

- the Archaeological Past*, pp. 71–88. Gainesville: University of Florida Press.
- Kane, S. (ed.) 2003. *The Politics of Archaeology and Identity in a Global Context*. Boston, Massachusetts: Archaeological Institute of America.
- Larsen, M. T. 1989. Orientalism and Near Eastern Archaeology. In D. Miller, M. Rowlands and C. Tilley (eds.) *Domination and Resistance*, pp. 229–239. London: Unwin Hyman.
- Liebmann M. and U. R. Rizvi 2008. *Archaeology and the Postcolonial Critique*. Lanham, New York: Altamira Press.
- Loosley, E. 2005. Archaeology and Cultural Belonging in Contemporary Syria: The Value of Archaeology to Religious Minorities. *World Archaeology* 37, 4: 589–596.
- Mallowan, M. 1977. *Mallowan's Memoirs*. London: Collins.
- Al-Maqdissi, M. (ed.) 2008. *Pionniers et protagonistes de l'archéologie syrienne, 1860–1960. D'Ernest Renan à Sélim Abdulkhak*. Ministère de la Culture, D.G.A.M., Damas: Documents d'Archéologie Syrienne XIV.
- Matthews, R. 2003. *The Archaeology of Mesopotamia: Theories and Approaches*. London and New York: Routledge.
- Meskel, L. (ed.) 1998. *Archaeology Under Fire: Nationalism, Politics and Heritage in the Eastern Mediterranean and Middle East*. London and New York: Routledge.
- Nicholas, G. and J. Hollowell 2007. Ethical Challenges to a Postcolonial Archaeology: The Legacy of Scientific Colonialism. In Y. Hamilakis and Ph. Duke (eds.) *Archaeology and Capitalism: From Ethics to Politics*. Walnut Creek, USA: Left Coast Press.
- Pollack, S. and R. Bernbeck 2004. Introduction. In S. Pollock and R. Bernbeck (eds.) *Archaeologies of the Middle East. Critical Perspectives*, pp. 1–9. London: Blackwell.
- Silberman, N. A. 1989. *Between Past and Present: Archaeology, Ideology and Nationalism in the Modern Middle East*. New York: Henry Holt and Company.
- Trigger, B. 1984. Alternative Archaeologies: Nationalist, Colonialist, Imperialist. *Man* 19, 3: 355–370.
- Valter, S. 2002. *La construction nationale syrienne. Légitimation de la nature communautaire du pouvoir par le discours historique*. Paris: CNRS Éditions.
- Woolley, C. L. 1932. *Dead Towns and Living Men. Being Pages from an Antiquary's Notebook*. London: Jonathan Cape, The Life and Letters Series.

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Flinders Petrie and Eugenics at UCL¹

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Introduction

William Matthew Flinders Petrie is considered the father of scientific archaeology and is credited with developing a chronology of Ancient Egypt using the nondescript artefacts that other archaeologists had ignored.² He occupied the first chair of Egyptology in England, and was also well-known for the

¹ I would like to thank the History of Science Department at the University of Oklahoma, especially Cornelia Lambert, Katherine Pandora, and Lisa Torres Stewart, as well as Tim Murray, Stephen Quirke, and Pamela Jane Smith, for their comments and questions which helped me to think through many of these issues. Their help has only made this article better; any mistakes are my own.

² The title 'Father of Scientific Archaeology' was given to Petrie posthumously and appears in a great many of his obituaries and biographies: 'Archaeology in Egypt was his main subject, and British archaeology in Egypt, in the sense of the theory and practice of scientific excavation, was largely his creation'. ('Prof. Sir Flinders

museum built around his personal collection of Egyptian artifacts at University College London.³ Petrie's archaeological work has been studied by scholars, from various disciplines, for its scholarly, cultural, and historical value, while Petrie's life and career outside of archaeology have been the subject of relatively little study. Petrie himself wrote two life stories: the first, *Ten Years Digging in Egypt, 1881–1891* (1892), detailed the years before his professorship at UCL; in 1932 he published his second, more complete autobiography, *Seventy Years in Archaeology*. After he died in 1942 there were various obituaries and memorials that outlined his life and major achievements in archaeology.⁴ There was very little written about Petrie the man until 1985, when Margaret Drower's *Flinders Petrie: A Life in Archaeology* was published; it remains the most comprehensive work on Petrie's life.⁵ A thin volume of the correspondence of Hilda and Flinders Petrie also allows a glimpse into life on excavation.⁶ In short, much of what is known about Petrie focuses on his excavations in Egypt, his time as Professor of Egyptology at University College London, or the museum that bears his name. Subsequently, as a historical matter, Petrie's work in the discipline of eugenics has rarely been discussed as part of his career.⁷

