

HIST 480

Racialist Thinking in the Life and Work of Francis Galton (1822-1911)

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Abstract

This research paper focuses on the racist thinking of Francis Galton and how this impacted on his work on eugenics and for a eugenic society. Whereas the focal point for most of the historiography is class and its impact, this paper fills a historiographical gap by arguing that race had an equally important effect on his thinking as class. The evidential base for this paper is the published writings and personal letters of Galton himself. In this paper, I will argue that Galton's formative years of travel, private in Europe and under the auspices of the Royal Geographical Society in Southern Africa laid the foundation for his racist thinking. During these travels, he came to believe that African and non-European races were not only intellectually and morally inferior to the British race but that they could also be ranked against civilised societies and each other as to their worth. He then connected the idea of ranking races with addressing degeneracy in Britain and developed a utopian vision of a eugenic society. I will argue that his work in composite photography, fingerprinting and with the British Association for the Advancement of Science was an attempt to find scientific ways to separate out those whose procreation would harm society, rather than help it, and all had the underpinnings of Galton's racist thinking.

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Introduction

In August 1851 Francis Galton (1822-1911) wrote a letter to *The Times*, London from Eikhams, Namagua Land, Southern Africa. In it, he stated, 'The Ovampos are really a charming tribe of Negroes but every other nation I have either seen or heard of are brutal and barbarous to an incredible degree.'¹ This quote is typical of Galton's writing about the natives of Southern Africa during his explorations of that country. During these travels, Galton's racist thinking developed, and he began to consider how races might be categorised and ranked. Over his lifetime Galton contributed to the early scholarship of several disciplines within the hard and social sciences including statistics, meteorology, geography, psychology, anthropology and eugenics. This dissertation, however, focuses on Galton's research into eugenics, that is, the attempt to use selective breeding to improve the human race. It is concerned with the way that Galton's racist thinking impacted on the development of this new science and his attempts to create tools which might contribute to the implementation of a eugenic society. This dissertation uses the term racist since Galton was interested in quantifying and ranking races. Racism in this context means 'the conviction that some races are superior to others' whereas racism is 'the belief that human abilities are the product of race.'²

While Galton's comments about the Ovampos and other Africans in 1851 strongly suggest that racist thinking impacted upon the development of his eugenic ideas, historians of eugenics have generally stressed the importance of class over race in Galton's thought. Donald McKenzie argues, for example, that eugenics is an ideology of the middle-class professional and that eugenics was a legitimisation and an enhancement of that class' social position.³ He specifically disregards the racial argument when he writes, 'Doubtless British eugenicists, like Britons in general at this time, held 'racist' views but these prove largely incidental to their eugenic concerns.'⁴ Dan Stone, however, argues that while class concerns were major factors behind the scientific research of British eugenicists no less important, and

¹ Francis Galton, "Extracts from a Letter Dated Eikhams, Namagua Land, August 16, 1851," *The Times*, 1 January 1852.

² Peter Davies and Derek Lynch, *The Routledge Companion to Fascism and the Far Right* (London;New York: Routledge, 2002), 119.

³ Donald MacKenzie, "Eugenics in Britain," *Social Studies of Science* 6, no. 3/4 (1976): 501.

⁴ Ibid.

frequently overlooked by historians, is the impact of ideas about race.⁵ He maintains that arguments about immigration and the assumptions about a racial hierarchy were important ideas in the nineteenth century and were based on fears about miscegenation and hybridity. Under these circumstances, he believes that race and class cannot be separated when considering eugenics in Britain.⁶

In Galton's book *Hereditary Genius*, he devotes a chapter, 'The Comparative Worth of Different Races' to categorising different races. However, in a further chapter called 'Classification of Men according to their Natural Gifts', he also categorises the British race within itself.⁷ In a eugenic society such as Galton proposed, procreation of those who represented the healthy of the nation as opposed to those who contributed to its degeneration needed to be discovered and categorised.⁸ It is this racist thinking that has not been properly considered by historians and it is within this gap that my dissertation sits.

Galton's casual racial stereotyping as a young traveller in 1838, 1840 and 1844-45 and the oftentimes demeaning and negative ways that he wrote about different native groups in Africa when exploring there between 1850-1852 demonstrates the development of his racist thinking. He began to develop a hierarchical and racist way of thinking not only in reference to Africans but also towards his own countrymen, this being set against the growing belief that the British race was the subject of degeneration. Racist thinking about other races and his own was apparent in both his published works and the conclusions that he came to with regards to inheritance and eugenics. Francis Galton then took his thinking to the next level when he began to work on real-life applications of his principles, researching ways that could assist authorities in implementing a eugenic society.

Galton's writing in eugenics was not, however, his first foray into publishing. Over the course of his life, he generated a substantial amount of scholarly writing in different genres. He published books ranging from African exploration to statistical analysis. He lectured before several societies such as the Anthropological Society, the Royal Geographical Society and the Eugenics Society. Many of these lectures were

⁵ Dan Stone, "Race in British Eugenics," *European History Quarterly* 31, no. 3 (2001): 398.

⁶ Ibid.

⁷ Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences* (London: Macmillan, 1869), 35-36.

⁸ Ibid., 336-51.

recorded in their publications. He also wrote letters to editors of national newspapers on various issues. Within his private life, Galton wrote numerous letters to family and colleagues many of which can still be viewed. It is these writings which are the primary sources for my dissertation.

Access to Galton's published works has been through two curated sites, Galton.org and the Wellcome Library site. Galton.org maintains that its online collection includes all of Galton's published works. The Wellcome Library site contains personal letters of all kinds, newspaper cuttings and evidence for Galton's work, particularly fingerprinting and composite photographs. However, these resources are compiled under very broad headings without a comprehensive finding aid. Galton's personal letters can be accessed via two sources, the Wellcome Library and in Pearson's four-volume biography of his mentor '*The Life, Letters and Labours of Francis Galton*' which can be found on the Galton.org site.⁹ The Wellcome Library has scanned a significant number of the letters and other papers, but there is no context or any transcription of them and the handwriting is very difficult to read. Some parts of the archive can only be searched in person, which has not been possible.

With regards to Galton's personal correspondence, Pearson's biography includes several letters, both full reproductions and excerpts. There are several risks associated with using this biography as a source of primary material. Pearson was mentored and then became an associate of Galton. The two men developed a close personal relationship which is reflected in the tone of the biography. The positive bias towards Galton may have affected the selection of letters and anecdotes that Pearson included. The risk of any source curated by someone else is having to be reliant upon their choice of what information was included and what was not.

The range of secondary literature on Galton reflects his pioneering work in many scientific disciplines. As such, much of this literature is contained within and relates to individual disciplines. The writing is often very technical and not meant for a general audience outside that discipline. The specificity of these articles means that

⁹ Karl Pearson, *The Life, Letters and Labours of Francis Galton*, 4 vols., vol. 1 (Cambridge [England]: University Press, 1914).

they rarely examine the beliefs underlying Galton's work or make connections between his different interests.

However, useful secondary sources have been written by those scholars interested in the history of science. While they too, write within their scientific discipline, they tend to have a broader, more holistic view of Galton and his work. The psychologist Raymond E. Fancher, for example, has written extensively on Galton's scientific work, but also addresses the underlying issues of his research and has written several pieces on the impact of race.

The historiography on Galton, as the father of eugenics, tends to focus on the wider impact of his work. Comprehensive studies have been made on eugenics as it influenced other nations. Eugenics as an influence on American concerns about poverty, race and the feeble-minded have been studied extensively.¹⁰ There is also a large body of work relating to the implementation of eugenic thought in Weimar and Nazi Germany.¹¹ Writers about British eugenics, such as Mackenzie¹² and Stone,¹³ tend to focus on a more wide-ranging exploration of eugenics, moving quickly past Galton and onto the issues of the impact of eugenic thinking in the early to mid-twentieth century.

