worked for Europeans and Africans in economically important urban centers.[24] Prior to World War I, many MOs did not publicize their medical services to Africans. Following the war, European nations became much more vocal about caring for African communities in their colonies instead of just addressing the needs of Europeans already there.[25] To a certain extent, colonial MOs believed their work embodied philanthropic and humanitarian values. Over

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[19] Anna Crozier. *Practising Colonial Medicine: The Colonial Medical Service in British East Africa* (New York: I. B. Tauris, 2007) 10.
[20] Ibid., 1.
[21] Ibid., 1.
[22] Ibid., 1.
[23] Ibid., 1.
[24] Ibid., 7.
[25] Ibid., 61.

time, colonial doctors became more conscious about their role in improving the health conditions of Africa that "allowed the legitimization of whiteness in historically non-white places."[26] This self-gratification helped further shape the identity of the Colonial Medical Officer. Yet, the racialized medicine that MOs practiced served as an intriguing paradox to the humanitarian-oriented nature of their work.

In addition to seeking the status of a social elite, Colonial Medical Service doctors were religiously motivated to travel to British East Africa. Crozier notes the extensive reference to Christianity as a primary factor in the personal writings of ex-Colonial MOs. Prior to the arrival of Colonial MOs, missionaries held the responsibility for delivering healthcare in the colonies. Many Colonial MOs were the children of missionaries, and for MOs, medicine provided an opportunity to perform "good works" of service that complimented the moral expectations of Christianity.[27] During colonialism, the British employed Christian missionaries as "civilizing agents," and Crozier notes that the Christian colonial medical officer identity similarly formed "as a means of defining the uncivilized 'other.'"[28] During this era, the notion of Africa as a "semi-civilized" and Africans as "barbarians" prevailed in widely circulating literature from European sojourners to Africa. The religious intent of colonial doctors thus legitimized their "civilizing" efforts and complemented the expansionist goals of the British Empire.

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[26] Anna Crozier. *Practising Colonial Medicine: The Colonial Medical Service in British East Africa* (New York: I. B. Tauris, 2007) 13.
[27] Ibid., 59.
[28] Ibid., 13.

The Origins and Transition of Racial Science from Europe to Africa

Prior to the movement of British physicians to Kenya in the 1930s, many British scientists had long traveled to African colonies to conduct research devoid of explicit racial guidelines, yet "their work was infused with racial assumptions."[29] In her essay "Appropriating the Idioms of Science," Stepan writes, "Scientific language was one of the most authoritative languages through which meaning was encoded, and as a language it had political and social, as well as intellectual consequences."[30] European scientists used this "authoritative language" to find empirical scientific evidence for racial theories, such as biological determinism, the notion that "people at the bottom are constructed of intrinsically inferior material."[31] Here, racial science refers to scientists' purposeful search for biological evidence for the separation of races. Racialized science refers to scientists' and physicians' deliberate attempt to segregate science and medicine by race. At the time, the European notion of race was "a malleable concept that could refer loosely to skin color, ancestry, continent of origin, civilizational status (i.e. advanced and primitive races), and sometimes all of these dimensions."[32] Expansion into Africa provided European scientists access to a land and people that they deliberately utilized for scientific inquiry to prove their racial scientific ideologies.[33]

According to Stepan, the suggested racial hierarchy of man as proposed by the idea of the Great Chain of Being "did not completely disappear from biology…but reappeared in a new

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[29] Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950* (Chicago: University of Chicago Press, 2011), 230.
[30] Nancy Leys Stepan, "Appropriating the Idioms of Science: The Rejection of Scientific Racism," in *The "Racial" Economy of Science toward a Democratic Future*, ed. Sandra G. Harding (Bloomington: Indiana University Press, 1993), 170.
[31] Ibid.
[32] Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950* (Chicago: University of Chicago Press, 2011), 229.
[33] Helen Tilley's research points to the various ways that European biomedical experimentation occurred in Africa, including malnutrition, malaria, and sleeping sickness research.

form to become one of the cornerstones of racial biology."[34] Between the mid-1800s and the beginning of the 20th century, an ideological shift from the belief in 'monogenism' to 'polygenism' occurred in European thought. This shift further necessitated scientists' quest for evidence supporting the biological separation and gradation of races. Prior to this shift, many scholars had ascribed to 'monogenism,' which is the belief that all people, including those encountered by missionaries or explorers abroad were, "despite any oddities of physical appearance or social customs, members of a single, human, biological 'species' and united in a single brotherhood by their common humanity."[35] This monogenetic belief had its roots in Christian theology. According to St. Augustine:

> Whoever is anywhere born a man, that is, a rational, mortal animal, no matter what unusual appearance he presents in colour, movement, sound, nor how peculiar he is in some part, or quality of his nature, no Christian can doubt he springs from that one potoplast….if they are human, then descended from Adam.[36]

Many intellectuals believed that all were created in the image of Christ, such as theologian Lanctantius who in the Fourth century wrote, "God, who produced and gives breath to men, willed that all should be equal, that is, equally matched."[37] Lanctantius went on to write that "In His sight no one is a slave, no one a master; for all have the same Father, by an equal right we are all children."[38] Even though some scholars ascribed to monogenism, all scientists did not ascribe to this notion. In fact, racial scientific ideologies still existed and emerged in various forms during this time. For instance, in the 1770s, Dutch scientists named Peter Camper

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[34] Nancy Leys Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 12.
[35] Quoted in Nancy Leys Stepan, "Appropriating the Idioms of Science: The Rejection of Scientific Racism," in *The "Racial" Economy of Science toward a Democratic Future*, ed. Sandra G. Harding (Bloomington: Indiana University Press, 1993), 1.
[36] Ibid., 1.
[37] Quoted in Nancy Leys Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 12.
[38] Ibid., 2.

introduced the measurement of the facial angle, and argued that "the more protruding the jaw, the greater the angle and the closer to the angle of the ape."[39] In effect, Camper concluded that by measuring from his facial angle, the Negro was associated with the ape.

Despite this Christian legacy among Europeans, in the mid-nineteenth century a shift in ideology from 'monogenism' to 'polygenism" still occurred. The notion of polygenism posits that mankind is composed of many species defined by clear, definite "mental, moral, and physical differences to constitute separate biological species of mankind."[40] The reason for this shift is not clear. Many scholars found the idea of 'polygenism' quite appealing, especially after Europeans encountered Africans. One of the leading British racial scientists at the time, anthropologist Dr. James Hunt, stated in 1863:

> No man who thoroughly investigates with an unbiased mind, can doubt that the Negro belongs to a distinct type...The term species, in the present state of science, is not satisfactory; but we may safely say that there is in the Negro that assemblage of evidence which would...induce the unbiased observer to make the European and the Negro distinct types of man.[41]

In the same year, Hunt established the Anthropological Society to sustain research that could provide concrete evidence for the speciation of human races.

According to British scientists, race could determine the extent of civilization and the level of human development. Stepan explains that the increasing popularity of racism in British science in the nineteenth century resulted from the rise of a more parochial and nationalistic outlook among scholars and common people. As industrialization swept over Britain, the British began to look down upon newly encountered cultures that were significantly less industrialized. During this time in Britain, most scientists did not express their blatant racism, as a few, such as

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[39] Nancy Leys Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 9.
[40] As quoted in Nancy Leys Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 4.
[41] Ibid.,3.

Dr. Robert Knox, a Scottish anatomist, once did in 1850 when he claimed, "With me, race or hereditary descent is everything. It stamps the man."[42] Many British scientists did admit, however, that racial identification and classification based on variation and separation "provided the key to human history and destiny."[43]

For European scientists, the racial hierarchical organization of man was of the utmost importance to scientific discovery and research. Stepan notes that racial science was significant because "it provided a series of lenses through which human variation was constructed, understood, and experienced from the early nineteenth century until well into the twentieth century, if not until the present day."[44] During the mid-nineteenth century, prominent scientists, such as Georges Cuvier, heralded in France as the "Aristotle" of his age and founder of comparative anatomy, geology, and paleontology, promoted polygenetic theories. Cuvier once referred to Africans as "the most degraded of human races, whose form approaches that of the beast and whose intelligence is nowhere great enough to arrive at regular government."[45] Charles Lyell, the renowned founder of modern geology, similarly remarked, "The brain of the Bushman... leads towards the brain of the Simiadae (monkeys). This implies a connexion between want of intelligence and structural assimilation. Each race of Man has its place, like the inferior animals."[46] European scientists sought to justify these theories by comparing African human and monkey skulls, and even sought to find evidence that would elicit the mechanisms

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[42] As quoted in Nancy Leys Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 4.
[43] Ibid.,4.
[44] Ibid.
[45] Nancy Leys Stepan, "Appropriating the Idioms of Science: The Rejection of Scientific Racism," in *The "Racial" Economy of Science toward a Democratic Future*, ed. Sandra G. Harding (Bloomington: Indiana University Press, 1993), 217.
[46] Nancy Leys Stepan, "Appropriating the Idioms of Science: The Rejection of Scientific Racism," in *The "Racial" Economy of Science toward a Democratic Future*, ed. Sandra G. Harding (Bloomington: Indiana University Press, 1993), 217.

leading to such "similarities."[47]

By the twentieth century, scientists remained preoccupied with the notion of race and "racism was firmly established in popular opinion and science."[48] In the 1930s, this preoccupation with race assumed an entirely new role in the form of the eugenics movement. Though eugenics consumed British society and science predominantly from 1900 to 1925, its origins began much earlier. In 1883 Charles Darwin's cousin Francis Galton first defined the term eugenics as "the study of agencies under social control that may improve or impair the racial qualities of future generations either physically or mentally."[49] Galton sought to understand how mankind could improve its "stock" and improve fitness and chances of survival by "breeding the fit and discouraging the breeding of the unfit." In Britain, the field of eugenics did not originally have any racial connotations. Rather, proponents of the movement were more concerned with ameliorating lower class social problems, such as poverty and unemployment, from a biological perspective.[50] This was not the case for long. Leaders of the eugenics movement soon became interested in improving races with social programming and the selective breeding of human species. By 1920, the movement had grown worldwide, and several countries such as Russia, Germany, Japan, and the United States took part in "race hygiene" programs. The most obvious result that manifested from this movement was the massacre of Jews in Nazi Germany from 1933 to 1945.