Although eugenics is, by and large, left out of published historical works about Petrie, an analysis of a few of his works outside of Egyptology brings into view his eugenic interests and his close working relationships with eugenics pioneers Francis Galton and Karl Pearson. Past historical and biographical studies largely have considered these three men separately. Pearson and Galton are often discussed together and are included extensively in one another's biographies; however, Petrie is seldom included.⁸ Furthermore, Galton and Pearson, as close as they were to Petrie in his life, are

Petrie, F. R. S.' *The Times*, 30 July 1942); see also Margaret S. Drower, *Flinders Petrie: A Life in Archaeology*, 2nd ed., (Madison, Wisc.: University of Wisconsin Press, 1995). He was also a pioneer of scientific archaeology in Palestine. However, a few historians lately have argued that, because he was most interested in topographic information and the gathering of smaller material remains, especially in Egypt, he may not have been as influential in the practice of stratigraphic excavation as originally thought; see David L. Browman and Douglas R. Givens, 'Stratigraphic Excavation: The First 'New Archaeology'', *American Anthropologist* New Series 98:1 (1996): 83.

³ See the collections online at <http://www.petrie.ucl.ac.uk>. The collections also include Amelia Blanford Edwards' collection, bequeathed to the University upon her death in 1892 and artefacts from multiple excavation seasons in Egypt and Palestine. See also Peter J. Ucko, 'The Biography of a Collection: The Sir Flinders Petrie Palestinian Collection and the Role of University Museums', *Museum Management and Curatorship* 17:4 (1998): 351–399; Peter J. Ucko, Rachael Thyrza Sparks and Stuart Laidlaw (eds.) *A Future for the Past? Petrie's Palestinian Collection* (Walnut Creek, Calif.: Left Coast Press, 2007).

⁴ W. M. Flinders Petrie, *Ten Years Digging in Egypt, 1881–1891* (London: Religious Tract Society, 1892); W. M. Flinders Petrie, *Seventy Years in Archaeology* (New York: Henry Holt & Co., 1932; reprint, New York: Henry Holt & Co., 1969), (page references are to reprint edition). Some obituaries: 'Prof. Sir Flinders Petrie, F. R. S.' *The Times*, 30 July 1942; Margaret A. Murray, 'William Matthew Flinders Petrie', *Religions in the Light of Anthropology, Archaeology, History, Mysticism, Mythology, Philology, and Philosophy* 41 (October 1942): 21–24; H. E. Winlock, 'William Flinders Petrie', *American Philosophical Society Yearbook* (1942): 358–362.

⁵ Drower, *Flinders Petrie*.

⁶ Margaret Drower (ed.) 2004. *Letters from the Desert: The Correspondence of Flinders and Hilda Petrie* (Oxford: Aris and Phillips). The letters give a private picture of two very important figures in archaeology of the nineteenth century and especially demonstrate Hilda's equality in fieldwork and that Flinders demonstrates, both in action and in words, how much he needs, appreciates and supports Hilda on site.

⁷ One exception is Neil Asher Silberman, 'Petrie's Head: Eugenics and Near Eastern Archaeology', in A. B. Kehoe and M. B. Emmerichs (eds.) *Assembling the Past: Studies in the Professionalization of Archaeology* (Albuquerque, N. M.: University of New Mexico Press, 1999) pp. 69–79. Silberman discusses Petrie's work in eugenics in the context of the removal of his head after his death. Petrie wished for it to be removed and sent to the Royal College of Surgeons for further study.