Galton has been the subject of several biographies since his death, but even some of the most well-received of these have been written by those with a technical background. D.W. Forrest writing in 1974 was a psychologist and Nicholas Wright-Gillham, who wrote a biography in 2002, is a statistician. However, a positive aspect of books written for a popular audience is that they tend to have understandable explanations of the mathematics involved and attempt to place him in a societal context that is generally missing from the more focused books and journal articles.

¹⁰ Edwin Black, *War against the Weak: Eugenics and America's Campaign to Create a Master Race* (New York: Thunder's Mouth Press, 2004); Daniel J. Kevles, "Eugenics in North America" (London, 1998); Egbert Klautke, "The Germans Are Beating Us at Our Own Game: American Eugenics and the German Sterilization Law of 1933," *History of the Human Sciences* 29, no. 3 (2016); Paul A. Lombardo, *A Century of Eugenics in America: From the Indiana Experiment to the Human Genome Era* (Bloomington, Ind: Indiana University Press, 2011).

¹¹ Michael Burleigh and Wolfgang Wippermann, *The Racial State: Germany, 1933-1945* (Cambridge [England]; New York: Cambridge University Press, 1991); Stefan Kühl, *The Nazi Connection: Eugenics, American Racism, and German National Socialism*, New ed. (New York: Oxford University Press, Incorporated, 2002); Richard F. Wetzell, *Inventing the Criminal: A History of German Criminology, 1880-1945* (Chapel Hill: University of North Carolina Press, 2014).

¹² MacKenzie, "Eugenics in Britain."

¹³ Stone, "Race in British Eugenics."

This dissertation is divided into three chapters. The first chapter outlines Galton's travel as a private citizen and then as a geographer in Southern Africa, partially sponsored by the Royal Geographical Society. Personal letters and published writings are used to demonstrate the development of his racialist thinking during this period. These show that he begins to consider ideas about the different value of races within a hierarchy as well as issues of inheritance with regards to intelligence and other characteristics. The second chapter focuses on Galton's writings on eugenics where he outlines his ideas about inheritance and a hierarchy of races, which includes not only black races but also the British. Chapter three then moves on to show that some of Galton's research, that is, composite photography, fingerprinting and his work for the British Association of Science, was undertaken with a view to assisting authorities to identify those who were contributing to the degeneration of the race.

Chapter One

During the first part of his life, Galton was known as an explorer, geographer, travel writer and meteorologist. He travelled extensively through Europe, the Middle East and Southern Africa. He published on both his travels in Africa and Europe and lectured before such bodies as the Royal Geographical Society. It was during these travels that Galton's racist thinking developed as is evident in his letters, publications and lectures.

Thought on racism and the development of racist thinking during the eighteenth and nineteenth centuries was highly influenced by the slave trade in Africa, which emerged in the fifteenth century. Unlike the ancient world where blackness had been associated with positive qualities such as physical beauty, it gradually became associated with the perceived degraded nature of slaves. Black skin was the outward sign of inward inferiority, both mental and moral. From this prejudice against black skin, a more general prejudice spread to include dark and mainly non-European peoples.¹⁴ In addition, white Europeans came to understand their own special destiny, and race became an important form of identification for both the individual and for the group.¹⁵ The growth of this kind of prejudice can be observed from Galton's earliest travel where letters home focus on the importance and superiority he places on being English. In later travels, particularly in Africa, the superiority of the white European over the black African underpins his developing racial beliefs. He also begins the rudimentary ranking of such races which, later in his career, leads to the categorisation and ranking of the British race.

Galton's first experience of travel occurred in July 1838 when he was sixteen. His father arranged for him to travel to Europe with two young doctors, prior to him taking up an apprenticeship at the General Hospital in Birmingham as a house pupil; this being the typical way to a medical qualification. The purpose of this trip was recreation combined with visiting several European hospitals.¹⁶ During this time, he wrote frequently to his family about his travels. Included in his letters are comments

¹⁴ Nancy Stepan, *The Idea of Race in Science: Great Britain 1800-1960* (London: MacMillan, 1982), xii.

¹⁵ *Ibid.*

¹⁶ Nicholas W. Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics* (New York, N.Y: Oxford University Press, 2001), 190.

reflecting a cultural arrogance that underpins his later racist thinking. He wrote to his older sister Bess, for example, 'I have duly kept your precepts in mind about the immeasurable superiority of Englishmen.'¹⁷ Similarly, in a letter to his family he wrote:

There is certainly nothing more useful than travelling. The more you see the more you are convinced of the superiority of England. However, nothing can be so admirable as a German or Frenchman who loves his country; it must be a great and genuine patriotism to be able thus to prefer it...¹⁸

Although a young man and clearly influenced by the views of his family, Galton's letters reflect a cultural arrogance that is in keeping with his later thinking about England and the English. His immaturity and lack of exposure to other races are reflected in the complacent remarks about the superiority of his homeland and they are pertinent when building a picture of the development of his beliefs.

Galton's first independent travel occurred when he was eighteen in 1840. He was supposed to be studying medicine in Germany for the summer but, without his father's permission, decided 'to make a dash and go as far as my money allowed.'¹⁹ He visited Vienna and then travelled east down the Danube to Budapest and Belgrade, before travelling to Constantinople.²⁰ It was during this journey that Galton first encountered races who were significantly different from himself. In a letter to his father he begins, 'Here I am at Constantinople among Turks, Armenians, Greeks, Jews and Franks,' and further on in the same letter:

Then there are the Greeks, I never saw such black eyes in all my life. I should like to put one of them in a rage; they must look splendid then. I saw the women's slave-market today-if I had had 50 pounds at my disposal, I could have invested in an excessively beautiful one, a Georgian. Some of the slaves had their nails dyed in henna. Most of the black ones were fettered, but they seemed very happy dancing

¹⁷ Pearson, *The Life, Letters and Labours of Francis Galton*, 1, 95.

¹⁸ Ibid.

¹⁹ Francis Galton, *Memories of My Life*, 1 ed. (London Methuen, 1908), 49.

²⁰ Raymond E. Fancher, "The Concept of Race in the Life and Thought of Francis Galton," in *Defining Difference: Race and Racism in the History of Psychology*, ed. Andrew S. Winston. (Washington DC, United States: American Psychological Association, 2004), 52.

and singing and looking on complacently whilst a couple of Turks were wrangling about their prices.²¹

Britain had abolished the slave trade in 1807 but had only ended slavery itself in British possessions in 1833. The latter had been preceded by large petitioning campaigns in both 1830 and 1833 activated by public outrage against slavery.²² Although Galton was still young it seems unlikely that he was unaware of these events but there is little evidence that these events had any impact on his thinking.

Five years later he undertook further travel. By this time his father had died, and he was left independently wealthy. Pearson describes these as the 'fallow years' where Galton had abandoned ideas of a medical career and seemed to have little direction. There are also no letters written by him during this time, Pearson recording that they had 'perished'.²³ What is known is that he travelled extensively during this time in the Middle East although not with any geographic or anthropological investigation in mind.²⁴ Reminiscences of this time then, come from his own memoirs or from times he wrote down what he recalled. While not as reliable as letters or notes from the actual period there is no reason to suspect that Galton was manipulating his views of this travel since he had no difficulty at other times criticising or commenting on race.