By the early 1930s, the racialized ideologies of the eugenics movement arrived in colonial Kenya. As Campbell notes, "British eugenics was the intellectual mothership for the

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[47] Ibid.
[48] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 19.
[49] Ibid.,2.
[50] Ibid., ix.

Kenyan movement."[51] In 1933, a coalition of British urban professionals and government officers eager to see an "intellectual movement" formed the Kenyan Society for the Study of Race Improvement (KSSRI).[52] Eugenics soon manifested itself in the practice of Kenyan colonial medicine because "it promised rational, biological solutions to perceived problems...of African development."[53] According to Campbell, Kenyan eugenicist doctors "made their agenda central to debates about African welfare" and adopted an extreme interpretation of racial differences.[54]

Eugenicists used science as their language to navigate the uncomfortable tensions caused by strained racial relations in the colony. Many Kenyan British eugenicists lobbied the British government to generate funds to establish a research program in Nairobi to investigate the causes of 'African backwardness.' Eugenicists continually questioned the biological basis of "African intelligence" and investigated mental deficiency, or 'amentia,' in Africans, thereby "pathologizing the brain of the Kenyan native as inferior."[55] Given the extensive history of racial science in Britain, these inquiries do not deviate much from the theories of Dr. James Hunt and other early British racist scientists who deliberately sought to categorize Africans as inferior, less developed, and loosely related to man. The "progressives" in Kenya supported eugenics research because they believed such "new information" could better inform them about African ways of life and help them develop a more "scientifically informed pursuit of native development."[56]

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[51] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 11.
[52] Barbara Bush, review of *Race and Empire: Eugenics in Colonial Kenya*, by Chloe Campbell, *Reviews in History*, October 31, 2007, review no. 632, http://www.history.ac.uk/reviews/review/632.
[53] Ibid.
[54] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 39.
[55] Ibid.
[56] Ibid.

Campbell suggests that working to improve "African development" legitimized colonialists' reason for even being in Kenya in the first place.

Since Kenya's settler population had only 16, 812 people in 1931, there was the "relative absence of a professional intelligentsia" which meant that it was easier for a single figure to dominate and promote eugenic ideas unchallenged by the majority of the population in Kenya. The leaders of the eugenics movement in Kenya included doctors, psychiatrists, and progressive settlers. The main leader of the eugenics movement in Kenya was psychiatrist Dr. Henry Laing Gordon, a colonial settler who later became the President of the Kenyan branch of the British Medical Association in 1931.[57] In his speech at the organization's Annual Dinner, he argued that "promotion of education and physical health in Africa were potentially irresponsible objectives if undertaken without due regard for immutable African capabilities, or lack of them."[58] Moreover he went on to say, "Native backwardness could never be made to disappear under the mere trapping of civilization. No prevention of disease, bonification, education, or religion could enable them to gather grapes of thorns or figs off thistles."[59] Gordon, as an influential member of the Kenyan colonial medical community, proclaimed this notion that no African could ever reach the full potential of being a human. Gordon publicly and unabashedly reinforced the stereotype of Africans as inferior, "uncivilized," and permanently backwards due to their "inferior intelligence."

Throughout the 1930s, Kenyan eugenicists continued to pursue research on racial differences in intellect between Africans and Europeans. During the eugenics movement,

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[57] Barbara Bush, review of *Race and Empire: Eugenics in Colonial Kenya*, by Chloe Campbell, *Reviews in History*, October 31, 2007, review no. 632, http://www.history.ac.uk/reviews/review/632.
[58] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 39.
[59] Ibid.

Kenyan medical professionals believed in the biological basis for the separation of races. They "resisted abandoning the question of African difference" and instead sought to "locate the causes of African difference whether in cultural development, psychological stability, or physique in the environment."[60] These research endeavors "enabled doctors to avoid accusations of racism" while giving them the freedom to continue exploring racial questions as promoted by the eugenics movement. In fact, Campbell notes that Kenya produced more eugenics research and rhetoric than any other British colony in the twentieth century. In 1934, the British Colonial Office received a request for funding from the Kenya Colony for an extensive research project that would investigate the underlying biological determinants of African "capacity and backwardness." This research sought to understand the physical and environmental factors that "limited" African "cerebral development, quality, and reaction" with the intent of casting light on Africans' "educability."[61] Although this proposal was denied, this research question gives insight into scientists' quest to justify the hierarchical organization of man by race.

Since Karl Landsteiner discovered the ABO blood grouping system in 1901, many racial scientists and eugenicists turned to blood groups as the key to determining the biological basis for the speciation of races. This quest became a popular concern, especially as the British Empire expanded and subjected newly encountered African ethnic groups to medical experimentation. Racial blood grouping was not exclusive to the African colonies. During World War I in Germany, according to records, two field workers in the war manipulated data to show that blood group B supposedly served as a marker for Jewish and Slavic ethnic groups. Their "data" also showed that group A served as a marker for "positive traits" and higher orders of "intellect and

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[60] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 39.
[61] Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 217.

industry."[62] Race and blood grouping continued to be a pervasive issue within the context of the World Wars, European colonialism, and the United States. For instance, during World War II, German officials only accepted donated blood from the 'Aryan' race, and in the US donated blood was segregated by race.[63] In fact, Louisiana passed a law in the 1950s that made it a misdemeanor for physicians to give a white patient donated blood from a black patient without the white patient's consent.[64] As this thesis explores, the racialized segregation of blood in Kenya differed from the German and US examples due to the deliberate humanitarian aspect of British colonial medicine. In effect, British colonial doctors in Kenya had to reconcile serving the medical needs of African communities while similarly asserting their racial superiority.

Pseudoscience Justified Racial Science

A major component of eugenics research relied upon pseudoscience, or practices or beliefs that have no scientific justification. Eugenicist doctors became overwhelmingly concerned with scientifically proving Africans were biologically and intellectually inferior. However, these doctors used scientific methods to falsely draw unsubstantiated scientific conclusions to prove the "inferiority of Africans." For example, when Kenyan eugenicist doctors sought to examine African intelligence, they "made histological counts of brain cells and physical measurements of brain capacity."[65] Using such flawed methodology based on prejudiced hypotheses, eugenicists claimed to have proven African intellectual inferiority.

The existence of colonial blood banks served as a rich and convenient source of data for

[62] Paul LF Giangrande, "The history of blood transfusion," *British Journal of Haematology* Volume 110, Issue 4 (September 2000): 758-767.
[63] Ibid.
[64] Ibid.
[65] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 40.

British scientists to explore some of these racially- charged scientific questions. In the 1930s, one such physician named Dr. Ronald Eldson-Dew embarked on medical expeditions in colonial East Africa to collect and test blood samples from various African groups. Dr. Dew was convinced that he had discovered a system to racialize blood types. He believed that different races of people (Native Americans, Asians, and various African tribes) could be categorized and identified by a distinct blood type.[66] This is false because modern science has revealed that while certain blood types may be more common to a certain race than others, race cannot be identified by one singular blood type. Dr. Eldson-Dew also wrote that certain African tribes had "more primitive blood" than others, and that European blood was farthest removed from the markers that characterized "primitive blood."[67] He also wrote, "What is true of the individual is also true of the race." Dr. Dew believed his "evidence" that blood grouping necessarily conveyed racial identity, a notion similar to that of biological determinism. As such, Dr. Dew adhered to the racial ideologies of his time. Although it is unknown if he was a eugenicist, his work may served as justification for the racialization colonial blood banks.

As one can see from figures 1 and 2 below, Dr. Eldson-Dew convinced himself and others that racial groups could be identified by their blood type. However, upon further analysis, it quickly becomes apparent that Dr. Dew did not substantiate his hypothesis. Rather, he indicated statistical trends in blood groups that are universally known: blood O group is the most common blood type in the world, followed by A, B, then AB. This trend is still evident in the human population today.

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[66] Dr. Ronald-Eldson Dew, Personal notes from "African Research: Survey of the Blood Groups of African Natives," 2 April 1937, Reference Number 847/8/2. The National Archives, Kew, United Kingdom.
[67] Ibid.

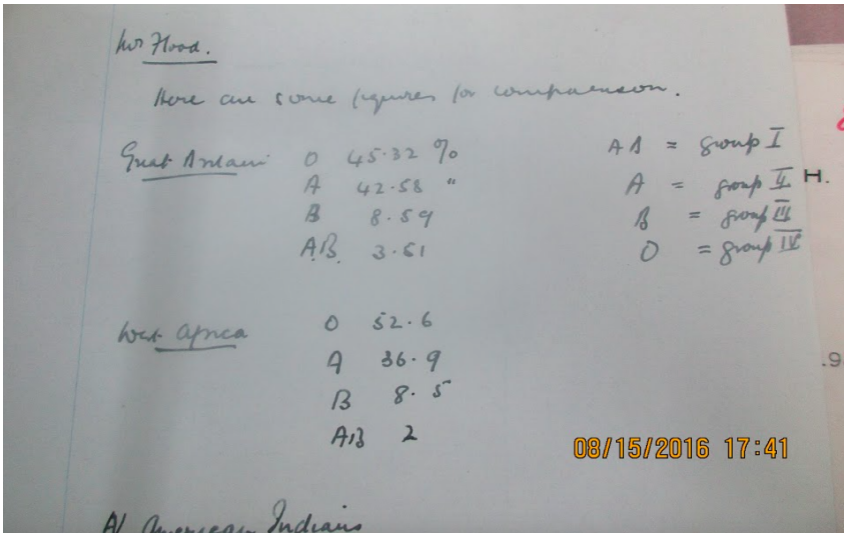

Figure 1. Photo from Dr. Eldson-Dew's research notes from his ethnic blood grouping expeditions.
Credit: Personal photo, Dr. Ronald-Eldson Dew, Personal notes from "African Research: Survey of the Blood Groups of African Natives," 2 April 1937, Reference Number 847/8/2. The National Archives, Kew, United Kingdom.