⁸ In Galton's autobiography, *Memories of My Life*, Petrie is discussed only in the context of the visit Galton and his niece made to Abydos in the 1900–01 digging season, in spite of the fact that he and Petrie had been in close correspondence for many years previous (Francis Galton, 1909, *Memories of My Life*, 3rd edn. [London: Methuen & Co.], pp. 97–100).

barely mentioned by Drower.⁹ The relationship between Petrie and Galton brought Petrie into the world of biology, anthropometrics and eugenics as early as 1883. At points throughout his career, comprising more than fifty digging seasons in Egypt, he had skeletons, skulls and bones sent back to Galton and Pearson at the UCL Anthropometric Laboratory. Over time, these close working relationships developed into deep personal relationships.¹⁰

Petrie's association with both of these men, and the exchange of ideas, materials and theories among them, was influential on his own practical and theoretical work on civilization, race, and culture. It was also important for the research Galton and Pearson were doing, since Petrie supplied them with needed human data and aided them in their statistical analyses. A brief examination of some of the anthropometric research published by the Eugenic Laboratories at UCL reveal that the faculty depended heavily upon Petrie to supply raw data in the form of human remains. It also establishes Petrie as a reliable source of statistical information and eugenic conclusions. Furthermore, the historical analysis of the development of civilization in Petrie's own works, such as *Janus in Modern Life* (1907) and *The Revolutions of Civilisation* (1911), demonstrate his adherence to a social evolutionary framework.¹¹ Petrie's social ideas were formed, not only by well-known works such as Darwin's *On the Origin of Species* (1859), but also, and even more so, by the statistical analysis and eugenic conclusions drawn from the anthropometric data he gathered with Galton and Pearson.¹² Like other social scientists at the time he presented and supported the evolutionary framework; he then went a step further by encouraging individuals to participate in social change through artificial selection, by choosing better mates.

Thus far, Petrie scholarship has focused mostly on his career in archaeology. I will show that Petrie not only had a specific interest in biometrics, but also played a significant role in the development and implementation of eugenic ideals. Although there is much written about eugenics and society in the nineteenth century and early-twentieth century, Petrie's work adds a new lens through which to view both Egyptology as well as the developments in biology and social theory.

Petrie's Early Career

Petrie first arrived in Egypt in December 1880. In harmony with his assertions in *Inductive Metrology*, of basing investigations of the past on quantitative methods, the purpose of his first trip was to make precise measurements of the pyramids – their dimensions and their alignment – to test the accuracy of the work of Piazzi Smyth.¹³ This was the first of his many annual trips to Egypt and Palestine.

⁹ Galton is mentioned as 'the geneticist' in the early part of the book (Drower, *Flinders Petrie*, p. 68); later on, there is a brief paragraph about Petrie's social ideas being 'much influenced by the views of his friend Francis Galton...' (p. 302). Pearson is even less present in the biography, and his only mentions are as Petrie's close friend and neighbor (p. 222; p. 260; p. 339). Literature about the other men includes Galton's autobiography, *Memories of My Life* and Pearson's four-volume biography of Galton, *The Life, Letters and Labours of Francis Galton* (Cambridge: Cambridge University Press, 1914–1930). In each, Petrie is mentioned simply as having Galton as a guest at Abydos in 1900: Galton, *Memories of my Life*, p. 97; Pearson, *Life, Letters and Labours*, v. IIIa, p. 240; v. IIIb, pp. 515–517.

¹⁰ As a pair, Pearson and Galton were close colleagues as well as confidants; Petrie and Pearson were next-door neighbors in Hampstead Heath; Galton visited Petrie in Egypt on more than one occasion. A deeper analysis of the personal relationships cannot be presented here, due to constraints of space and scope. For a further investigation of this aspect, see Kathleen L. Sheppard, "You call this archaeology?": Flinders Petrie and Eugenics', Unpublished Master's Thesis, University of Oklahoma, 2006.

¹¹ W. M. Flinders Petrie, 1907, *Janus in Modern Life* (New York: G. P. Putnam's Sons); W. M. Flinders Petrie, 1911, *The Revolutions of Civilisation* (London: Harper Brothers).

¹² While there were many others who utilized Petrie's contributions, such as George Thane, professor of Anatomy at UCL from 1877–1919, I will focus mainly on Galton, Pearson, and others associated with the Eugenics Lab at UCL (Drower, *Flinders Petrie*, p. 222).