Although the circumstance that provoked this recollection is not noted, Galton recalled his travels in a memorandum dated from 1885 in which he comments:

Such a difference between the Berbers and the Egyptians. You cannot strike a Berber but may flog as many Egyptians and beat them with sticks as much as you like, they are thoroughly slavish.²⁵

In his memoirs published in 1906 he recalled another part of that same journey:

... a party of Negress girls who had been captured on the borders of Abyssinia...
The girls were delighted to talk to us of places known to them as well as to

²¹ Pearson, *The Life, Letters and Labours of Francis Galton*, 1. 136-137.

²² Hugh Cunningham, *The Challenge of Democracy: Britain 1832-1918* (London;New York: Longman, 2001), 22.

²³ Pearson, *The Life, Letters and Labours of Francis Galton*, 1, v.

²⁴ *Ibid.*, 196.

²⁵ *Ibid.*, 203.

ourselves. They seem merry as possible at the prospect of being sold and soon finding, each of them, a master and a home.²⁶

Galton's early travels exposed him to races, whose lifestyles and values were different from his own and he regularly expressed a cultural arrogance and lack of empathy towards others who were not English.

After a few years of living a lifestyle with little direction and reaching the age of twenty-seven, Galton decided to explore Africa. In his memoirs, he comments on the state of knowledge of the world in 1849. He writes:

Blank spaces in the map of the world were both large and numerous, and the position of many towns, rivers and notable districts were untrustworthy. The whole interior of South Africa and much of that of North Africa were quite unknown to civilised man.²⁷

Galton was interested in geography and exploration, and wanted to undertake travel in a more meaningful way. He was introduced to the Royal Geographical Society by his cousin Douglas Galton of the Royal Engineers. They offered him expertise and moral support for his expedition and with their assistance, his vague plans were defined and approved.²⁸ He set sail for Southern Africa in April 1850.

Galton's scornful portrayal of the natives he first meets at Walfisch Bay, Western South Africa establishes the approach that he takes when writing about natives for the rest of his journey. He belittles their intelligence and their appearance and often compares them negatively to children and animals. He writes in his book, *Narrative of an Explorer in South Africa*:

A row of seven dirty, squalid natives came to meet us...They had Hottentot features but were of a darker colour, and a most ill-looking appearance; some had trousers, some coats of skin, and they clicked, and howled, and chattered, and behaved like baboons.²⁹

During his two years of exploration in West South Africa, he encountered three major groups of native inhabitants: the Nama (and a subgroup called the Oerlams who had

²⁶ Galton, *Memories of My Life*.101-102.

²⁷ *Ibid.*, 121.

²⁸ Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*, 61-62.

²⁹ Francis Galton, *Narrative of an Explorer in Tropical South Africa* (Murray, 1853), 15.

been exposed to Dutch culture, mostly as servants), the Herero, and the Ovambo. Galton's expedition was focused on the physical geography of the region which is now known as Namibia. The observations he made in letters and in his later published writings about the native groups he met are his own reactions and make no pretence of scholarship. However, it is notable how his observations on different groups inform his later work on eugenics and demonstrates the continued development of his racist thinking. As he writes about each tribe he begins, in a rough way, to categorise them in comparison to their level of intellect and civilisation.³⁰ Once again from his book *Narrative of an Explorer in Tropical South Africa*, he writes:

When I say Oerlam, Hottentot or Bushman, the identically same yellow, flat-nosed, woolly-haired, clicking individual must be conjured up before the mind of my kind reader, but differing in dirt, squalor, and nakedness, according to the actual term employed; the very highest point of the scale being a creature who has means of dressing himself respectably on Sundays and gala-days, and who knows something of reading and writing; the lowest point, a regular savage.³¹

Galton was unimpressed with the Nama and felt superior to them as he outsmarted the current Chief, Jonker Afrikaner, and managed to secure both passage for himself and convince the Chief to sign up to a Western-style legal code which proscribed Jonker's behaviour particularly against the Herero whom they were murdering and stealing cattle from at the time.³² In *Narrative of an Explorer* Galton comments, 'All of this may seem laughable, but Oerlams are like children, and the manner which wins respect from them is not that which has the most influence with us'.³³

Galton also disliked the Herero. While he considered them to be aesthetically pleasing 'magnificent models for sculptors'³⁴ he was critical of their moral and

³⁰ Raymond E. Fancher, "Francis Galton's African Ethnography and Its Role in the Development of His Psychology," *The British Journal for the History of Science* 16, no. 1 (1983): 74.

³¹ Galton, *Narrative of an Explorer in Tropical South Africa*, 69.

³² Fancher, "Francis Galton's African Ethnography and Its Role in the Development of His Psychology," 73.

³³ Galton, *Narrative of an Explorer in Tropical South Africa*, 115.

³⁴ *Ibid.*, 99.

intellectual attributes. Describing the Herero (or Damaras, as he calls them) he writes:

There is hardly a particle of romance, or affection, or poetry in their character or creed but they are a greedy, heartless, silly set of savages... The Damaras have a vast number of small superstitions, but these are all stupid and often very gross, and there is not much that is characteristic in them.³⁵

When describing their intellect, he mocks their way of counting by commenting, 'When they wish to express four, they take their fingers, which are to them as formidable instruments of calculation as a sliding rule is to an English schoolboy. They puzzle very much after five because no spare hand....'³⁶

With regards to the Ovambo, he was much more impressed and praised them in his book on his travels, 'They are a kind-hearted, cheerful people, and very domestic. I saw no pauperism in the country; everybody seemed well to do, and the few very old people that I saw were treated with particular respect and care'³⁷ and 'The Ovambo have infinitely more claims on a white man's sympathy than savages like the Damaras, for they have a high notion of morality in many points and seem to be a very inquiring race',³⁸ but he did not care for them physically. He described the men as 'ugly, bony men with strongly marked features'³⁹ and the women while 'decidedly nice-looking; their faces were open and merry, but they had rather coarse features and shone all over with butter and red pigment.'⁴⁰ He also described one woman as a 'greasy negress'.⁴¹

These quotes clearly demonstrate Galton's racist thinking. In his racial hierarchy, the Ovambo is a race worth cultivating. He believes that they are morally and intellectually superior to the Damara and they should benefit from the influence of the civilised white man through exposure to missionaries and settlers.⁴² The Damara sit somewhere near the bottom of Galton's hierarchy to the extent that he believes that even if they were enslaved they 'could hardly become more wretched than they now

³⁵ Ibid., 190.

³⁶ Ibid., 133.

³⁷ Ibid., 229.

³⁸ Ibid., 230.

³⁹ Ibid., 179.

⁴⁰ Ibid., 213.

⁴¹ Ibid., 221.

⁴² Ibid., 230.

are, and might be made much less mischievous.⁴³ Both races, however, pale into insignificance beside the civilisation of the white man. It is this racist thinking that informs Galton's work with eugenics in the 1860s. He takes the idea of hierarchy and applies it to black races, other European races, and ultimately to his own British race.

On his return to England, he was praised for his exploration in Africa and received a Gold medal from the Geographical Society in recognition of his geographical work. In 1853 he wrote a book on his explorations called *Narrative of an Explorer in South Africa* and, as noted in many of the quotes from above, was outspoken in his beliefs about the natives he encountered. In 1855 he was encouraged to write a further book on exploration. *The Art of Travel or Shifts and Contrivances Available in Wild Countries* was popular and ran to many editions. In its pages, Galton describes the ways and means for the survival in wild countries by which he generally means Africa. While not the focus of the book he does make mention of African natives and in much milder terms than he discussed individual tribes in his previous book, but once again his tone is patronising, and certainly local natives are regarded at the most as helpful interpreters and carriers and at the least, hindrances. Throughout the book, he occasionally refers to them as natives, but mostly calls them savages.⁴⁴

However, while the evidence above demonstrates the development over time of Francis Galton's beliefs the question as to where his beliefs fit within Victorian society remains. Were his views part of mainstream thinking or was he out of step with common belief? There was a diversity of thought within Victorian England about race. During Galton's lifetime scientists and explorers could express virtually any opinion on racial differences, positive or negative, and find some support for whatever opinion they espoused.⁴⁵ During the pre-Darwinian era, when Galton was travelling in Southern Africa, the discussion on race amongst scholars and ethnologists fell broadly into two rival theories. The monogenists held that all human groups descended from a single ancestral pair as recounted in the Bible.