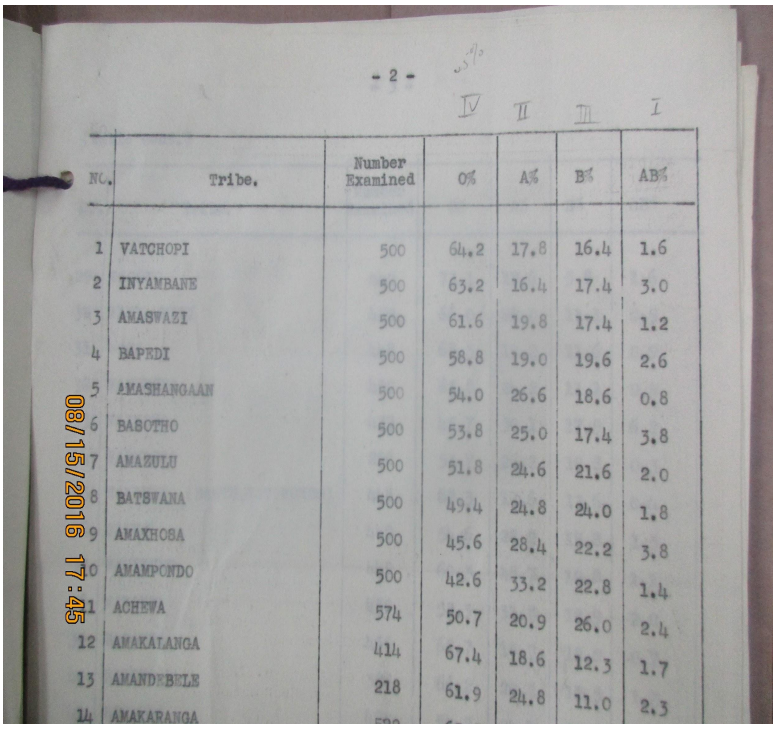

Figure 2. Photo from Dr. Eldson-Dew's blood grouping expedition indicating percentage of blood group by East African tribes.
Credit: Personal photo, Dr. Ronald-Eldson Dew, Personal notes from "African Research: Survey of the Blood Groups of African Natives," 2 April 1937, Reference Number 847/8/2. The National Archives, Kew, United Kingdom.

Stepan argues against the idea that racial science was merely a story of pseudoscience, as some scholars believe. She concludes science during this time may have been bad science but it was not truly pseudoscience.[68] For Stepan, merely labeling their work as pseudoscientific discredits scientists' adherence to rigorous scientific methods they used to pursue their inquiries. Moreover, she notes that these scientists were "not consciously racist" and were merely using science to solve "puzzling problems of biology and human society."[69] Experimentation by scientists such as Dr. Eldson- Dew raises questions about Stepan's approach. First, he failed to adequately identify the origin or significance of "markers of primitivity" in his blood samples. As most modern scientists today would agree, such a claim could not be made without substantial experimental evidence or data. Moreover, Dr. Eldson-Dew used the ill-defined term "primitivity" loosely and provided no explanation for linking this vague term with biological markers. For these reasons, the term pseudoscience more accurately characterizes Dr. Eldson-Dew's research as it lacked proper experimental evidence without properly adhering to the scientific method.

Science provided the gateway for some British scientists to vilify their racist ideologies. In principle, science is not a subjectively malleable field. The scientific method is rigorous, data-driven, and unbiased. Yet, British scientists fundamentally changed this during the simultaneous rise of pseudoscience and new scientific technological advances in Europe. The emergence of new European scientific technologies, such as methods to conduct blood grouping, facilitated these pseudoscientific research endeavors. Eugenicists used their ability to manipulate the

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[68] Stepan, Nancy, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), xvi.
[69] Ibid.

scientific method to conduct racially-charged research expeditions on colonial subjects within the British empire. Such experimentation led colonial governments and medical officers to routinely medicalize Africans and further racialize their experiences in their own land.

The Racialization of Colonial Blood Banks

> Blood is a slippery substance: both matter and idea, both a viscous material entity and a collection of visual and linguistic metaphors. Blood transports oxygen, pathogens, ideologies, affects, and norms...Blood slips by us, through us, around us, and we come to know ourselves and each other through its circulations.
>
> -Cathy Hannabach, *Blood Cultures: Medicine, Media, and Militarisms*

In colonial Kenya, British colonial authorities sought to further segregate society by racializing every facet of life, from residential areas to the delivery of medical care. They justified racializing medicine by referencing pseudoscientific research that proved the separation of race by blood group. According to the Foucauldian perspective, "Power, as it operates in the medical encounter, is a disciplinary power that provides guidelines about how patients should understand, regulate, and experience their bodies."[70] Many patients living in Kenya may have well understood their bodily processes under racial guidelines. This racialized colonial medical system also metaphorically demonstrated widely accepted ideologies of European racial superiority and dominance in Africa. Just as medicine conveyed power, blood transmitted dominance and authority. Foucault notes that before sexuality assumed the symbolic role of power, "the relation of blood long remained an important element in the mechanisms of power, its manifestations, and its rituals."[71] He writes:

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[70] Deborah Lupton, "Foucault and the medicalisation critique," in *Foucault, Health and Medicine,* ed. Alan R. Petersen and Robin Bunton (New York: Routledge, 1997), 94-110.
[71] Michael Foucault, *History of Sexuality, Volume 1: An Introduction* (New York: Vintage, 1980) 147.

> For a society in which the systems of alliance, the political form of the sovereign, differentiation into orders and castes, and the value of descent lines were predominant; for a society in which famine, epidemics, and violence made death imminent, blood constituted on of the most fundamental values.[72]

Colonial Kenya was a socially and racially stratified society that operated under a system of power imbalances. In this society, blood "was a reality with a symbolic function."[73]

One of the most striking instances of racialized medical care in colonial Kenya is the emergence of segregated colonial blood banks. Scientists and physicians began to employ blood transfusions in regular medical care after the practice became popular from widespread usage in the World War I in Europe. In 1918, a Belgian doctor named Émile Lejeune traveled to the East African front at the end of World War I to treat patients suffering from the conflict between the British and German-led forces in Tanganyika. During this campaign, Lejeune treated a European officer who was suffering from blackwater fever with a blood transfusion. This case was one of the earliest recorded transfusions in sub-Saharan Africa.[74] This example proved to Europeans that doctors could successfully perform blood transfusions in an "African setting."[75] By the early 1900s, the British colony had built three main hospitals in Mombasa, Entebbe, and Nairobi which provided the medical infrastructure necessary to perform blood transfusions in sub-Saharan Africa.[76]

By the end of World War II, blood transfusions had become a routine facet of medical care in sub-Saharan African. As more European doctors traveled to Africa, many were equipped

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[72] Ibid.
[73] Ibid.
[74] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 11.
[75] Ibid., 11.
[76] Ibid., 11.

with knowledge of transfusions from their Western medical training.[77] The British Red Cross played a significant role in the operation and viability of these numerous blood banks in the British colonies. Colonial medical administrators, such as the Director of Medical Services in Kenya, Senior Medical Officers, and Transfusion Committees, called upon the British Red Cross to help operate colonial blood banks due to their expertise in blood banking in the United Kingdom and on the warfront. The British Red Cross had a secure source of funding and was willing to provide volunteers experienced in recruiting panels of donors for blood donation.[78] Colonial physicians routinely referred patients who needed blood transfusions to one of the many regional British Red Cross blood bank transfusion centers.[79] As racial science emerged in Europe, British physicians and the British Red Cross brought these ideologies to the colonies in the form of segregated blood transfusion services in colonial Kenya.

The development of blood transfusion technology initially had no role in racial science. Beginning in 1666 in Oxford, England, scientists carried out the first blood transfusions in animals. In 1818, an English obstetrician from Guy's and St. Thomas' Hospitals in London named James Blundell became the first physician to successfully transfuse blood from human to human and initiated the era of transfusion medicine.[80] European scientists and physicians quickly realized the immense potential for human health that this new scientific development could allow since blood transfusions have a multitude of uses within the clinical setting. For instance, transfusions are used to treat a variety of ailments such as hemorrhaging in postpartum women,

[77] Ibid., 30.
[78] Ibid., 10.
[79] Ibid., 31.
[80] Paul LF Giangrande, "The history of blood transfusion," *British Journal of Haematology* Volume 110, Issue 4 (September 2000): 758-767.

anemia, hemophilia, and can supplant blood loss during surgery.[81]

1666	Richard Lower (Oxford) conducts experiments involving transfusion of blood from one animal to another
1667	Jean Denis (Paris) transfuses blood from animals to humans
1818	James Blundell (London) is credited with being the first person to transfuse blood from one human to another
1901	Karl Landsteiner (Vienna) discovers ABO blood groups. Awarded Nobel Prize for Medicine in 1930
1908	Alexis Carrel (New York) develops a surgical technique for transfusion, involving anastomosis of vein in the recipient with artery in the donor. Awarded Nobel Prize for Medicine in 1912
1915	Richard Lewinsohn (New York) develops 0.2% sodium citrate as anticoagulant
1921	The first blood donor service in the world was established in London by Percy Oliver
1937	Blood bank established in a Chicago hospital by Bernard Fantus
1940	Landsteiner and Wiener (New York) identify Rhesus antigens in man
1940	Edwin Cohn (Boston) develops a method for fractionation of plasma proteins. The following year, albumin produced by this method was used for the first time to treat victims of the Japanese attack on Pearl Harbour
1945	Antiglobulin test devised by Coombs (Cambridge), which also facilitated identification of several other antigenic systems such as Kell (Coombs et al, 1946), Duffy (Cutbush *et al*, 1950) and Kidd (Cutbush *et al*, 1950)
1948	National Blood Transfusion Service (NBTS) established in the UK
1951	Edwin Cohn (Boston) and colleagues develop the first blood cell separator
1964	Judith Pool (Palo Alto, California) develops cryoprecipitate for the treatment of haemophilia
1966	Cyril Clarke (Liverpool) reports the use of anti-Rh antibody to prevent haemolytic disease of the newborn

Table 1. Landmarks in blood transfusion medicine history.
Credit: Paul LF Giangrande, "The history of blood transfusion," *British Journal of Haematology* Volume 110, Issue 4 (September 2000).