¹³ Smyth had written a book titled *Our Inheritance in the Great Pyramid*, and published in 1864. In it he claimed

He spent two years measuring and plotting the pyramids and in early 1883 he learned that the Royal Society was offering a grant to the Royal Engineers to survey the pyramids. Petrie recollected that upon hearing this news, 'I wrote saying that the survey was already done, and asked if it might be inspected. Francis Galton was directed to report on it; I went up to show it to him. In due course I was told it was considered sound work, and I should have a grant of £100 to pay for the publication'.¹⁴ Galton and Petrie had been acquainted before, but Petrie's book, *The Pyramids and Temples of Gizeh*, published by the Royal Society in 1883, was the first of many joint ventures.¹⁵ Like *Inductive Metrology, Pyramids and Temples* sought to make archaeology an objective and methodical discipline through changes to archaeological methods. According to Philippa Levine, Petrie did such important mathematical and metrological work on the pyramids at Giza 'that by the end of the [nineteenth] century David Hogarth could confidently claim that "the excavator, from being a random hunter for treasure has become a methodical collector of evidence."¹⁶ Petrie's methods and work forever changed the practices, and hence the public image, of archaeologists.

However, in his first few seasons in Egypt, he had other tasks to complete.¹⁷ In November of 1883, Galton wrote a letter to Petrie complimenting him on *Pyramids and Temples* and the quality of the research and photographs in it.¹⁸ Galton saw in the detailed photographs of pyramid stones the possibility for another project. In 1886, with a grant from the British Association for the Advancement of Science (BAAS), Galton hired Petrie to return to Egypt and photograph the different racial types portrayed in ancient portraits, sculptures, and temple inscriptions. *Racial Photographs of the Egyptian Monuments*, comprising 190 photographs of various monuments from all over Egypt, was published the following year.¹⁹ The publication was 'available for students at the cost of printing copies'; applications were to be made to Mr. R. C. Murray, the publisher.²⁰ The photographs were of excellent quality for the time and a surprising amount of detail could be seen. Probably because it was a specifically commissioned work by the Royal Society and was not readily available to the general public, this work is rarely mentioned either by Petrie, his contemporaries or his biographers.

From the time that *Racial Photographs* was published in 1887, Petrie worked closely with, and for Galton, and later with Pearson, on various projects that had more to do with statistics, heredity,

that, if the Biblical chronology of time was right (and for him it was), the pyramids could not have been built by the Egyptians, but only by strangers under divine guidance. He had measured out 'pyramid inches' and tried to 'decipher the hidden message of the Great Pyramid' (Drower, *Flinders Petrie*, p. 28). Petrie and his father were interested in taking their own, more reliable measurements. C. Piazzzi Smyth, 1864, *Our Inheritance in the Great Pyramid* (London: A. Strahan & Co).

¹⁴ Petrie, *Seventy Years*, p. 37; W. M. Flinders Petrie, 1883, *The Pyramids and Temples of Gizeh* (London: Field & Tuer), p. v.

¹⁵ Petrie, *Pyramids and Temples*.

¹⁶ Philippa Levine, 1986, *The Amateur and the Professional: Antiquarians, Historians and Archaeologists in Victorian England, 1838–1886* (Cambridge, UK: Cambridge University Press) p. 89.

¹⁷ David Gange has recently argued that Petrie's drive and objective for being in Egypt was not for imperialist eugenical purposes but for religious and spiritual ones ('Religion and Science in Late Nineteenth-Century British Egyptology', *The Historical Journal* 49:4 (2006): 1083–1103). One downside to his argument is that he does not contend with colonialism at all. Due to the fact that Britain came to occupy Egypt for over half a century beginning in 1882, most historians acknowledge colonialism and imperialism – whether formal or informal – as the main impetus behind Egyptology in this period. Margarita Diaz-Andreu deals with both possibilities in *A World History of Nineteenth-Century Archaeology: Nationalism, Colonialism and the Past* (Oxford: Oxford University Press, 2007), and she comes to the conclusion that it may have been a mixture of both objectives. This seems to be the most plausible inference.

