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Tropical Medicine's Contribution to Colonial Racism

ABSTRACT

This essay examines two case studies of racial discrimination by biomedical science within the context of European colonialism; firstly, against indigenous Australians, and secondly, against indigenous Africans. It argues that in these particular cases the science did not arise completely out of pre-existing racist beliefs, but to some extent the racist beliefs arose out of the science.

BIOGRAPHY

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TROPICAL MEDICINE'S CONTRIBUTION TO COLONIAL RACISM

During the latter part of the nineteenth century, multicultural societies that arose out of post-industrial globalism became inextricably linked with discoveries in biomedical science and disease epidemiology. European colonialists in Australia and Africa, after initially decimating indigenous populations with diseases of their own, began the study of tropical diseases that were causing strife in settler populations. Back in Europe, the scientific and medical community had concerned itself with various “Asiatic” diseases brought in by migrants from the East. It was within this period that Western biomedical science made the significant assumption that disease transmission was a racial characteristic, just like skin colour and skull shape, which greatly contributed to mass suspicion of foreigners by the wider European community, aggressive segregation policies by colonial governments, and the burgeoning, racially-motivated eugenics movement.ⁱ In this essay I will examine two case studies of racial discrimination by biomedical science within the context of European colonialism; firstly, against indigenous Australians, and secondly, against indigenous Africans. I will also argue that in these particular cases the science did not arise completely out of pre-existing racist beliefs, but to some extent the racist beliefs arose out of the science.

During the early part of the nineteenth century science became motivated by racially deterministic points of view.ⁱⁱ Phrenology, originating in 1795 with Johann Franz Gall, professed to have found a link between the shape of peoples' skulls and their mental abilities. Phrenologists believed that all characteristics of human behaviour were dictated by the brain's structure and functions, and that these characteristics were inherited from the parents.ⁱⁱⁱ Although they advertised their hereditarian ideas as being able to perfect the human race through selective breeding, early phrenologists did not believe in racial purity as later phrenologists and eugenicists would.^{iv} For instance, Johan Cristoph Spurzheim, one of Gall's early followers, prescribed to the idea that mixing races may strengthen the population, just as farmers cross-breed their animals to create better stock:

Foreign invaders, who intermarried with the old inhabitants, have greatly contributed to change the character of different nations; and new settlers who mix with the natives will be of greater effect than all sorts of other regulations ... by crossing their blood, their faculties of body and mind may be strengthened and improved.^v

Spurzheim's theories contained none of the racist undertones employed by later phrenologists. For instance, Lorenzo and Orson Fowler's *New Illustrated Self-Instructor in Phrenology and Physiology*, published approximately fifty years after Spurzheim, broke from the rational thought of Spurzheim and his peers, promoted Caucasians as the superior race, and appealed to readers in the general public by using emotive and figurative language rather than argument:

While the Caucasian race is superior in reasoning power and moral elevation to all the other races, and, accordingly, has a higher and bolder forehead ... Ransack air, earth and water, and not one palpable exception has ever been, ever can be, adduced. This wholesale view of this science precludes the possibility of mistake. Phrenology is therefore part and parcel of nature—a universal fact.^{vi}

The ideas of the later phrenologists were embraced by racial hygienists both in early twentieth century America and in Nazi Germany. Even though phrenology began without racist prejudice, it was a major step towards a biology based on race and group differences rather than purely individual differences.^{vii}

This biology of race differences also had roots in another significant scientific theory, polygenism: the idea that during the creation of the human race there was more than one set of first parents; hence people of different physical appearance must belong to a different species. John Atkins's work on naval medicine, *The Navy-Surgeon*, published in 1734, contained polygenist theory and is important not as an early medical text but as a signifier of the shift in European attitudes towards race.^{viii} Atkins was an early contributor to tropical medicine and argued, firstly, that the 'indolent lifestyles' of slaves from inland Africa were pathogenic, and secondly, when combined with an unhealthy diet, these 'indolent lifestyles' of the slaves were the pathogenic cause of disease.^{ix} One particular disease, termed by Atkins “Sleepy Distemper” and now known as African trypanosomiasis, was said to be a disease that affected the native population only, and was caused by a natural weakness of the African brain.^x Thus Atkins's polygenist beliefs influenced his construction of tropical medicine, and highlight the beginning of a wider shift in racial beliefs during colonialism, which directly contributed to the later idea of disease transmission as a racial characteristic.