Monogenism allowed for the potential equality for all human beings based on

⁴³ Ibid., 228-29.

⁴⁴ Francis Galton, *The Art of Travel or Shifts and Contrivances Available in Wild Countries* (London: John Murray 1855).

⁴⁵ Fancher, "Francis Galton's African Ethnography and Its Role in the Development of His Psychology," 71.

common origins but did not exclude negative comparisons being made between races. The second theory was that of polygenism which viewed different races as completely different species. The views of this group did not generally allow for any equality and comparisons between the species were negative overall.⁴⁶ As the nineteenth century progressed, the polygenist theory began to dominate with its biological, comparative anatomical and craniological approaches to race.⁴⁷ Explorers of Africa reflected the diversity of beliefs of general society. They were not scholars but tended to be military, medical men or Christian missionaries. Their reporting of contact with native tribes tended to relate what they saw, their emotional response to it and to describe 'curiosities' rather than common aspects of everyday life.⁴⁸ In 1856, David Livingstone, when awarded the Patron's medal for his African exploration by the Royal Geographic Society, referenced his contact with various native tribes during his journey. He reported being 'kindly treated' and that they were 'remarkably civil,' and 'generous'.⁴⁹ Livingstone had faith in the educability and industry of the native races.⁵⁰ Richard Burton, also a contemporary of Galton's, held vastly different views, describing an African tribe, the Wanyika as 'a futile race of barbarians, drunken and immoral; cowardly and destructive; ... indolent, greedy and thriftless.'⁵¹ So, if the views on race can be thought of as on a continuum then, while not an outlier, Galton's views of African natives were generally at the negative end and he had little concern about being outspoken in his writings about his beliefs.

Galton's letters and published writings about his early travels in Europe, the Middle East and Africa show the development of a negative perspective on non-European races, but his beliefs were not completely outside the mainstream of the society in which he lived, although they were generally negative. He returned from Africa believing that he had seen evidence to convince him of the intellectual and moral inferiority of the natives he encountered, and that the natives could be ranked

⁴⁶ Ibid., 69.

⁴⁷ Stepan, *The Idea of Race in Science: Great Britain 1800-1960*, 44.

⁴⁸ Philip D. Curtin, *The Image of Africa: British Ideas and Action, 1780-1850* (London: MacMillan, 1965), 321.

⁴⁹ *Proceedings of the Royal Geographical Society of London*, Session 1856-7. Fourth Meeting (special) December 18, 1856. 241.

⁵⁰ Fawn M. Brodie, *The Devil Drives: A Life of Sir Richard Burton* (London: England, 1986), 223.

⁵¹ Ibid., 150.

against each other and Britons. These beliefs underpinned his future work in eugenics, fingerprinting, and composite photography.

Chapter Two

It is argued within the historiography that the main influence on Galton as he developed his eugenic thinking is class. McKenzie and Stone argue their points from the perspective of Edwardian and inter-war sources, but this chapter will argue that race was important during Galton's lifetime too. The influence of his travels, both privately and as a geographer, is demonstrated not only in the development of eugenics and how it relates to non-Europeans but shows that he began to envisage ways to categorise those within his own race whom he considered were contributing to the degeneration of society. The development of his ideas can be clearly seen in his published works.

Race was a concern of nineteenth-century scientists, a point which is argued by William B. Provine and Elizabeth S. Russell. Citing private letters and the published writings of Charles Darwin (1809-1882) and Thomas Henry Huxley (1825-1895) they argue that the scientific evidence for hereditary mental differences between human races appeared to scientists at the time to be overwhelming.⁵² It was common sense to most white observers, including Darwin and Galton, that Negroes and Australian Aborigines, for example, had less intelligence than white people. Influential evolutionary biologists such as Darwin and Huxley believed that races differed hereditarily in average levels of intelligence. Galton provided the quantitative model that encapsulated this belief, thereby also confirming his own observations developed while he explored Africa. Provine and Russell conclude that in the late nineteenth century, to deny inherent racial differences was to risk being labelled unscientific.⁵³

The term 'race' was a fluid one in the nineteenth century. It might be used to refer to humanity, ethnically different Europeans or even different species. Equally, the term could also refer to social as well as ethnic backgrounds.⁵⁴ Galton was a man of his time in this regard and he used 'race' in an idiosyncratic way that also changed over time as he came to investigate issues of hereditary and inheritance. Michael Banton

⁵² William B. Provine and Elizabeth S. Russell, "Geneticists and Race," *American Zoologist* 26, no. 3 (1986): 858.

⁵³ *Ibid.*, 864.

⁵⁴ Angelique Richardson, *Love and Eugenics in the Late Nineteenth Century: Rational Reproduction and the New Woman* (Oxford: Oxford University Press, 2003), 24/25.

identifies three ways in which Galton uses the word 'race' in his writings.⁵⁵ The first is in a literary sense when he makes statements such as 'poets are a sensuous, erotic race, exceedingly irregular in their way of life' and 'Judges are by no means an unfertile race.'⁵⁶ Banton also argues that he uses race in a taxonomic sense as a synonym for genus when he writes of the 'human race'; as a synonym for species when he writes 'that the American Indian race is divided into many varieties'⁵⁷ or as a synonym for variety itself when he writes about the race of the Irish Celts or of the English race. However, he believes that Galton's conception of race is better understood in line with his later thinking about heredity. Thus, in 1892 when Galton wrote a new preface to *Hereditary Genius*, he wrote in terms of 'the question of race' where Banton believes he is using race as a synonym for heredity.⁵⁸ Fancher also maintains that Galton's understanding of race should be considered in line with his beliefs about heredity when Galton writes, as a definition, that race is 'the constitutional peculiarities transmitted...by inheritance'.⁵⁹

Galton first coined the term 'eugenics' in a footnote in his book *Inquiries into Human Faculty and its development*, published in 1883. He adapted the Greek word *eugenes* which he translated to mean 'good in stock' and 'hereditarily endowed with noble qualities'⁶⁰ He maintained that the word applies equally to 'men, brutes and plants' and is a word that briefly expresses 'the science of improving stock ... and takes cognisance of all influences that give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable than they otherwise would have had'.⁶¹

Galton's first published work on heredity was a two-part article in *Macmillan's Magazine* in 1865 called *Hereditary Talent and Character*. In the first article, he attempted to present evidence for the hypothesis that 'talent is transmittable by

⁵⁵ Michael Banton, "Galton's Conception of Race in Historical Perspective," in *Sir Francis Galton, FRS, the Legacy of His Ideas*, ed. Milo Keynes, Studies in Biology, Economy and Society (Houndmills, Basingstoke, Hampshire: Macmillan : in association with the Galton Institute, 1993), 170.

⁵⁶ Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 225, 131.

⁵⁷ Francis Galton, "Hereditary Talent and Character: Part 2," *Macmillan's Magazine*, May/October 1865, 321.

⁵⁸ Banton, "Galton's Conception of Race in Historical Perspective," 170.

⁵⁹ Fancher, "The Concept of Race in the Life and Thought of Francis Galton," 70.

⁶⁰ Francis Galton, *Inquiries into Human Faculty and Its Development* (London: Macmillan, 1883), 24.