¹⁸ Francis Galton, London, to William Flinders Petrie, London, 13 November 1883. Petrie Museum Archives, Petrie Museum of Egyptian Archaeology, University College London, London, England.

¹⁹ W. M. F. Petrie, 1887, *Racial Photographs from the Egyptian Monuments* (London: British Association).

²⁰ *Ibid.*

anthropometrics and eugenics than they did with Egyptian archaeology and artefacts. Reliance on a wealth of biometric data, and especially the results obtained from them, led these men directly to the practice of improving the human race.

Galton, Pearson, and Eugenics

Galton's ideas about race and society were influenced by a number of factors. After graduating from Cambridge in 1843, he took a long tour with two of his friends throughout Africa and the Middle East. Most days were spent at leisure, but Galton also gathered ethnographic and anthropological data about the peoples and cultures with which he came into contact.²¹ He was further influenced by Darwin's *On the Origin of Species* (1859). In 1921, Pearson argued that his mentor's 'main aim in life was to study how the ideas propounded by his cousin Charles Darwin might be applied to inform the race of men'.²² That he would then apply evolutionary ideas to social problems is a connection that some scholars find problematic because it seems too simple a result.²³

However, for others this connection is a very clear one. Historian of biology Robert Young argues that 'the intellectual origins of the theory of evolution by natural selection are inseparable from social, economic and ideological issues in nineteenth-century Britain...'.²⁴ Furthermore, he argues, the social theories one might infer from Darwin's theory 'are not separable from Darwin's own views, nor are they chronologically subsequent. They are integral'.²⁵ George Stocking attributes Galton's interest to prevailing cultural attitudes as well. He argues that these men, and others in their social class, were '... confident of their own cultural or racial superiority'.²⁶ For men in Galton's social class, 'the professional classes were the prime repository of ability and civic virtue' and they desired that this repository would always be the class in charge; and through practicing eugenics Galton saw a way to make that possible.²⁷

Pearson, also a Cambridge graduate (mathematics, 1879), accepted a post at UCL in 1884 in the applied mathematics and mechanics department. From 1891 to 1911 he held the chair of that department. Throughout his career at UCL he was an active participant in certain socialist groups where he developed a scientific socialism.²⁸ Theodore Porter, a recent Pearson biographer, argues that his main goal was to apply mathematics to solve social problems, so he 'devoted himself' relentlessly to a project of 'almost universal quantification'.²⁹ Both Galton and Pearson 'confidently equated science with progress. All around [them] the technology of the industrial revolution confirmed man's

²¹ Daniel Kevles, 1985, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (Cambridge: Harvard University Press; reprint edition, Cambridge: Harvard University Press, 1995), p. 6.

²² Karl Pearson, 'Speech to the Second Galton Dinner at the Galton Anthropometric and Biometric Laboratories, University College London', 17 January 1921. Pearson Papers, Special Collections, University College London, London.

²³ See Kevles.

²⁴ Robert M. Young, 1985, 'Darwinism is Social', In D. Kohn (ed.) *The Darwinian Heritage*, (Princeton: Princeton University Press) p. 609.

²⁵ Young, p. 609.

²⁶ George Stocking, 1987, *Victorian Anthropology* (New York: The Free Press) p. 80.

²⁷ Kevles, p. 9.

²⁸ This article will not discuss the important role of political leanings in the decisions each of these men made. For a further discussion of some of these ideas, see Theodore Porter, 2004, *Karl Pearson: The Scientific Life in Statistical Age* (Princeton, N. J.: Princeton University Press) and Dan Stone, 2002, *Breeding Superman: Nietzsche, Race and Eugenics in Edwardian and Interwar Britain* (Liverpool, UK: Liverpool University Press). Petrie was a member of the Anti-Socialist League for a number of years as well as a member, later President, of the 'right-wing body, the British Constitution Association' (Drower, *Flinders Petrie*, pp. 342–343). Petrie and Pearson clearly did not share the same political sentiments, but their scientific goals and ideals brought them together.