During the nineteenth century, Australia's tropical north was seen to be something very different to the more civilised southern Australia. Tropical climates were seen as uninhabitable by “whites” as the climate itself appeared to cause mental and physical degeneration.^{xi} Colonial scientists and their European counterparts spent

a lot of effort researching the inhabitability of northern Australia with a view to making it habitable. In addition to this, the medical laboratory was beginning to play an important role in the forging of an Australian national identity. The technical capability of the laboratory promised a means to safeguard moral, upstanding citizens from contamination in the new world. As Warwick Anderson states:

This was especially good news for an immigrant society striving to overcome perceived environmental and social defects, and to merge six separate colonies in to a new nation. Bacteriology suggested a program of social and behavioural reform that might circumvent, or render irrelevant, any apparently fixed environmental or climatic impediments.^{xii}

Although climate was the initial concern of biomedical scientists, they quickly turned their attention to racial hygiene.

By 1898 every tropical condition was asserted as having a microbiological cause, and by the turn of the century bacteriologists began to refer to “native reservoirs” of disease. These reservoirs supposedly developed out of thousands of years of immunological adaptation and were further cultivated by promiscuous behaviour.^{xiii} The new British schools of tropical medicine in the early twentieth century, supported by germ theory, had reassessed the tropical problem as hazardous not because of the climate, but due only to the present of parasites, and warned that “unsanitary natives” were a primary health issue.^{xiv} This was articulated by H. E. Annet in 1902 in an article on the work of the Liverpool School of Tropical Medicine: ‘... the uncleanly habits of uneducated natives afford the most effective way by which infection with these parasites [malarial fever in particular] is rendered easy.’^{xv} The idea that contact with the wrong climate caused disease had been superseded by contact with the wrong race.

Within this period of intense microbiological research, the Australian states began to enact legislation to segregate Aboriginals. In 1897, Queensland passed the *Aboriginal Protection and Restriction of the Sale of Opium Act*, with similar legislation being passed in 1905 in Western Australia, 1909 in New South Wales, and 1911 in South Australia.^{xvi} These laws were passed supposedly to protect Aboriginals from the disease and violence of settlers, but as Kevin Blackburn states, ‘protection meant little more than institutionalised domination and confinement of Aboriginals.’^{xvii} White administrators controlled most aspects of Aboriginal life, including where they lived, what they did during the day, where they worked, and what they owned.^{xviii} As this period divided two periods of assimilationist policy, it is impossible to ignore tropical medicine’s contribution to the segregation of Aboriginal people. Aboriginals became commonly known as germ growers and transmitters, and all white contact was strictly discouraged.^{xix}

As white nationalism and the quest for a white Australia became the prevalent ideologies, protecting the new Australian identity (as opposed to the British colonial identity) meant resisting contact with “coloured germs.” Further research conducted on Aboriginals, Pacific Islanders, and Asians in northern Australia as late as 1920 found that immune or partially-immune hosts of disease were carriers which enabled the parasite to complete its life cycle, and pointed to the unsanitary practices of these three ethnic groups as the origin of tropical diseases that affected Caucasians.^{xx} Scientists were involved in a significant amount of government lobbying and urged politicians to engage with technical experts. They argued that Australia, if it wanted to develop a healthy working class in the tropical north, should consider itself a laboratory and white citizens as the experiment.^{xxi} If the people of Australian were to embrace the new rationalism of science, then fair labour laws, proper infrastructure, and restricted foreign competition would surely ensue.^{xxii} This ensured that racist mistrust would enter a new level—no longer were other races just inferior, they were also diseased killers that threatened a national identity.

Much of the literature on Australian tropical medicine from this period concentrates on the question “is a white Australia possible?”, and was inextricably linked with bureaucratic discourse on white Australia.^{xxiii} Colonising the northern reaches of Australia to establish a national border bound by sea and thus protecting the “island” from Asian “others” became Australia’s most pressing public health issue. As a result, quarantine was the only public health issue written in to the new Constitution.^{xxiv} In an address to the Royal society of New South Wales in 1910, Dr. J. V. Danes explained how the Chinese spread “Beri-Beri” to Caucasians in the Northern Territory, just as they has spread venereal disease among Aboriginals, and that if these “Asiatic aliens” were permitted then the future of white settlement in tropical Australia would become much more dangerous.^{xxv} Hence, in addition to being the primary contributing factor in the segregation of Aboriginals, tropical medicine in Australia laid the groundwork for the racist “white Australia policy”.