⁶¹ *Ibid.*, 25.

inheritance to a very remarkable degree'.⁶² He did this by creating lists of so-called eminent men culled from books such as '*The Million Facts*' by Sir Thomas Phillips⁶³ and Lord Campbell's '*Lives of the Chancellors*'.⁶⁴ By analysing familial relationships he proved, to his satisfaction, that 'eminence' within different groups of men (painters, lawyers, Grand Chancellors of England etc) could be transmitted to their (male) offspring. He concluded that eight out of every one hundred eminent men had a son who was equally distinguished. Galton was always more inclined to believe that nature was the dominant factor, but he was prepared to consider that there may be cases where the sons of great men were more advantaged than if they were the sons of ordinary men.⁶⁵ Therefore, as a comparison, he attempted to calculate the frequency of men with ability in the general population as a whole, using the number of students educated in Europe over the preceding four centuries. His result of 1 in 3000 allowed him to confirm, in his own mind, his original hypothesis.⁶⁶

In part two of Galton's article, he attempts to build on the previous article and formulate ideas around selective breeding for positive qualities in one group, while discouraging the breeding of certain qualities within other groups.⁶⁷ Within this article, he also explores the idea of transmission of racial distinctions. Unlike his work with European populations, he makes no attempt to provide any evidence for his comments. He expounds at length about the American Indian, a race he has not interacted with personally, and he makes no effort to indicate the source of his information. He maintains, however, that they are cold, melancholic, patient and taciturn, but also patriotic, have strong local attachments and a sense of personal dignity.⁶⁸ As Michael Billing comments, 'the prejudices of the Victorian explorer were raised to the level of immutable biological facts.'⁶⁹ Indeed, in the second part of *Hereditary Talent and Character* Galton claims:

The Hindu, the Arab, the Mongol, the Teuton, and very many more, have each of them their peculiar characters. We have not the space to analyse them on this

⁶² Francis Galton, "Hereditary Talent and Character: Part 1," *Macmillan's Magazine*, May/Oct 1865, 157.

⁶³ *Ibid.*, 159.

⁶⁴ *Ibid.*, 161.

⁶⁵ Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*, 156.

⁶⁶ *Ibid.*, 157.

⁶⁷ *Ibid.*

⁶⁸ Galton, "Hereditary Talent and Character: Part 2," 321.

⁶⁹ Micheal Billig, "The Origins of Race Psychology," *Patterns of Prejudice* 1, no. 3 (1982): 4.

occasion: but whatever they are, they are transmitted, generation after generation, as truly as their physical form.⁷⁰

Modern scientists who have analysed the science as presented in *Hereditary Talent and Character* have outlined numerous deficiencies.⁷¹ Ruth Schwartz Cohen concluded upon her analysis that, 'Rarely in the history of science has such an important generalization been made on the basis of so little concrete evidence, so badly put and so naively conceived.'⁷²

The ideas and science in *Hereditary Talent and Character* were expanded in his book *Hereditary Genius*, published in 1869. Once again, Galton engaged in the statistical analysis of the family trees of eminent men but expanded the groups studied to include: classics scholars at Cambridge, oarsman, wrestlers of the North Country and Divines. Between *Hereditary Talent and Character* and *Hereditary Genius*, Galton had been exposed to Gaussian law, or normal distribution, and now used this to apply statistical analysis to his findings. From Quetelet's demonstration in 1849 that height, weight and other physical measurements fall into a bell-shaped distribution, Galton extrapolated these results into observations about academic marks in examinations at Cambridge through to the natural gifts of man. Based on his results, he developed a 'Classification of Men According to their Natural Gifts'. In this table, he divided the population into 16 equally spaced grades: eight above the mean (A, B, C etc), and eight below (labelled a, b, c etc).⁷³ Fancher states that A and a lie closest to the mean and contain one-quarter of all cases; the distance between the mean and the most extreme score in A or a is the statistical probable error of the distribution.⁷⁴

Galton defines class A and B as the 'mediocre classes. He defines mediocrity as 'the standards of intellectual power found in most provincial gatherings'.⁷⁵ C represents a typical jury foreman, D includes men he describes as obtaining 'the ordinary prizes of life,' with E being just a stage higher. F and G are eminent and very eminent and

⁷⁰ Galton, "Hereditary Talent and Character: Part 2."

⁷¹ Ruth Schwartz Cohen, "Nature and Nurture: The Interplay of Biology and Politics in the Work of Francis Galton," in *Studies in the History of Biology*, ed. William Coleman and Camille Limoges (Baltimore and London: The John Hopkins University Press, 1977), 136.

⁷² *Ibid.*, 135.

⁷³ Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 35.

⁷⁴ Fancher, "The Concept of Race in the Life and Thought of Francis Galton," 67.

⁷⁵ Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 35.

those 1-in-a-million above those grades are illustrious.⁷⁶ As for the bottom of the distribution, he described f and g as idiots and imbeciles. He comments, almost casually, that he presumes that class f of dogs and other intelligent animals are commensurate with the f class of humans in respect to memory and reason. This comment resonates with one he made in *Narrative of an Explorer in Tropical South Africa* when he compares the Damaras' ability to count to that of his spaniel attempting to ascertain if any of her puppies were missing. In Galton's assessment, 'Taking the two as they stood, dog and Damara, the comparison reflected no great honour on the man.'⁷⁷

Further on in the book, he attempts to widen the scope of his subject from western European populations in a chapter entitled "The Comparative Worth of Different Races". Here he attempts to set different races within the table he used to assess the populations of Europe. He is clearly applying his belief of what constitutes eminence (and therefore valuable) against societies completely divergent from his own. He concludes that Africans are two classes below the white races in terms of their natural abilities. As with the previous articles, these assessments appear to be based solely on his own experiences in Southern Africa and he makes no attempt to produce scientific or statistical explanations for his comments. He maintains that very few Negroes have ever shown ability as high as class F, which he regards as their class X. As further evidence, he stated that white travellers, such as himself and others that he has interviewed, always hold their own when encountering native chiefs, even though they are in the native's environment. This is even though the white man in that situation is not likely to fit the criteria as eminent, so even lower rating Anglo Saxons can best the native. Galton was also struck by the number of mentally deficient Negroes that he met in his own travels.⁷⁸

Galton speculates about categories within his own race in these publications and a further magazine article published in 1873. As with his descriptions of native races, his language is often derogatory and shows no empathy for his fellow Britons. Those with poor health have '...wretched constitutions, sickly children,' and are 'narrow chested men and fragile delicate women.'⁷⁹ He describes the 'draggled, drudged,

⁷⁶ Ibid.

⁷⁷ Galton, *Narrative of an Explorer in Tropical South Africa*, 134.

⁷⁸ *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 338.

⁷⁹ Francis Galton, "Hereditary Improvement," *Fraser's Magazine* 1873, 117.

mean look of the mass of individuals, especially of the women, that one meets in the streets of London.⁸⁰ He also complains that the average intellect of his race, 'is easily gauged by a glance at the contents of a railway book-stall.'⁸¹ He maintains that the poor sanitary conditions of urban life mean that those who withstand disease are favoured with life, but that this characteristic does not necessarily make a nation great. He comments particularly on the Irish who, having survived the famine have taken on a more Negroid look, thus showing that those who survived were of a 'lower coarser organisation.'⁸² However, it was not only those who were predisposed towards illness that he was concerned with. He believed that heredity was involved in the inheritance of a proclivity for drinking and gambling, for strong sexual passion, pauperism, and criminal behaviour.⁸³

As outlined in these early writings of Galton's, it was his hope that once it was realised that future generations could be manipulated for the better by heredity, then environmental solutions to political problems such as poor laws and sanitary laws would become a thing of the past, and society would proceed on eugenic values.⁸⁴ The race could also be improved, he believed, if improper forms of charity, which allowed unfit individuals to live and breed, and improper laws of inheritance that allowed wealth to be transferred to unfit individuals, were addressed.⁸⁵ In *Hereditary Talent and Character*, he described, in a manner reminiscent of his later unpublished utopian fictional work *Kantsaywhere*, an imagined country where the most promising young men and women entered into a eugenic marriage sponsored by the State for the sake of the race.⁸⁶

Galton received a mixture of reviews on *Hereditary Genius*. Gökyiğit argues that responses to Galton's book depended on the professional or ideological values of the reviewer.⁸⁷ In general, Galton received positive responses from the Victorian scientific community, including his cousin Charles Darwin who commented: 'I do not

⁸⁰ Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences*, 340.