²⁹ Porter, p. 1; p. 3.

mastery over inanimate nature'.³⁰ They then 'came to equate morality with the advancement of social evolution, the outcome of the Darwinian struggle with the ascendancy of the fittest nation, and the achievement of fitness with a nationalist socialism'.³¹ It seemed that the most expedient way to do this was in the artificial sexual selection of humans, called eugenics, as Galton defined in 1883:

[Eugenics means] ... good in stock, hereditarily endowed with noble qualities. ... We greatly want a brief word to express the science of improving stock, which is by no means confined to questions of judicious mating, but which especially in the case of man, take cognizance of all influences that tend in however remote a degree to 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.³²

The only way that Galton could see to do this was in proving that nature, more than nurture, was the determining factor of human abilities and in encouraging those with more ability to reproduce.³³ He had stated fifteen years earlier in *Hereditary Genius* that he had

no patience with the hypothesis occasionally expressed, and often implied, especially in tales written to teach children to be good, that babies are born pretty much alike, and that the sole agencies in creating differences between boy and boy, and man and man, are steady application and moral effort. It is in the most unqualified manner that I object to pretensions of natural equality.³⁴

In *Inquiries Into Human Faculty*, Galton attempted to prove his argument by using biometric statistics from hundreds of pedigrees of noteworthy families. He also took the opportunity to encourage the measurement of still more families, in order to gather more data. The impetus for biometrics, as well as the study and practice of eugenics, was thus to improve the *nature* of each human being.³⁵

He based his inquiries on the study of human energy, both physical and mental, using statistics and anthropology as his methodologies.³⁶ In the late-nineteenth and early-twentieth centuries, biology was undergoing serious methodological changes. Biology had been understood primarily as conforming to the descriptive methods of natural history, but by the first decades of the twentieth century it had become an experimental, analytical science, and Galton was an instrumental part of this shift.³⁷ Statistics was a relatively new science and 'consisted mainly of the accumulation of socially useful numerical data, with neither theoretical underpinning nor mathematical analysis'.³⁸ However, in his laboratory, Galton was able to join the changing discipline of biology and the new method of applied

³⁰ Kevles, p. 3.

³¹ Kevles, p. 23.

³² Francis Galton, 1911, *Inquiries Into Human Faculty and Its Development*, 2nd edition (London: J. M. Dent & Sons) p. 17.

³³ Francis Galton, 1869, *Hereditary Genius: An Inquiry into Its Laws and Consequences* (London: Macmillan); Galton, *Inquiries into Human Faculty*.

³⁴ Galton, *Hereditary Genius*, p. 14.

³⁵ Galton discussed nature and nurture at length in *English Men of Science: Their Nature and Nurture* (London: Macmillan, 1874). He introduces the idea in the way in which he would continue to study it for the rest of his life: 'Nature is all that a man brings with himself into the world; nurture is every influence from without that affects him after his birth. ... When nature and nurture compete for supremacy on equal terms ... the former proves the stronger' (p. 12). The issue of nature and nurture continues to be a volatile one in both biology and psychology.

³⁶ Galton, *Inquiries Into Human Faculty*, p. 19; Karl Pearson, 'Speech to the Fourteenth Galton Dinner at the Galton Anthropometric and Biometric Laboratories, University College London', 17 January 1933. Special Collections, Pearson Papers, University College London, London.

³⁷ See, for example, William Coleman, 1977, *Biology in the Nineteenth Century: Problems of Form, Function, and Transformation* (Cambridge: Cambridge University Press).

³⁸ Kevles, p. 13.

statistics. He worked to give biology a more quantitative role, with Pearson's work in statistics providing the theoretical underpinnings of the mathematical analysis of the data.

Years later, Pearson defined their eugenic pursuit in this way:

[O]ur science is an instrument of research, where the relationships are real but not absolute. In this sense it covers all knowledge where we fall short of complete causation, it has appreciations to anthropology, to craniology, to medicine, to criminology, to psychology, to physiology.³⁹

Thus, eugenics is a science by which humans can not only understand all of the disciplines listed by Pearson, but also have some control over them. Galton, Pearson and Petrie had a clear social agenda nonetheless. For example, they spent countless hours writing, giving speeches, and meeting with various groups and clubs to promote eugenic marriages. Pearson suggested that the reason for eugenic marriages was so that '... selective breeding might well change the center of regression from one generation to the next. In short, the mean of the population for a given character might be deliberately moved in an evolutionary line of eugenic advance'.⁴⁰ Deliberately moving the mean of the population for traits such as intelligence, memory, and physical stamina, these men well knew, could only be achieved through social and reproductive control.