Throughout the 1900s, scientists discovered methods to perfect the practice of blood transfusions. These discoveries facilitated the rapid development of transfusion centers that emerged across Europe. In 1921, Percy Oliver, founder of the British Red Cross, established the first blood donor service in the world in London. This system of accruing blood donors relied on compiling lists of volunteers whose blood type was already known and who had been screened for illnesses. The British Red Cross then relied on these established donor panels by calling the

[81] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 11.

names of volunteers at any time to donate blood. [82] The British Red Cross required that the blood be given on a voluntary basis and without compensation from the donor, a stipulation that Percy Olivier vehemently advocated for.[83] This systematic recruitment of donors and operation of blood banks in London served as a model for the operation of British colonial blood banks in Kenya.

In 1932, the British Red Cross established the first blood transfusion service center in Nairobi. In the first year, its donor panel list consisted of 24 donors. These initial blood donor centers continued to grow in Kenya due to the "availability of donors, willing patients, and technical ability to do transfusions."[84] Following World War II, the British allocated more funds to the construction of hospitals in its African colonies, which allowed for a rapid increase in the number of blood transfusions.[85] Additionally, more technological advances, such as discovering methods to store whole blood and separate and freeze-dry plasma, facilitated the rapid growth of blood transfusions in the tropical climate of the African colonies.[86]

By the 1930s, the British colonial government and the British Red Cross established and operated European, African, and Asian Blood Banks in various regions in Kenya. On June 25, 1940, a Senior Medical Officer wrote to a Senior Pathologist in Nairobi stating, "The difficulty of arranging an adequate blood transfusion service in a mixed population is so great as to render any such scheme impracticable."[87] Although the eugenics movement had declined, eugenicists'

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[82] Paul LF Giangrande, "The history of blood transfusion," *British Journal of Haematology* Volume 110, Issue 4 (September 2000): 758-767.
[83] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 32.
[84] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 27.
[85] Ibid., 28.
[86] Ibid.
[87] Letter from RAW Procter (Senior Medical Officer) to Senior Pathologist, Nairobi, June 25, 1940, Kenya National Archives.

insistence on the racial separation of blood remained a widely accepted belief in Kenya. In the 1930s, Dr. Gordon remained optimistic of the permanence of white dominance in Africa provided that race mixture did not occur in any form. He once remarked, "There must be no mixture with negroid blood."[88] Due to this pervasive eugenic rhetoric, colonial blood banks remained segregated well into the 1960s.

Pseudoscientific studies influenced by racial ideologies, such as those by Dr. Eldson-Dew, may have initially served as justification for the separation of blood by racial groups. By the 1960s, some medical professionals were aware that this science was flawed and that races did not differ by blood groups. In March 1960, an individual from the Laboratory of Clinical Medicine in Kenya wrote to the Chief Medical Officer reinforcing this notion:

> The problems in this country are considerably more complex than in European countries for various reasons—emotional, religious, and even rational. It is at the present time, necessary to maintain in Nairobi, separate Blood Banks and donor lists for the Europeans, Asian and African communities in spite of the fact that the composition of blood varies little between races.[89]

This quote serves as evidence that clinical officers, who directly made requests to the British Red Cross to racialize the blood supply, knew that "scientific" justifications for racial determinism were faulty. It is unclear how the individual knew that "the composition of blood varies little between races." Perhaps new research surfaced that debunked previous pseudoscientific research claiming races differed by blood types. However, colonial medical authorities continued to validate racializing the blood supply in an attempt to control the distribution of blood among the three racial communities in colonial Kenya.

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[88] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 125.

[89] Letter from Laboratory of Clinical Medicine to Walker (Chief Med Officer, Kenya), March 1960, File B7/12/9, "Blood Transfusion Institute," Kenya National Archives.

Challenges in the Operation of Colonial Blood Banks

The British Red Cross did not uniformly operate the three racialized blood banks. Each bank had its own set of problems both internally and externally in each respective community. For example, in the same letter of correspondence, the writer informed the Chief Medical Officer of Kenya:

> In the case of the African community, there is little difficulty. No regular donor lists are maintained, but there is a vast blood donor potential available to bleeding teams...The African Bank is kept in the Consultative Clinic of King George VI Hospital, where it was first established…The other two communities are less fortunate. The bulk of the patients requiring transfusions are non-Governmental employees unentitled for the most part, to the free service provided for the African, and therefore not subject to a uniform administration.[90]

It is important to note from this letter that the three racial blood banks were located in separate physical locations. African Blood Banks resided in some regional hospitals, and the European and Asian Blood Banks resided in other separate locations. In times of emergency, even if a medical professional wanted to fetch blood from another race, the physical separation of the blood banks made this an unlikely solution. This physical separation, in addition to the mere separation of blood by race, further emphasized the British colonial government's insistence on segregation of bodies and bodily fluids.

The annual reports of the British Red Cross revealed the extent of racialization of the blood banking system in the British colonies. In some reports, the writers reported the quantity of blood donations by race. The British Red Cross did not mix donated blood of different racial groups, even in times of medical emergencies. Many of these medical emergencies arose from a

[90] Letter from Laboratory of Clinical Medicine to Walker (Chief Med Officer, Kenya). March 1960, File B7/12/9. "Blood Transfusion Institute," Kenya National Archives.

blood shortage in the blood banks. This problem was not exclusive to Kenyan blood banks. In fact, blood banks in other British colonies faced similar situations. In her February 1961 field report, British Red Cross field officer Patricia Jephson reported a serious problem occurring in her jurisdiction of Nyasaland in present-day Malawi:

> This is very worrying. The African Blood Bank is empty. The surgeon at the hospital has told me he is unable to operate for lack of blood. There is a separate bank for Europeans and European blood is not used for Africans. The Africans are not coming forward at all. [91]

Ironically, while the British Red Cross invested time and money in establishing numerous blood banks, many patients suffered when their racial blood banks were empty. This is one of the best examples of the paradox surrounding healthcare delivery during this time. Racialized medicine countered the purpose of the European "civilizing mission" to aid in African development and improvement of "native" health even in the presence of live-saving technology.

The British Red Cross prided itself in administering blood transfusions in many British colonies, including Northern Rhodesia, Tanganyika, and Uganda, among others. The successes and challenges of these blood banks differed by colony. In an Overseas Branch Report from 1947, the British Red Cross wrote that "the Blood Transfusion Service has continued very successfully and no-one in need has had to suffer from lack of a transfusion."[92] Another report from the Northern Rhodesia Branch in 1953 noted that "many emergency calls have been answered and many lives saved."[93] Yet in reports from other colonies, the British Red Cross reported a shortage of blood in particular racial blood banks. In an attempt to address their

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[91] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 140.
[92] British Red Cross Society, Kenya, Overseas Branch Report, 1947, D43, British Red Cross Archives, London, United Kingdom.
[93] British Red Cross Society, Northern Rhodesia Branch, Annual Report, 1953, British Red Cross Archives, London, United Kingdom.

challenges in obtaining blood for a certain race, the solution never included borrowing blood from another race. The British Red Cross always resorted to asking for money from the British government to establish another bank or increasing their recruitment efforts.

While the actual practice of transfusing blood from donor to patient may have been ubiquitous, recruiting donors differed across the populations. The demands of each blood bank depended on the size of the population that it served. For example, African blood banks experienced the most pressure to keep the pace of the demands for transfusions as they served a population of 3.1 million Africans (compared to the population of 16,821 Europeans in 1932 colonial Kenya).[94] Contrary to the original stipulation by the British Red Cross to ensure all blood donations were voluntary and did not include compensation, many colonial blood banks began compensating Africans for their blood to fulfill the needs of their large population. In addition, many blood banks, often associated with hospitals, required a patient's friends or relatives to offer themselves as donors.[95]

It was not common practice for many African groups in Kenya to willingly donate blood. In notes collected from a meeting on Blood Transfusion Services on May 15, 1952, many assumed that "Africans would be forthcoming in adequate quantities."[96] However, this was not the case due to many reasons. For many Africans, blood was seen as sacred, and traditions and cultural taboos prevented them from donating their blood.[97] As Tilley notes, Africans were skeptical about donating their blood since many Europeans subjected Africans to blood drawings

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[94] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 27.
[95] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013) 32.
[96] "Blood Transfusion Services. Notes on a Meeting," May 15, 1952, Kenya National Archives.
[97] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 131.

for biomedical research.[98]

This skepticism was not unwarranted. Louise White investigated the rumors of "vampire men" and "bloodsucking" in Central and East Africa which reflected some Africans' skepticism of blood collection and their subjugation to European medical exploitations.[99] White and Jennifer Tappan believed these rumors give insight into many African's perspectives on Western medical intervention. In some instances, the rumors even served as a social commentary on the "critique of biomedical research that failed to improve health and wellbeing and benefit the people."[100] In East Africa, where much biomedical experimentation took place, medical research was oftentimes East Africans' first exposure to Western biomedicine.[101] Despite this, some Africans were still receptive to reaping the benefits of colonial healthcare in the form of blood transfusions. On June 4, 1955, Mr. JMO Tameno (African Representative) said, "The Africans now realized that treatment from a qualified doctor was better than treatment from a witch-doctor."[102] Thus, though such a sentiment cannot be generalized for all Africans, some Africans may have greatly appreciated the transfusion services despite the racially segregated nature of the service while others may have remained skeptical to donating.