⁸¹ *Ibid.*, 342.

⁸² Galton, "Hereditary Improvement," 118.

⁸³ Galton, "Hereditary Talent and Character: Part 2," 320.

⁸⁴ Ruth Schwartz Cohen, "Francis Galton's Statistical Ideas: The Influence of Eugenics," *Isis* 63, no. 4 (1972): 511.

⁸⁵ Cohen, "Nature and Nurture: The Interplay of Biology and Politics in the Work of Francis Galton," 155.

⁸⁶ Galton, "Hereditary Talent and Character: Part 1," 165.

⁸⁷ Emel Aileen Gökyiğit, "The Reception of Francis Galton's "Hereditary Genius" in the Victorian Periodical Press," *Journal of the History of Biology* 27, no. 2 (1994): 219.

think that I have ever in all my life read anything more interesting and original.⁸⁸ Gökyiğit maintains that those reviewers had an underlying belief in scientific reasoning, which overcame any moral response to his suggestions.⁸⁹ Neither did these reviewers show any concern for the way other races were portrayed in his writings. The religious audience attacked Galton for his comments on the Divines, but also for his ideas about free will, charity and the potential future of the population of Britain.⁹⁰ So-called neutral reviews attacked the book over the exclusiveness of the hereditary argument against the idea of social and educational factors.⁹¹

If a comparison is made between the language used to describe African natives that Galton interacted with in his African travels and the descriptions of race contained in both *Hereditary Talent and Character* and *Hereditary Genius*, it can be demonstrated that Galton's opinions of black races had not changed in the twenty years since he travelled to Southern Africa. The language is derogatory and dismissive. Natives are regularly negatively compared to so-called civilised men. He is even prepared, at this later stage, to accept ideas about race that were not based on his own observations, but generally fitted his world view. He also writes similarly about his own countrymen as he does with the natives he met in Africa. He disparages their health, their intellect and argues that they contribute to the degeneration of society.

Like Dan Stone, I would argue that race occupies an important place when trying to understand the role that eugenics plays in nineteenth and twentieth-century Britain. The underlying belief, although not explicitly expressed in his writings, is that the 'weakly and incapable men'⁹² of his own society do not belong in the new eugenic society and neither do the natives of most countries. He does not believe that the native can be redeemed either by education or civilising influences, maintaining that 'savages seem incapable of progress after the first few years of their lives...' and 'but as the years go by higher races continue to progress, while the lower ones gradually stop.'⁹³ He also believes that raising children of 'low races' (natives and gypsies), by settler families in civilised ways is fruitless as they ultimately abandon their home

⁸⁸ Galton, *Memories of My Life*, 290.

⁸⁹ Gökyiğit, "The Reception of Francis Galton's "Hereditary Genius" in the Victorian Periodical Press," 222.

⁹⁰ *Ibid.*

⁹¹ *Ibid.*, 229.

⁹² Galton, "Hereditary Talent and Character: Part 2," 319.

⁹³ *Ibid.*, 326.

and live in contented barbarism.⁹⁴ Likewise, there are sections of his own countrymen who, as contributors to degeneracy via their health or mental limitations, do not belong. In the 1870s and 1880s, Galton set himself the task of using science and technology to research processes that would assist authorities in a eugenic society. He hoped his findings would enable them to determine those with negative hereditary tendencies who should not be allowed to procreate. He did this by investigating the uses of composite photography, fingerprinting and through his work with the British Association of Science.

⁹⁴ *Ibid.*

Chapter Three

Galton's enquiries into heredity began on the basis that Britain's urban decay had a biological, rather than a social basis.⁹⁵ While his cousin, Darwin, argued that selection favoured the mentally and physically fit, Galton argued that evolution could favour those who were less fit, due to their level of reproduction and the interference with natural selection by social programmes that acted to keep those who would otherwise die, alive to continue to procreate.

There were two groups that Galton was particularly concerned about. These were those of English origin who carried congenital defects, and people of colour, including those of mixed European and African heritage. The latter was considered particularly problematic, given what Galton perceived as the differences in black people's intellect, which he had outlined in his 1869 work *Hereditary Genius*.⁹⁶ Galton believed that the mental and moral limitations of the Africans placed them on the same level as Britain's criminals. In this regard, he wrote:

The greater part of the Hottentots about me had that peculiar set of features which is so characteristic of bad characters in England, and so general amongst prisoners that it is usually, I believe known by the name of the 'felon face'; I mean they have prominent cheekbones, bullet-shaped head, cowering but restless eyes, and heavy sensual lips, and added to this a shackling dress and manner.⁹⁷

Here Galton was relying on physiognomy, that is, linking a person's inner being with their physical appearance. This was a prevalent idea during the nineteenth century and was based on Johann Lavater's writings from the late eighteenth century, and that of the Italian Cesare Lombroso who was a contemporary of Galton.⁹⁸

While *Hereditary Genius* does not attempt to connect increased criminal behaviour with miscegenation, the preface to the 1892 edition suggests race mixing is one of the primary causes of societal degeneration. Galton was concerned about the mixing

⁹⁵ Anne Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940* (Brighton, England: Sussex Academic Press, 2008), 80.

⁹⁶ *Ibid.*, 82.

⁹⁷ Galton, *Narrative of an Explorer in Tropical South Africa*, 123.

⁹⁸ Clive Emsley, *Crime, Police, and Penal Policy: European Experiences 1750-1940* (New York; Oxford: Oxford University Press, 2007), 188.

of races that were far apart from each other, such as African and European, because he believed that they produced offspring that were weak and short-lived.⁹⁹

In the late 1870s, Galton began to investigate anthropometric techniques that might be used in establishing a eugenic society. He was particularly interested in the way that visual cues could be used to prove his theories about heredity as the basis of human existence, and also to determine racial fitness.¹⁰⁰ In his book *Inquiries into Human Faculty and Its Development*, for example, he wrote:

The proportion of weakly and misshapen individuals is not to be estimated by those we meet in the streets; the worst cases are out of sight. We should parade before our mind eye the inmates of the lunatic, idiot and pauper asylums, the prisoners, the patients in hospitals, the sufferers at home, the crippled, and the congenitally blind...our human civilized stock is far more weak through congenital imperfection than that of any other species of animal, whether wild or domestic.¹⁰¹

Galton wanted to use science to convince people of the importance of heredity and provide authorities with systems for identifying those amongst England's population who offered the best chance for the continuation of a strong and healthy nation, and those whose continued reproduction would lead to ruin.¹⁰² He wanted real-world solutions and tools and so he began to experiment with composite photography and fingerprinting. A further opportunity to apply his theories to real-life situations arose when he became president of a subcommittee of the Anthropometric and Racial Committee of the British Association for the Advancement of Science.¹⁰³

Galton hypothesised that if a group of individuals shared a mental trait, and this was reflected physically, then by using composite photography, he could remove the unique features of their faces and reveal their shared attributes. This created a photographic mean or average.¹⁰⁴ Commenting on his 1877 experiments using the Millbank prisoner photographs, Galton wrote:

⁹⁹ Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 82.