Medical science in 19th-century colonial Africa concerned itself with much the same problems as in colonial Australia: white degeneration in a tropical climate. In some areas of Africa the assimilation of indigenous people

in to European colonies had been much more successful than early attempts at the assimilation of Australian Aboriginals. Although racism was ever-present, and white superiority never questioned, Europeans and Africans were able to live together tolerably in some cases. In the French colony of Freetown in Sierra Leone, people of different race interacted on a daily basis, leading to the rise of a Creole gentry.^{xxvi} Europeans socialised with Africans, employed live-in African servants, and lived in close proximity to Africans. The only persistent danger to the Europeans in Freetown were fatal tropical diseases—so much so that it became known as the “White Man’s Grave” and Europeans travelling there were refused insurance.^{xxvii}

An expedition launched in 1899 by the Liverpool School of Tropical Medicine sought to discover methods of preventing one of the biggest killers of Europeans in Africa, malarial fever, and within their findings announced two significant methods of prevention. Firstly, all surfaces must be completely drained in and around European quarters, and secondly, Europeans must be segregated at least half a mile from indigenous dwellings.^{xxviii} The scientists reported that the blood of indigenous African children carried the malarial parasite, and mosquitos, after biting the children, delivered the disease to Europeans.^{xxix} Dr. Ronald Ross, a lecturer at the Liverpool School of Tropical Medicine and later Nobel Prize laureate, conducted much of his research in Freetown and paid attention to the lack of mosquito nets in use and the poorly ventilated housing, but asserted that the high death rate could be attributed primarily to the fact that Africans were not segregated from Europeans.^{xxx}

Dr. Ross’s work in Africa had its foundations in the discoveries of Robert Koch, a German bacteriologist in the late nineteenth century. The work of Koch, along with that of Louis Pasteur, went on to inspire the racial hygiene movement in Nazi Germany, just as phrenology did. Koch’s bacteriology was a continuation of earlier parasitology; hence disease was thought to be the result of invasive parasites, not physiological malfunction.^{xxxi} Eradicating the species of parasite, according to Koch, would eradicate the disease caused by that parasite. Although Koch was wholly unconcerned with the relationship between ethnicity and disease, some of his followers formulated a racial understanding of typhus by making a connection between the way in which it was transmitted through body lice and the physical characteristics of those who were infested.^{xxxii} Thus, by the early 1900s, a number of diseases had been identified as Asiatic diseases by this new school of bacteriology, and attributed to migrants from Asian and African countries, which reinforced the phrenologists’ association of racial groups with disease and renewed the idea of disease transmission as a racial characteristic.

The segregation of indigenous Africans began in Sierra Leone not long after Dr. Ross’s visit. Africans were not permitted to squat, build houses, or cultivate land within one mile of European settlement and many fences were erected to enforce this.^{xxxiii} The colonial government in Freetown proposed building a segregated suburb, called Hill Station, 750 feet above sea level and four miles from the centre of Freetown. Construction began in 1902, and by 1904 a large number of residences were available for habitation. A strip of land was cleared around Hill Station and beyond that a mile-wide “sanitary corridor” was enforced, within which no indigenous African could build a house.^{xxxiv} Old relationships between Africans and Europeans were now thoroughly disrupted, and a new racism motivated by this idea of “unsanitary natives” was now prevalent.

In other parts of Africa, similar methods of segregation were adopted as the influence of the Liverpool School of Tropical Medicine spread, and in some cases the racism was more blatant. In 1912, Northern Nigerian senior sanitary officer Dr. M. Cameron Blair planned to exclude indigenous Africans from commercial districts as well as residential, creating an obvious advantage for Caucasian merchants.^{xxxv} In German-controlled Cameroon, the chief government physician, Dr. Ziemann, dubiously stated that 72 percent of indigenous people in the port town of Duala were infested with the malarial parasite and argued that they should be relocated away from the town, around which a one kilometre exclusion zone would apply.^{xxxvi} In 1914, following an outbreak of the plague in Dakar, all African-style, thatch-roofed houses were burned and the government ordered the remaining indigenous population to move to a town on the outskirts, to be known as Medina. As the epidemic weakened the movement of people slowed down, but the idea of segregation remained.^{xxxvii}

During this period of tropical medicine, the plight of Aboriginal Australians and indigenous Africans is remarkably similar. Both contain a striking shift in the racial attitudes of settlers and treatment by governing bodies. The type of racism shifted from a racism based on physical characteristics and the superiority of European civilisation to a more insidious, pervasive type of racism based on perceived biological and internal differences. As it promised death and disease, this type of racism has been much more difficult to remove via generational shifts in attitudes, as demonstrated by the continuing (although not enforced) segregation of Australian Aboriginals and early discourse on the current AIDS epidemic in Africa, which pointed to increased sexual promiscuity in the “unsanitary native” population as the leading cause of infection.^{xxxviii}

The racism that began with tropical medicine, although formulated in a racist climate, produced a new racism different from old notions of imperialistic racism. As demonstrated in this essay, the racism, in some cases, arose out of the science. In Australia, advances in tropical medicine resulted in the segregation of Aboriginals and helped the initial push for a “white Australia.” In Africa, a succeeding assimilation of indigenous people in to settler society in places such Sierra Leone was destroyed by the intervention of tropical medicine. In both cases, the concept that disease transmission was a racial characteristic and indigenous populations were the source of problematic tropical diseases precipitated this new form of racism.

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