The British Red Cross' recruitment of African donors necessarily differed from Asians and European donors due to the difference in types and location of the jobs that Africans held. For example, a letter from a meeting on the proposed multi-racial blood bank noted that the

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[98] Helen Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950* (Chicago: University of Chicago Press, 2011).
[99] This is not meant to generalize all Africans and their views toward blood. Not all Africans living in colonial Kenya maintained skepticism towards donating blood. This paragraph serves to explain the general socio-historical context of African skepticism to donate blood during European occupation and colonialism in Africa.
[100] Ibid., 477.
[101] Melissa Graboyes, "Introduction: Incorporating Medical Research into the History of Medicine in East Africa," *International Journal of African Historical Studies* Volume 47, Issue 3 (2014).
[102] "Onus for Blood Bank rests on Government: Red Cross Unable to Meet Increased Commitment," June 4, 1955, *East African Standard*, Kenyan National Archives.

building should be in walking distance for the majority of workers in Nairobi, but "for Africans it would be necessary to provide a mobile unit which could visit their places of work."[103] The British Red Cross in colonial Kenya also undertook great measures to recruit African youth to donate blood. In addition to recruiting from schools, the British Red Cross also primarily recruited donors from the military and prisons.[104] Evidence indicates that men were more likely than women to donate blood, and African youth were more likely to donate than their counterparts in Europe and North America.[105] In addition to coordinating large campaigns in urban and rural districts to encourage African youth to donate, in some colonies the British Red Cross also formed the Junior Red Cross and enlisted local youth to volunteer at local blood banks and reach more African youth in schools for blood donations.[106]

To recruit more Africans donors, the British Red Cross used posters that emphasized the importance of donating blood to save the lives of others.[107] The British Red Cross also created The Mobile Touring Van used to collect blood from Africans in areas farther from urban centers "to ensure good will and cooperation" (see Figure 3 below).[108] One solution to increasing the voluntary participation of donors, in addition to using the mobile van, included giving badges to donors. According to several annual reports, such as the 1955 Uganda report, the British Red Cross awarded medals to donors who had donated more than four pints of blood.[109] These reports only mentioned giving these badges to African donors in an attempt to increase the

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[103] "All Races Blood Bank. Notes on a Meeting," June 19, 1952, Kenya National Archives.
[104] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 131.
[105] Ibid., 132.
[106] Report for the Year in 1960, Northern Rhodesia Branch, The British Red Cross Society, British Red Cross Archives, London, United Kingdom.
[107] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 110.
[108] "Blood Transfusion Services. Notes on a Meeting," May 15, 1952, Kenyan National Archives.
[109] Overseas Branch Report, Uganda, 1955, British Red Cross Archives, D43, London, United Kingdom.

number of donors. Eventually, some blood banks paid Africans for their blood. According to Schneider, compensation for blood donation in Africa was not simply a "token of inconvenience." Rather, the compensation served as a source of cash for Africans who otherwise would not have had access to readily available money.[110] Thus, although taboo and rumors did abound among some African communities concerning blood transfusions, with time many Africans viewed blood donation as a source of extra income.

Figure 3. British Red Cross Volunteer standing in front of mobile transfusion unit, 1960. *Credit*: Overseas Branch Reports, Uganda, 1960-1961, The British Red Cross Society, British Red Cross Archives, London, United Kingdom.

In addition, the British Red Cross created films depicting the "lifesaving" power of blood donations and showed this in many African communities. They showed these videos in towns

[110] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 132.

and cities in various regions in Kenya to increase the number of African donors. In a meeting with Kenyan Medical Officers from March, 17, 1950, one of the topics on their agenda included:

> Item 7: Formation of Blood Transfusion service for Africans in Central Province: It was considered that propaganda on blood transfusion should be carried out in all districts and that the blood transfusion film taken at Kiambu should be shown in other districts. The Information Office should be approached to produce other suitable films as being the most effective form of propaganda.[111]

As such, the British Red Cross relied primarily on films to encourage donations among Africans. It is unclear if this same method of propaganda was used primarily among Asians or Europeans. However, even discussions about film showings contained racial assumptions about Africans and their intellectual abilities. Schneider notes that the Canadian Red Cross created a movie, titled *Miracle Fluid*, to be shown to individuals and encourage blood donations. The British Red Cross was aware of this movie but refused to show it in the "up-country" of Nakuru noting that it would not be effective since the movie was "too technical for the African and his ability to understand."[112] The racist attitudes of the British and other Europeans manifested themselves in many circumstances, from segregating the blood supply in the colonies to questioning the intelligence of Africans during donor recruitment.

The British Red Cross had more difficulty finding donors to give blood in some communities more than in others. In an overseas Branch Report from Uganda, the British Red Cross reported, "It is hoped to run a small blood bank for Asian donors of two pints per district as in an emergency great difficulty is experienced in obtaining donors."[113] In another letter from December 18, 1954, a man by the name of Ahmed Ali expressed this same difficulty in obtaining

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[111] "Minutes of Medical Officers" Meeting at NCH, Nyeri, March 17, 1950, Kenyan National Archives.
[112] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013), 132.
[113] Kenya Overseas Branch Report, 1952, British Red Cross Society, D43, British Red Cross Archives, London, United Kingdom.

Asian donors to the Director of Medical Services (DMS) in Kenya:

> I have succeeded where Social Service League, Nairobi and Pandya Clinic Mombasa and many individual doctors have failed with all the resources at their disposal. It is not an easy thing to get blood out of an Asian yet I have succeeded in collecting 245 pints. I have chased persons in the streets, clubs, met their employers and parents and thus collected 245 pints.[114]

Ali proceeded to plead the Government for money to sustain his recruitment efforts and to "educate the Asian public on this subject."[115] This example demonstrated that individuals did not always voluntarily give their blood as suggested in the British Red Cross annual reports. In another letter, Ali pleaded to the British Red Cross to establish an Asian Blood Bank in Nairobi. He wrote that "the need for a proper Blood Bank for the Asian community has been keenly felt but nothing so far had been done."[116] He cited an example emphasizing the urgency of establishing an Asian Blood Bank with a story. In Nairobi, the King George VI Hospital admitted a gentleman named Mr. Sawan Singh who needed type "O" blood for a transfusion. Ali ran to the Social Service League in Nairobi to find names and addresses of Asian donors with type "O" blood. He found six names, two of which he could not locate, the third had left for London, the fifth was flying to India, and the sixth was "found in a bar drunk...he would not listen to the question of blood. He insisted upon treating us with drinks."[117] In one last desperate attempt, Ali made an announcement on the radio pleading for donors. Finally, some "kind-hearted people" heard the announcement and ran to the hospital to donate.

In the same letter, Ali noted that people in his community constantly beg him to donate blood. He received calls at midnight for someone needing blood for someone's mother and a

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[114] Ahmed Ali to DMS Kenya. "The Asian Blood Bank," Dec 18, 1954, Kenyan National Archives.
[115] Ibid.
[116] Ibid.
[117] Ibid.

father asking for blood for his son who was in an accident. Someone even asked for his blood when Ali was on his way to bury his father. Ali noted that this way of living and lack of an organized blood supply was "a complete mess." He also noted that there were "only 11,000 Europeans in Nairobi and they have two properly run banks while we 38,000 Asians...have not got a single one."[118] The allocation of resources and blood banks, much like the distribution of authority and political power, was racially disproportionate in colonial Kenya.

Ahmed Ali understood the medical needs of his Indian community and had a responsibility to bring this urgency to the colonial medical authorities. In another letter on April 2, 1954, Ahmed Ali wrote to the Director of Medical Services in Kenya again pleading for a central Blood Bank, but this time he mentioned other races. He wrote:

> I cannot express the difficulties suffered by the Asian community when someone is in need of blood. It is a daily need. I request you to open one Blood Bank somewhere in the centre of the city. I promise to produce Asian blood donors in any number you suggest. I am even prepared to let you have the necessary funds. What I need is proper staff to run it and it should be your duty. I again promise to provide volunteers and money. Let it be for all races. Believe me we Asians cannot manage it…[119]

For the sake of his community, Ali played into the racial rhetoric of his society by promising to "produce Asian donors." In the same letter, he compared his community's donating efforts to other racial communities by noting that many European women were on the list of European blood banks and that this "should be a source of inspiration to Asian young men and women...this is a challenge to our social and mora conscience. This is our citizenship duty."[120]

In his letter, Ali promised that he would supply this blood bank with his own volunteers and money. Although the British Red Cross did run and supply Asian Blood Banks, perhaps Ali

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[118] Ahmed Ali to DMS Kenya. "The Asian Blood Bank," Dec 18, 1954, Kenyan National Archives.
[119] Ibid.
[120] Ahmed Ali to DMS Kenya. "The Asian Blood Bank," Dec 18, 1954, Kenyan National Archives.

lived in a region where one had not been established and serviced by the British Red Cross. Even though Indians made up the portion of middle-class in colonial Kenya, their lack of access to adequate blood transfusion services negatively affected their daily lives. Ali made this discrepancy known to colonial medical authorities by reminding them that this need had remained unfulfilled by the government. At the end of his letter, Ali suggested a blood bank "for all races." It is unclear, however, if Ali advocated for a centralized, segregated blood bank that house all three "racial" blood or an entirely integrated blood bank. The proposal for the former, however, was a sentiment that the British Red Cross similarly reflected in letters the following year.

The mere timing of the establishment of all three types of blood banks also revealed the racialized hierarchy of the blood banking system. In a letter from Norman MacLennan to Director of Medical Services in Kenya in September 17, 1947, MacLennan suggested that first a European blood bank be built and "would be as well to exclude other races at present, or at least until the success or otherwise of the European scheme is assured."[121] Undoubtedly, the British Red Cross established the European blood banks to meet the needs of colonial settlers well before they established the Asian and African blood banks in Kenya. Ali Ahmed reminded the Director of Medical Services in Kenya about this when he reinforced the fact that Europeans had blood banks before even one Asian blood bank existed. This again reinforced the British colonial belief in a racial hierarchy and privileged access to healthcare. The obvious order of priority in building the blood banks could not have represented this ideology more clearly.

[121] Norman Maclennan (DMS, Kenya) to Member for Health and Local Government, Nairobi, "Establishment of Blood Bank," Kenyan National Archives.

Plans for an Interracial Blood Bank

Despite these challenges in operating separate blood banks, Kenyan colonial authorities and the British Red Cross resisted the integration and cross-mixing of blood in blood banks. On May 12, 1951, Eileen C Timms, Secretary of the Kenya Blood Transfusion Services of the Red Cross, wrote in a letter to DMS Kenya:

> Although it is not necessary on technical grounds, in the present state of public opinion a separate blood bank for each of the three races is essential…The Red Cross will support and sponsor similar services for Asians and Africans and do just as much for them as it does for the European one…"[122]

Eileen Timms advocated for the idea of "separate but equal" facilities for blood banks. However, even this idea would not address the operational inefficiency of the segregated blood banks. Timms also justified her plan by noting that the continued segregation of blood banks is supported by "public opinion." However, did this public opinion include those of Africans and Asians, whose larger populations suffered from severe blood shortages and who may have supported the integration of blood transfusion services? Or was this "public opinion" merely the dominant, authoritative voice of the British colonial administration? Just four years later, Ali begged the government for an Asian Blood Bank. So clearly, the Kenya Blood Transfusion services had still not provided adequate transfusion services to all Asian communities in Kenya as promised.