¹⁰⁰ Cohen, "Nature and Nurture: The Interplay of Biology and Politics in the Work of Francis Galton.", 151.

¹⁰¹ Galton, *Inquiries into Human Faculty and Its Development*, 23.

¹⁰² Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 83.

¹⁰³ John C. Kenna, "Sir Francis Galton's Contribution to Anthropology," *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 94, no. 2 (1964): 81.

¹⁰⁴ Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*, 216.

Composite portraits are made by successfully throwing the images of many different portraits for a short time, on the same portion of the same photographic plate. Features common to all appear in full strength; individual peculiarities leave too faint an impression to be seen, thus a typical or averaged figure is the result.¹⁰⁵

Galton began his first investigations at the invitation of Sir Edmund Du Cane, the Inspector of Prisons. He provided Galton with photographs of convicted prisoners from Hanwell and Millbank Prisons. The photographs were grouped and then labelled by crime; murder, manslaughter and burglary, felony and forgery and the third group were sexual criminals.¹⁰⁶ Galton hoped to be able to produce a clear description of each class of criminal based on congruity between the prisoners' physical features and the types of crimes they had committed. In the first instance, by sight, he established to his own satisfaction that men who committed larceny possessed 'large foreheads and small skulls' and burglars were inclined to be 'squinty faced'.¹⁰⁷ However, once he subjected the photographs to his composite process the results did not give him the outcome he had anticipated. Instead of identifying the criminal, he determined that he had instead, revealed the face of the man who was likely to fall into criminal behaviour. He wondered if physical features reflected specific behavioural or racial traits, and, if these were inheritable, would composite photography provide a means of identifying these characteristics?¹⁰⁸ Within Galton's eugenic society, a process such as composite photography, which identified individuals who were likely to fall into criminal behaviour or enabled the identification of unwanted races, could be particularly valuable.

In 1886, Galton worked alongside Joseph Jacobs, anthropologist and historian of Jewish culture, to gather portraits of Jewish boys from a Jewish boy's school in London. Jacobs was trying to ascertain if there was a Jewish type and Galton took the opportunity to discover if the Jewish type had a physiological basis that was the result of inherited traits.¹⁰⁹ The results were exactly as Galton thought he would find,

¹⁰⁵ Composite Photographs: Millbank Prisoners Ref. Galton/2/8/1/10 1877, Galton Papers Wellcome Library On line (Accessed 21 August 2019.)

¹⁰⁶ Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*, 217.

¹⁰⁷ "Composite Photographs: Millbank Prisoners," (1877).

¹⁰⁸ Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*, 217.

¹⁰⁹ Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 88.

although his interpretation of the results could not be more different than that of Jacobs. Galton held a typical prejudice for his time against Jews who, during the nineteenth century, were generally perceived to be physically and morally inferior to the Anglo-Saxon. While Galton believed that this was because their origins were Asian, rather than European, a more common view was that as urban dwellers, with large families who often lived in poverty, Jews were part of the problem of racial degeneration within cities. When presenting his findings to the Royal Anthropological Institute in 1886 he described his journey through the Jewish quarter thus:

The feature that struck me the most as I drove to the school through the adjacent Jewish quarter, was the cold scanning gaze of man, women and child and this was no less conspicuous among the schoolboys.... I felt, rightly or wrongly, that every one of them was coolly appraising me at market value, without the slightest interest of any other kind.¹¹⁰

Galton's stereotypical beliefs regarding race have been commented on previously and this is further evidence that this thinking continued to be present in his later life.

Although he found the boys to be 'dirty little fellows' individually, he described the composites of them as 'wonderfully beautiful'.¹¹¹ He and many of his scientific colleagues believed that he had successfully captured the Jewish type. Jacobs and another Jewish scholar Dr Adolf Neubauer, however, had quite different opinions from Galton, as reported in their presentations to the Anthropological Society. They both argued that the Jews of Europe were so racially mixed that they could not be distinguished from other Europeans, and that if there was something in their expressions, then it was environmental and related to them being oppressed individuals, rather than from heredity.¹¹² What Galton regarded as a biologically determined, a visual embodiment of an inferior race, Jacobs saw as a social phenomenon.¹¹³

Galton continued to experiment with composite photography, and his choices of subject reflected those he believed were socially undesirable and would lead to the further degeneration of the British race. He photographed people with mental

¹¹⁰ Francis Galton, "Photographic Composites," *The Photographic News* 1885, 243.

¹¹¹ *Ibid.*

¹¹² Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 87.

¹¹³ *Ibid.*, 92.

illnesses who were in asylums and patients who suffered from Phthisis (Tuberculosis). The composites of the patients from asylums were so irregular that they were not easily combined for averaging.¹¹⁴ There were also problems with the tubercular patients, as the expectation that the narrow ovoid (more or less egg-shaped) face, anecdotally associated with the disease, was not prevalent in the photographs. The faces in the photographs were much broader and showed little difference from a group of subjects with other illnesses he was using as a control group.¹¹⁵ This set-back did not stop Galton from maintaining, even against all of his own evidence, that some future test may still yet confirm a link between the illness and the physiognomy of the patient.¹¹⁶ While his attempts to uncover the physical features that particularly identified the sufferers of mental health and chronic disease were not successful this, did not undermine his belief that photography and composite photography were still useful in identifying those who were contributing to degeneration.

Galton also made composites of desirable types whom, he believed, if allowed to breed, would augment the nation. For example, he created composites of engineers, Anglican ministers, scientists, doctors and Westminster schoolboys. All the faces were middle to upper-class Anglo-Saxons with balanced, fairish features. Galton left no written commentary on these composites, but his biographer, Pearson, thought in publishing the photographs, ordinary citizens would find them aspirational and an example of what could be achieved through eugenics.¹¹⁷

Galton's assertion that composite photography was the right tool to provide typical pictures of different races was not embraced by anthropologists for two reasons. Firstly, it was an extremely complicated and exacting method of photography, and secondly, Galton had constructed it for the sole purpose of identifying and regulating those who should reproduce, whereas anthropologists were more interested in comparison for the purpose of evolutionary ranking.¹¹⁸

¹¹⁴ Ibid., 86.

¹¹⁵ Francis Galton and F.A. Mohomed, *An Enquiry into the Physiognomy of Phthisis by the Method of Composite Photography*, (London: Guys's Hospital, 1882), 492.

¹¹⁶ Ibid., 493.

¹¹⁷ Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 93.

¹¹⁸ Ibid., 97.

Galton's concern about race mixing and its impact on crime and feeble-mindedness did reflect the concern of some British anthropologists. It was believed that Britain's domestic population contained inferior racial elements due to years of migration, particularly from Southern Europe (Gaelic, Mediterranean and Semitic ethnic groups). Together with more recent migrants, they were negatively affecting Britain's ability to manage its Empire. For this reason, Galton wanted to discover what proportion of Anglo-Saxons there were in comparison with inferior Celtic and southern European types.