As directly evidenced from these letters, contemporary British racial scientific ideologies had a profound and subtle way of manifesting themselves in the organization and delivery of medical care in the colonies. For example, Timms described the segregation of blood as 'essential.' This necessity to segregate blood again can be traced to the goals of racial science

[122] Eileen C Timms [Secretary, Kenya Blood Transfusion Services, Red Cross] to DMS Kenya, "The Kenya Blood Transfusion Service," May 12, 1951, Kenyan National Archives.

ideology that emerged as early as 1830 in the British scientific community. For if Timms and the larger British medical community believed all races were fundamentally equal, why would they make it a priority to physically segregate the blood? This idea to deliberately separate the blood by different races emphasizes racial scientific ideology that promoted the "essential heterogeneity of mankind, despite superficial similarities."[123] This enforced segregation also drew upon elements of racial determinism that saw man "as primarily a biological being" instead of a merely social being.[124] If Ms. Timms had not abided by or accepted these ideologies as maintained by her British contemporaries, then she would not have suggested the separation of blood by races. The extent to which she fully accepted and believed this ideology is not known. It is unknown if she or any other colonial medical authorities referenced thus far were eugenicists. Yet, the commonly held belief during this time in the twentieth century in Europe was that "the white race was superior to the non-white races."[125] The colonial authorities made this notion clear to all inhabitants of the British Kenyan colony in the form of segregated and unequal healthcare services.

In order to address the many challenges of the blood banks, in 1955 the British Red Cross suggested the creation of a multi-racial hospital. In this proposed solution, the British Red Cross suggested building a hospital with full-time staff where blood from each race would be stored separately in one centralized location.[126] In the same year, one author wrote in the *East African Standard,* the colony's main newspaper, and noted that "the importance of a multi-racial service

[123] Nancy Leys Stepan, *The Idea of Race in Science: Great Britain, 1800-1960* (Hamden: Archon, 1982), 4.
[124] Ibid.
[125] Ibid.
[126] Excerpt from Minutes of a Meeting of the Executive Committee of the Kenya Branch of the British Red Cross Society Held at Headquarters on April 29, 1955," May 11, 1955, Kenya National Archives.

in normal times needs little emphasis and it is particularly urgent in times of Emergency."[127] The author pleaded for the full financial support of the British government for this plan. Finally, the author ensured that the British Red Cross would be fully capable of running this proposed multi-racial hospital due to its past successful record in operating the separate African, European, and Asian Blood Banks.

The Colonial Government of Kenya was originally reluctant to finance the project. In the same letter, the author noted, "It is estimated that the capital outlay for the buildings would be about 7000 pounds, and the recurrent annual costs something over 2000 pounds for permanent staff."[128] The British Government offered to pay for the building "on a 50-50" basis splitting the cost with the British Red Cross. However, the British Red Cross could not afford this deal, even if split with the Government. The author questioned why the Government could not support this expenditure, citing the funding a multiracial blood transfusion service in Singapore as a successful example. The author then wrote that the request for financial support "is such an elementary item in medical welfare that it is surely worth 7000 pounds to the Government."[129] The author wrote that the Government "has to consider plans to meet the need." Finally, the author assured the reader that Kenya is not going to lose its blood banks or transfusion services due to the unrelenting dedication of the Red Cross volunteers, who "deserve every praise and encouragement, as do also the donors of all three races."[130]

This proposal for an interracial blood bank was one step closer in the direction of centralizing blood from the three racial communities in colonial Kenya. By demonstrating their efficacy in recruitment and performing a certain number of donations, this author substantiated

[127] "Blood Banks," *East African Standard*. [Whole Article], June 6, 1955, Kenya National Archives.
[128] Ibid.
[129] Ibid.
[130] "Blood Banks," *East African Standard*. [Whole Article], June 6, 1955, Kenya National Archives.

the British Red Cross' requests for funding by the British government. However, as demonstrated, the British Red Cross never mentioned ameliorating the problem by simply integrating the blood supply. Interestingly, the author had to remind the government of the importance of healthcare in the colony for its residents. The government used its lack of financial resources as an excuse to back out. However, in the post-war era beginning in 1945, Britain vowed to invest more resources to supplant African development in the colonies. This excuse to back out of funding the interracial blood bank contradicted Britain's newly universalist approach to addressing "native" needs while governing the colonies.

The segregation of blood banks allowed the British to maintain social and racial control of the colony through medicine. This is especially apparent in the letters from transfusion committees discussing the placement of medical staff within new blood transfusion centers. In notes concerning the creation of the interracial blood bank on May 15, 1952, attendants at the meeting agreed that "for the operation of an interracial blood bank, a full time Euro Secretary would be necessary and an Euro Lab Tech who would be under the general supervision of Dr. Timms and Dr. Dockeray."[131] Even in an area as diverse as colonial Kenya, those attending the meeting agreed and suggested that only Europeans would be responsible for running the interracial blood bank.[132] In the notes, they also specified which races would fulfill the specific jobs that the interracial blood bank would require. Clearly, race was still very much on the mind of those at the meeting. Ironically, even though the interracial blood bank was one step closer to desegregating the blood banks, administrators still took time to carefully consider how the three races would interact and who would maintain authority of the other races.

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[131] "Blood Transfusion Services. Notes on a Meeting," May 15, 1952, Kenyan National Archives.
[132] The letters mention "Europeans" but it is unclear if this denotes other nationalities besides the British

The placement of British in roles of authority at the interracial blood bank ensured that the colony would remain socially and racially ordered in light of these minimally progressive measures. An individual named Michael Wood wrote to Susan Wood on December 10, 1947 noting, "The Kenya Blood Bank is now at the service of all European medical practitioners throughout Kenya."[133] This mention of European physicians attending to the blood bank provides interesting insight into the hierarchical nature of the medical profession in colonial Kenya during this time. In Kenya, British physicians held the most authority and power in the medical community. Though many Indian doctors had lived in East Africa since their arrival in the 1890s, the British colonial medical authorities considered Indian doctors to be significantly less qualified than European physicians. Indian doctors had been pivotal to the establishment of Western medicine in Kenya.[134] In fact, at the end of World War I, there were twice as many Indian doctors working for the Colonial Medical Service as Europeans.[135]

After the 1920s, many Indian doctors entered private practice. However, colonial medical authorities bypassed well-qualified Indian physicians for leadership roles in the government. Additionally, though many Indians worked as medical staff and were even praised for their work, the British Colonial Medical service assumed they were "not as desirable as European doctors."[136] Finally, there were no African doctors who served in the Colonial Medical Service in Kenya, though a few gained training as 'hospital dressers' starting in the 1930s at Makerere

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[133] Michael Wood to Susan Wood, "Kenya Blood Transfusion Services," December 10, 1947, Kenyan National Archives.
[134] Anna Greenwood and Harshad Topiwala, *Indian Doctors in Kenya, 1845-1940: The Forgotten History* (New York: Palgrave Macmillan, 2015) 1.
[135] Ibid.
[136] Anna Greenwood and Harshad Topiwala, *Indian Doctors in Kenya, 1845-1940: The Forgotten History* (New York: Palgrave Macmillan, 2015) 95.

College in Uganda, as detailed by John Iliffe.[137] Greenwood cautions against the use of the term 'doctors' as Africans were not trained to be as equally qualified as their European physician counterparts.[138]

Colonial medical administrators justified their decision to place British physicians in charge by noting that each racial community supported the segregation of medical services. For example, in notes from a meeting to discuss blood transfusion services on October 12, 1950, an attendee wrote: "Mr. Wood has been asked to run a blood bank for Asians, but thinks that they should run their own under Asian doctors as there seems to be some sort of racial prejudice prevalent."[139] Perhaps Asian patients did feel more comfortable when receiving medical services from doctors of their own race. However, by placing this responsibility on Asian doctors instead of providing an adequate, well-staffed Asian blood bank, Mr. Wood appealed to his own assumptions and perception of Asians' racial preference to justify removing himself from taking on this responsibility.

In response to the proposal for an interracial blood bank and request for the expansion of European transfusion centers, a letter from TF Anderson on October 13, 1950 stated:

> I consider that it should be ultimately possible for a separate organization to be set up in Nairobi which would be responsible for the administration of a blood bank for all races, serving the whole Colony and possibly later sub-depots to serve other East African territories. In my view such a separate organisation would not be justifiable at present because it is doubtful to what extent it would be supplied by the Asian and African communities."[140]

For TF Anderson, the prospect of creating an interracial blood bank seemed unrealistic due to his

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[137] Anna Greenwood, personally interviewed by Alexa Dantzler. E-mail, March 13, 2017.
[138] Ibid.
[139] "Minutes of a Meeting Held at Medical Headquarters to discuss the Blood Transfusion Service, Blood Bank, Etc.," October 12, 1950, Kenyan National Archives.
[140] TF Anderson to Honorary Member for Health and Local Government, "Blood Transfusion Service," October 13, 1950, Kenyan National Archives.

doubt that Asians and Africans would fulfill their role in donating. Five years earlier, in a letter from the acting Governor of Kenya to Secretary of State Savingram on December 21 1945, the Governor wrote that plasma is an "invaluable measure of saving life" and that plasma is running low, especially in the African Blood Bank, according to the Kenya Medical Department.[141] He noted that Africans, due to "superstition, disease, and floating populations" have made "satisfactory blood transfusion services impracticable."[142] Thus, while it is true that Africans may have skeptical to donating, they still could have received blood from another race if an interracial blood bank existed.

From these letters and minutes, it is evident that the governing parties understood and acknowledged the life-saving nature of blood transfusions. Yet, while it is true that Africans in colonial Kenya may have been wary of donating their blood, the solution never included cross-mixing the blood to fill deficits in the African or Asian blood banks. This notion was emphasized when the Governor wrote that the "Director of Medical Services is unwilling to ask for plasma from British people for Africans who might reasonably be expected to provide their own unless the supply can be put on a commercial basis."[143] Even in the face of medical emergencies where human lives were at risk, the Governor of Kenya and British Red Cross worked tirelessly to maintain the racialized social order of the day.

The logic of these plans was flawed since building an interracial blood bank would not necessarily ensure that more people from each race would be forthcoming to donate. If an African individual maintained skepticism about donating blood, how would the centralization of

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[141] Acting Governor of Kenya to Secretary of State. Savingram. [Whole Note]. December 21, 1945, Kenyan National Archives.
[142] Ibid.
[143] Acting Governor of Kenya to Secretary of State. Savingram. [Whole Note]. December 21, 1945, Kenyan National Archives.

blood in the form of a new blood bank influence him or her to donate? Senior Medical Officers, on the other hand, believed the interracial blood bank would ensure that more blood would be available for emergency situations. On March 27, 1953, a Senior Medical Officer wrote to the Director of Medical Services in Kenya:

> 43 patients were admitted mostly with panga wounds and loss of blood from Limuru district yesterday…28 pints of blood were collected from 21 pupils of Alliance High School and 7 students of Medical Training School. 15 pints have so far been given to casualties admitted yesterday. That blood was life-saving. ["Bleeding donors"]… It was provident that blood was obtainable at the eleventh hour. The incident has emphasized the paramount need of having blood available before casualties arrive, ie, an African Blood Bank. It is understood that plans have been worked out for a comprehensive Blood Bank for all races, which away funds. Meanwhile, it is suggested that certain measures would enable us at this hospital to be prepared for any future incident of this nature…[144]

In this report and the letter by Ahmed Ali, both writers indicated that doctors saved patients by finding donors at the last minute. Colonial medical officers saw this tardiness in medical care delivery as unacceptable. Yet, the creation of an interracial blood bank would not necessarily ensure an increased number of blood donations from each racial group even in times of emergency.

The minutes from these meetings regarding the proposal to build an interracial blood bank in colonial Kenya exposed many underlying and nuanced racial assumptions that powerful and authoritative colonial officials held during this time. If there was a deficit in a blood bank, colonial medical authorities claimed that it resulted from a lack of donors coming forward to donate blood. To the British, the crisis of blood shortage was situational and relative to each racial community. Instead of seeing the shortage of blood within an increasing population as a widespread issue in colonial Kenya, transfusion committee leaders addressed the blood bank

[144] From Senior Medical Officer to DMS Kenya, "Uplands Casualties and Blood Transfusions," March 27, 1953, Kenyan National Archives.

deficit community by community, race by race.

The Governors, physicians, and British Red Cross similarly addressed this situation as separate silos of concern instead of mixing blood of different races to serve the needs of their colony. Clearly, due to the sheer differences in the demands of each racial population, the blood banks were separate but they certainly were not equal. How could they be equal when African blood banks faced more blood shortages than European blood banks? How could they be equal when two European blood banks fully operated before even one Asian blood bank existed? This "separate but equal" mindset that many colonial authorities maintained further emphasized the widespread acceptance of racial superiority of Europeans during this period. This ideological notion undoubtedly cost lives, lives that the British Red Cross could have protected with the use of a technology as lifesaving as a blood transfusion.

Conclusion

The period between 1930 and 1950 in British colonial Kenya was a profoundly important time in the history of racialized colonial medicine. It would be remiss to study the delivery of healthcare in Kenya without understanding the detailed and underlying ideological framework that British scientists and physicians imported from Britain. As much as Kenyan colonial authorities asserted British dominance in the colony, Kenya was not a 'white' colony. Its population, although stratified by race and class, was intensely diverse. This unique makeup presented a situation unlike other British colonies during this period. One of the main themes this thesis has elucidated is the extent to which racial ideologies shaped the medical experiences of all three racial groups living in Kenya. These medical experiences differed greatly among members of each racial community, and Kenyan colonial medical officials had the authority to

deliberately determine the extent of this difference in experience.

As new scientific technologies emerged from Europe, they took on an entirely new role in the African colonial context. I illustrate in this thesis how those in authoritative positions in Kenya maintained the ability to simultaneously manipulate and deny science. Racially motivated scientific endeavors emerged at the same time as the apex of colonialism. It is not coincidental that research using blood groups to explain the biological separation of man emerged at the same time that colonial medical authorities segregated colonial blood banks.

One single factor does not identify race. Certainly one blood type cannot identify race either. Scientists such as Dr. Eldson-Dew and other eugenicists sought to prove the biological basis for the separation of races by blood type. Dew purposefully failed to admit that within a race, a diversity of blood types exists. This was obvious from the raw data of Dr. Eldson- Dew. He even noted that within African tribes, different percentages of blood groups existed. Although some blood types are more common in certain ethnic groups than others, a singular blood type does not define an entire race. He even went a step further and attempted to extrapolate from his blood data the degree of primitivity of different races. Dr. Eldson- Dew is a perfect example of how contemporary racial scientific ideology influenced the progression and results of his work. Moreover, his work may have been used as "empirical evidence" for the separation of blood in colonial Kenya.

The 1930s eugenics movement in colonial Kenya helped justify and legitimize the continued segregation of races. The movement also laid the ideological framework for the basic operation of all facets of Kenyan colonial society. As a result of the pervasive rhetoric of the eugenics movement, many members of the colonial Kenya medical community believed in their own racial superiority and belittled the intellectual capabilities of Africans. Eugenicists believed

in the timelessness and permanence of their ideas regarding the biological separation of man. As seen in history with the evidence of the Holocaust and many other events, highly racialized rhetoric such as this endangers the lives of targeted individuals. In the case of colonial Kenya, the segregation of blood banks served as a very direct and obvious reminder to Africans and Asians of their inferiority to Europeans.

As seen with the development of blood transfusions in Europe, newly emerging scientific and medical technologies took time to perfect. Yet once scientists perfected the complexities of new technologies, medical discoveries and innovations contained the power to prevent diseases and save human lives. When British physicians brought blood transfusion technology to Africa, many were in awe of the life-saving nature of this new technology. British scientists developed new techniques to facilitate the use of blood transfusions in Africa, such as improved storage and refrigeration methods. However, the mere racialized organization of colonial blood banks severely limited the life-saving power of blood transfusions.

British insistence on preventing blood-mixing between races in colonial Kenya exemplified the manifestation of nineteenth century British racial ideology. Although these conversations discussed the segregation of blood banks in the 1950s, rhetoric from early racial ideologies and the 1930s eugenics movement still influenced the segregation of the blood supply. For British Red Cross and Kenya Medical Directors, some of whom may have been eugenicists, it was more important to preserve racist ideology than to save patients suffering from blood shortages within their respective racial blood banks. More importantly, these Kenyan medical eugenicists rarely faced opposition as the colony lacked a larger community of intellectuals who

could challenge the flawed beliefs of leaders of the movement such as Dr. Gordon.[145]

During this time, humanitarian motives also succumbed to racial scientific ideologies. Masked under the guise of religion and will to perform good works, the British Red Cross facilitated the maintenance of the highly racialized order of Kenya society. For many young British physicians and British Red Cross volunteers traveling to colonial Kenya, the opportunity to help Africans served as one of the primary reasons to practice medicine in Africa. Few colonial doctors, if any, openly asked the British Red Cross of Director of Medical Services to desegregate the blood supply. As Dr. Robert Knox once proclaimed in 1850, "Race stamps the man." This sentiment still held true in colonial Kenya in the 1930s and ruled the organization of every facet of society. Yet, from analyzing these primary sources, it is clear that many physicians were aware that the racialization of blood banks endangered lives during blood shortages. To address the shortages, British Red Cross volunteers invested so much time recruiting donors with films, badges, and mobile units instead of simply mixing blood. They dared not question the racialized order of the day and instead allowed racial ideologies to proliferate and influence the basic delivery and practice of medicine. Adherence to such racial scientific ideology diminished their ability as doctors to embody key principals such as beneficence and prevention of illness and death. Such principles are tenants of the Hippocratic Oath that physicians have taken since the fifth century BC.

Equal access to adequate healthcare was not a guaranteed right to all racial communities living in Kenya. The imposed inequality of racialized Kenyan society forced some individuals, such as Ahmed Ali, to demand adequate services. Ali's case answered many questions such as:

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[145] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 178.

Who in colonial Kenyan society had access to health care? Who decided which communities received access to what type of health care? Who delivered the healthcare? As evidenced, the simple answer is that British settlers unsurprisingly maintained all legal, political, economic, social, and medical power. The colonial government maintained this highly racialized system of medicine in spite of knowing that the biological basis for the separation of races by blood groups was flawed. Once again, science is malleable and subject to biases and political agendas. In this case, science was an agent of power, authority, and social control.

Eventually, the eugenics movement died out in colonial Kenya due to a decreased interest and lack of funds. Yet the rhetoric and discourse of the eugenics movement "has an afterlife."[146] Although Kenya experienced this rhetoric for a relatively short period of time, the implications of this movement lingered for years. As Campbell notes, scientific studies that scientists undertook in East Africa in the 1940s also contained eugenic language and retained many racial assumptions about Africans.[147] For example, J.C. Carothers, who served as a lead physician at the Mathari Mental Hospital in 1938, was a psychiatric specialist in Kenya and was "a notorious figure in the history of colonial psychiatry."[148] In 1954, the World Health Organization commissioned him to write a monograph for *The African Mind in Health and Disease* analyzing the Mau Mau from a psychological perspective. In response, his report concluded that the Mau Mau revolution was "an expression of psychopathy." Additionally, many psychologists of the day, including Carothers, believed that Africans presented with mental illnesses from dealing with "the contradictions between African social structures…and Western

[146] Chloe Campbell, *Race and Empire: Eugenics in Colonial Kenya* (New York: Manchester University Press, 2007) 11.
[147] Ibid., 182.
[148] Ibid., 182.

social attitudes."[149] Colonial psychiatry continued to medicalize the African mind during the rise of African political resistance to colonialism and the beginning of an era of African independence.[150] Eugenics and pseudoscience thus gave implicit permission to doctors to racialize and medicalizing African bodies.

This thesis demonstrates the extent of individual acceptance and widespread belief in popular racist ideologies. In history, numerous examples show how ideology can be used to justify invasions, legislature, and wars. Yet, the racialization of colonial blood banks in Kenya exemplified just how the culmination of racial scientific ideologies affected individuals and communities on a personal, microscopic level. In colonial Kenya, racialized ideologies determined life or death for patients, and to maintain the racist agenda of British colonial Kenya, Kenyan Medical Officers and the British Red Cross alike were willing to preserve these ideologies, no matter the cost.