In 1881, the Anthropometric and Racial Committee of the British Association for the Advancement of Science commissioned a study that was based on the findings of another committee, which in 1875 had been tasked with compiling data on the physical characteristics of human beings in the British Empire, and of publishing photographs of the typical races found there. This committee included Galton, as did the sub-committee of 1881, whose focus was on the collection and publication of the main races of the British Isles.¹¹⁹

The sub-committee identified three main groups of racial types. Type A was described as having an elongated skull and was dark and represented the more primitive race found in Ireland, West Scotland, Cornwall and Wales. Type B was broad skulled and fair and found in the North of England, parts of Scotland, Ireland and Wales. Finally, the Anglo-Saxons were labelled type C and could be found in England, particularly in places such as Sussex, Kent, Durham, the Shetland Islands, and Southampton.¹²⁰

Part of the subcommittee's task was to rank as well as identify races. The photographs of each group were placed within their own album and it was clear the Saxon-Teutonic group was favoured above the others. They were photographed in a more flattering manner. Their poses were sedate, the lighting was not harsh and their surroundings and clothing made them appear sophisticated, prosperous and modern.¹²¹ The committee, chaired by Galton, then went on to further categorise the races by the creation of a map devised to plot the 'Distribution of Genius in England,' reminiscent of his experiments in the 1860s. They devised eight classes of clever

¹¹⁹ Kenna, "Sir Francis Galton's Contribution to Anthropology," 81.

¹²⁰ Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 98.

¹²¹ *Ibid.*, 101.

Englishmen scientists, authors, artists etc. Sixty-eight percent of genius was in the south of England and the rest in the north. A second map, devised to show the curve of least and most talented, reinforced the first map. Perhaps it is not so surprising to find that when comparing these later maps with the anthropological map of races in Britain, genius is found where the Saxon-Teutonic Group C is most prolific.¹²²

The committee confirmed its belief that photography was useful for determining the value of racial crosses in different parts of the country, but also wondered if photography could become a mechanism to address some of Britain's social problems, such as aiding authorities by providing exact descriptions of criminals and deserters.¹²³ This was not the purpose that Galton had in mind for photography, but he remained interested in this technique for the rest of his life.

Following his interest in photography as a means to identify race and the dysgenic classes, Galton began his experimentation in fingerprinting. He was not the first person, however, to consider fingerprints as a means of identification. In 1858, Sir William Herschel, then of the Bengal Civil Service and later a Magistrate near Calcutta, used fingerprinting to identify individual Indians, and to detect fraud amongst those who were receiving government pensions. In 1878 at Tokyo Hospital, Dr Henry Faulds became interested in the fingerprints on pre-historic pottery. From there he progressed to looking at monkeys and then onto Japanese citizens. Faulds wrote up his discovery in *Nature* in 1880, and Herschel responded with his own findings.¹²⁴

In 1891, Galton published a book on fingerprinting and was responsible for proving three main characteristics of fingerprints. Fingerprints are not affected by the ageing of the individual, after they are formed, they are not affected by the environment and finally that the structures of individual ridges are extremely varied.¹²⁵ He also contributed to the classification of fingerprints by introducing the Arch-Loop-Whorl classification, which formed the basis for all later indexing.¹²⁶

¹²² Ibid., 102.

¹²³ Ibid., 105.

¹²⁴ Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*, 236.

¹²⁵ Gertrud Hauser, "Galton and the Study of Fingerprints," in *Sir Francis Galton, Frs the Legacy of His Ideas*, ed. Milo Keynes, Studies in Biology, Economy and Society (Handmills. Basingstoke, Hampshire: MacMillan: in association with the Galton Institute, 1993), 147.

¹²⁶ Kenna, "Sir Francis Galton's Contribution to Anthropology," 82.

However, at the same time he was proving fingerprints were useful for individual identification, he was still exploring the idea that race and/or intellect could be detected through these patterns. Gathering together large numbers of fingerprints of different races (English, Welsh, Negro, Hebrew and Basque) he studied them but concluded that there was no 'peculiar pattern that characterises any persons of the above races.'¹²⁷ He also attempted comparisons between classes, as he called them, of science students, art students, and inmates of asylums, but once again could not find any differences. In his book on fingerprints, he wrote:

I have prints of eminent thinkers and eminent statesmen that can be matched with those of congenital idiots. No indications of temperaments, character or ability are to be found in finger marks.¹²⁸

Once again, as with the experimentation with Phthisis patients, and despite his own evidence to the contrary, Galton still tried to find a connection between fingerprinting and race. His book continued:

Still, whether it be from pure fancy on my part, or from some real peculiarity, the general aspect of the Negro print strikes me as characteristic. The width of the ridges seems more uniform, their intervals more regular, and their courses more parallel than with us. In short, they give an idea of greater simplicity...¹²⁹

Galton spent several years researching methods that would, had they worked in the manner he intended, have served to identify those whose existence contributed to the degeneration of society. His choices of the groups studied indicate his bias and racist thinking. The mentally and congenitally ill had no place, nor did the criminal or lower races, which might act as a contaminate to his own.

Galton's own evidence did not stop him from continuing to believe that he was correct in thinking that eventually there would be a link between the physiognomy and the illness of a patient, nor that there was a difference in the fingerprints of civilised and less civilised races. With regards to composite photography, he never gave up the idea that it was ideal for demonstrating heredity as it measured the similarity between individuals of the same class or social grouping, and within the

¹²⁷ Francis Galton, *Finger Prints* (London: MacMillan and Co., 1882), 192.

¹²⁸ *Ibid.*, 197.

¹²⁹ *Ibid.*, 196.

same family. He believed that the keeping of anthropometric information, medical histories and photographs of a family over several generations would be useful for tracking disease and the impact of marriage.¹³⁰ His work with the British Association for the Advancement of Science gave him an opportunity to ask some important questions about race in the British Isles, and then influence the way in which the material was categorised and presented.

¹³⁰ Maxwell, *Picture Imperfect: Photography and Eugenics 1870-1940*, 94.

Conclusion

Galton's travel overseas in Europe and Africa during his early life, and his encounters with races different from his own, convinced him not only that Africans and other European races were generally intellectually and morally inferior to the British race, but that they could be assessed against civilised conduct and ranked as to their fit. When assessing the different African tribes, his writing makes it clear that his opinion was not affected by the very different environments which the tribes experienced, and for the rest of his life he continued to believe that nature was the overwhelming force when it came to men's circumstances. When he returned to Britain, he concentrated on geography, publishing travel books and meteorology until 1859, when he was inspired by the ideas of inheritance and evolution in Darwin's book '*On the Origin of Species by Means of Natural Selection*' to start investigating inheritance and heredity.

It took until 1865 for Galton to begin to publish his ideas, and his thinking had moved on considerably from the academic exercise of ranking of races. Ideas about degeneracy had entered his thinking, both in terms of inheritance and its effects on society. He connected the idea of ranking races with addressing degeneracy and developed a utopian vision of a so-called eugenic society, where those gifted intellectually and physically would be encouraged to marry and breed, thus improving society. Those who were not so gifted would not be allowed to procreate, and so their negative characteristics would eventually be bred out of society. Galton's racialist ideas, and his intent to influence society towards an acceptance of eugenic thinking, was reflected in his other projects. He worked on composite photography, hoping to find commonality amongst criminal, psychiatric patients and patients with tuberculosis. This was with little success, but he did believe that he had found a so-called Jewish 'type', which conveniently fit the stereotypes of Jews prevalent in Britain at the time. He attempted to analyse fingerprinting as a means of finding heritable characteristics, but instead confirmed that it was unique identifier thus entering the annals of forensic science. It was in his work with the Anthropometric and Racial Committee of the British Association for the Advancement of Science that he was able to put some of his ideas into practice as

he and his committee identified and ranked the different nationalities that made up the British Isles.

Francis Galton wanted to create a society where the selective breeding of positive traits, and the breeding out of negative traits, was a fundamental premise. While class did have a significant influence on his scientific work and the beliefs underlying it, this dissertation has demonstrated the powerful impact that his racist views also had on his work. Underpinning all of Galton's work was the idea that rank, and therefore, merit could be attached to race.

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