Afterword

As integral as blood transfusions have been to medicine for the last two hundred years, the practice has not come without serious public health consequences. In the early years of colonial blood bank development, blood was not ubiquitously screened across blood banks. As a result, scholars have implicated blood transfusions as a major cause of the widespread HIV/AIDS epidemic across Africa. Blood transfusions transmit HIV more efficiently than any

[149] Ibid.,11.
[150] See Meghan Vaughan, "The Madman and the Medicine Men: Colonial Psychiatry and the Theory of Deculturation," *Curing Their Ills: Colonial Power and African Illness*. Malden: Polity Press, 1991.

other means (90% efficiency in transmitting the virus).[151] In fact, blood recipients were one of the earliest groups identified as HIV positive during the early years of the epidemic. By 1955, 19 African countries reported running transfusion programs with national rates of up to 1372 transfusions per 100,000 people by 1964.[152] According to Schneider by 1970, blood banks had performed nearly 1 million blood transfusions in sub-Saharan Africa, thus indicating that "transfusions were widely used throughout sub-Saharan Africa during the crucial period of 1950–1970, when all epidemic strains of HIV first emerged in this region."[153]

Looking forward, it would be worthwhile to research the effect of the racialization of blood banks on the spread and incidence of HIV/AIDS in certain African communities where colonial blood banks once existed. Moreover, it would be interesting to research which racial blood banks first gained access to early blood screening technologies for the virus, which did not emerge until the 1980s when HIV/AIDS was a full-fledged epidemic Interestingly, Kenya maintained the highest number of blood transfusions, which, not coincidentally, helped spread HIV/AIDS well before the epidemic in the 1980s.[154] Thus, the study of the early years of the development of blood banks is crucial to the study of epidemiological trends relevant to public health research today.

After many African countries gained independence in the 1970s, they suffered economic crises which inevitably affected the operation of blood transfusions centers. Governments devoted fewer resources to helping blood banks stay current with developing techniques in transfusion medicine. Moreover, the lack of resources allotted to blood banks in the mid-1970s

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[151] William Schneider, "Blood Transfusions in the Early Years of AIDS in Sub-Saharan Africa," *American Journal of Public Health*, Vol. 96, number 6, June 2006.
[152] Ibid.
[153] Ibid.
[154] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013) 75.

constrained their ability to draw and adequately store blood. As new diseases were discovered such as Hepatitis B, many African blood banks needed to increase their blood screening and testing, but simply could not do to lack of resources. The blood banks experienced more pressure to maintain the safety of their blood from the World Health Organization and International Red Cross, both of which "helped secure funding and coordinated offers of technical assistance for setting standards of blood safety beginning in the 1970s."[155] Thus, before AIDS hit the continent 10 years later, some safety measures were in place to ensure the safety of the blood supply.

Colonial blood banks have a long, complex that has implications to the present day. This history is tainted with racial ideologies, economic and politic agendas, and mandates that influenced the delivery of medicine and maintained the widely accepted racial order of colonial Kenya society. The history of public health intervention within the context of colonialism has present day health implications for many communities. While many lives were saved due to blood transfusions, many lives were lost for the sake of preservation of racial ideology. Such ideologies are not confined to the past, either. Racial ideologies continue to influence discrepancies in access to adequate health services in minority communities and racialized societies across the globe. By writing this thesis, I seek to demonstrate that the delivery of healthcare is highly influenced by ideologies and biases propagated by authority. Such biases inevitably affect the outcome of a patient's health, which physicians vow to protect and save.

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[155] William H. Schneider, *The History of Blood Transfusion in Sub-Saharan Africa* (Athens: Ohio University Press, 2013) 7.

Bibliography

Primary Sources

Archives

British Red Cross Archives, London

National Archives, London

Kenya National Archives (sources courtesy of Dr. Melissa Graboyes)

Acting Governor of Kenya to Secretary of State. Savingram. [Whole Note]. December 21, 1945, Kenyan National Archives.

"All Races Blood Bank. Notes on a Meeting," June 19, 1952, Kenya National Archives.

Anna Greenwood, personally interviewed by Alexa Dantzler. E-mail, March 13, 2017.

Ahmed Ali to DMS Kenya. "The Asian Blood Bank," April 2, 1954, Kenyan National Archives.

Ahmed Ali to DMS Kenya. "The Asian Blood Bank," Dec 18, 1954, Kenyan National Archives.

"Blood Transfusion Services. Notes on a Meeting," May 15, 1952, Kenyan National Archives.

"Blood Banks," *East African Standard*. [Whole Article], June 6, 1955, Kenya National Archives.

British Red Cross Society, Northern Rhodesia Branch, Annual Report, 1953, British Red Cross Archives, London, United Kingdom.

British Red Cross Society, Kenya, Overseas Branch Report, 1947, D43, British Red Cross Archives, London, United Kingdom.

British Red Cross Society, Kenya, Overseas Branch Report, 1952, D43, British Red Cross Archives, London, United Kingdom.

Dr. Ronald-Eldson Dew, Personal notes from "African Research: Survey of the Blood Groups of African Natives," 2 April 1937, Reference Number 847/8/2. The National Archives, Kew, United Kingdom.

Eileen C Timms [Secretary, Kenya Blood Transfusion Services, Red Cross] to DMS Kenya, "The Kenya Blood Transfusion Service," May 12, 1951, Kenyan National Archives.

Excerpt from Minutes of a Meeting of the Executive Committee of the Kenya Branch of the British Red Cross Society Held at Headquarters on April 29, 1955," May 11, 1955, Kenya National Archives.

Letter from Laboratory of Clinical Medicine to Walker (Chief Med Officer, Kenya). March 1960, File B7/12/9. "Blood Transfusion Institute," Kenya National Archives.

Letter from RAW Procter (Senior Medical Officer) to Senior Pathologist, Nairobi, June 25, 1940, Kenya National Archives.

"Minutes of Medical Officers" Meeting at NCH, Nyeri, March 17, 1950, Kenyan National Archives.

"Minutes of a Meeting Held at Medical Headquarters to discuss the Blood Transfusion Service, Blood Bank, Etc", October 12, 1950, Kenyan National Archives.

Norman Maclennan (DMS, Kenya) to Member for Health and Local Government, Nairobi, "Establishment of Blood Bank," Kenyan National Archives.

Onus for Blood Bank rests on Government: Red Cross Unable to Meet Increased Commitment," June 4, 1955, *East African Standard*, Kenyan National Archives.

Overseas Branch Report, Uganda, 1955, British Red Cross Archives, , D43, London, United Kingdom.

Report for the Year in 1960, Northern Rhodesia Branch, The British Red Cross Society, British Red Cross Archives, London, United Kingdom.

TF Anderson to Honorary Member for Health and Local Government, "Blood Transfusion Service," October 13, 1950, Kenyan National Archives.

Secondary Sources

Bewell, Alan. *Romanticism and Colonial Disease*. Baltimore: The Johns Hopkins University Press, 1999.

Bush, Barbara. Review of *Race and Empire: Eugenics in Colonial Kenya*, by Chloe Campbell, *Reviews in History*, October 31, 2007, review no. 632. http://www.history.ac.uk/reviews/review/632.

Campbell, Chloe. *Race and Empire: Eugenics in Colonial Kenya*. New York: Manchester University Press, 2007.

Crozier, Anna. *Practising Colonial Medicine: The Colonial Medical Service in British East Africa*. London; New York: I. B. Tauris, 2007.

Foucault, Michael. *History of Sexuality, Volume 1: An Introduction*. New York: Vintage, 1980.
Giangrande, Paul LF. "The history of blood transfusion." *British Journal of Haematology* 110, no. 4 (September 2000): 758-767.

Graboyes, Melissa. "Introduction: Incorporating Medical Research into the History of Medicine in East Africa." *International Journal of African Historical Studies* Volume 47, Issue 3, (2014).

Greenwood, Anna and Topiwala, Harshad. *Indian Doctors in Kenya, 1845-1940: The Forgotten History*. New York: Palgrave Macmillan, 2015.

Kenneth J. Arrow, Claire Ponasian, and Hellen gelband, Editors. *Saving Lives, Buying Time: Economics of Malaria Drugs in an Age of Resistance.* Washington (DC): National Academies Press. 2004. http://www.nap.edu/catalog/11017.html

Lonsdale, John. "The Conquest State, 1895-1904." In *A Modern History of Kenya: 1895-1980,* edited by Bethwell Allan Ogot and William Robert Ochieng, 6-28. London: Evans,1989.

Lupton, Deborah. "Foucault and the medicalisation critique." In *Foucault, Health and Medicine,* edited by Alan R. Petersen and Robin Bunton, 94-110. New York: Routledge, 1997.

McNeill, William. *The Rise of the West: A History of the Human Community*. Chicago: The University of Chicago Press, 1963.

Morgan, W. T. W. "The 'White Highlands' of Kenya." *The Geographical Journal* Volume 129, Issue 2 (1963): 140–155.

Nahamias, AJ and J Weiss."Evidence for human infection with an HTLV III/LAV-like virus in Central Africa, 1959." *The Lancet* Volume 327, Issue 8492, (1986).

Nicholls, Christine Stephanie. *Red Strangers: The White Tribe of Kenya*. London: Timewell Press, 2005.

Schneider, William H. *The History of Blood Transfusion in Sub-Saharan Africa.* Athens: Ohio University Press, 2013.

Schneider, William. "Blood Transfusions in the Early Years of AIDS in Sub-Saharan Africa." *American Journal of Public Health*, Volume 96, Number 6 (2006).

Stepan, Nancy Leys. “Appropriating the Idioms of Science: The Rejection of Scientific Racism.” In *The "Racial" Economy of Science toward a Democratic Future*, edited by Sandra G. Harding , 170. Bloomington: Indiana University Press, 1993.

Stepan, Nancy Leys. *The Idea of Race in Science: Great Britain, 1800-1960*. Hamden, Archon, 1982.

Tilley, Helen. *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870-1950*. Chicago: University of Chicago Press, 2011.

Vaughan, Meghan. *Curing Their Ills: Colonial Power and African Illness*. Malden: Polity Press, 1991.