Galton died in 1911, but in his will he endowed a chair of eugenics at UCL, which was first occupied by Pearson. Galton's money also provided for the opening of an official Galton Biometric Laboratory of which Pearson was also in charge. Furthermore, in his will, Galton made clear that the main goal of the chair of eugenics that bore his name was to investigate the effects of national eugenics on race in England.⁴¹ The laboratory became 'the sole British establishment for eugenic research, the principal source of authoritative eugenic science, the scientific benchmark of all eugenic discussion in England' in the early twentieth century.⁴² Petrie's material remains as well as his statistical and sociological support was an invaluable contribution to the collective practice of the lab.

Petrie's Eugenic Work

It is not immediately evident that Petrie, the famous archaeologist, was also an influential biometrician and eugenic supporter. However, three of Petrie's works had explicit eugenic purposes: *Racial Photographs*, *Janus in Modern Life*, and *Revolutions of Civilisation*.⁴³ One can find Galton's and Pearson's eugenic practices made plain in most scholarship about them, and their writings can be found easily in many library collections; the same cannot be said for Petrie's work. Drower briefly acknowledges the eugenic vein in Petrie's theoretical works, but does not address it in depth, stating that 'these ideas were much influenced by the views of his friend Francis Galton on the "gifted class"...'.⁴⁴ Galton's biographer, Gillham, notes this influence as well: 'Galton's notions of eugenics, in turn, profoundly

³⁹ Karl Pearson, 'Speech to the First Galton Dinner at the Galton Anthropometric and Biometric Laboratories, University College London', 17 January 1920. Special Collections, Pearson Papers, University College London, London.

⁴⁰ Kevles, p. 37.

⁴¹ 'Opening the New Building Given by Sir Herbert Bartlett, Bt. for the Department of Applied Statistics, Drapers' Company and Galton Laboratories at University College', 4 June 1920. Special Collections, Pearson Papers, University College London, London.

⁴² Kevles, p. 40.

⁴³ Petrie's 1906 Huxley Lecture of the Anthropological Institute, 'Migrations', was reprinted in *The Journal of the Anthropological Institute of Great Britain and Ireland* 36 (1906): 189–232. In it he argued that migrations of civilizations 'are a means of supplanting the less capable by the more capable' by using a number of examples, not the least of which was the measurement and analysis of the shapes, sizes, and types of skulls from Egyptian cemeteries (Petrie, 'Migrations'; Drower, *Flinders Petrie*, p. 302). I will not go into detail about this lecture, but it is one example of Petrie's use of the biometric data to discuss the benefits of eugenics.

⁴⁴ Drower, *Flinders Petrie*, p. 302.

influenced Flinders Petrie...'.⁴⁵ Finally, in the introduction to a 2005 exhibition catalogue of objects from the Petrie Museum, one very short statement, easily overlooked, refers to *Racial Photographs* and Petrie's direct involvement with eugenics:

Determined to return to work in Egypt, Petrie was commissioned by Francis Galton, who was engaged in research on genetics, to photograph and record different racial types found in Egypt. This was the unfortunate beginning of the eugenics movement, whose proponents attempted to validate their ideas of racial superiority by projecting them back into the past. Like other Egyptologists of his day, Petrie was badly misled by these ideas.⁴⁶

The lack of attention paid to, or worse, the complete dismissal of, this important part of Petrie's ideology has left holes in scholarship about the history of archaeology in general, and in scholarship about Petrie in particular. He was not 'badly misled' by anyone or by their ideas, nor was his involvement in eugenics an accident. Petrie was a believer in, and a proponent of, the biometric methods and the solutions eugenics offered for the ills of society.

Racial Types and New Races, 1880s–1890s

Racial Photographs from the Egyptian Monuments was the first work Petrie completed for Galton.⁴⁷ According to the frontispiece, *Racial Photographs* is a 'series of 190 photographs of the various races conquered or visited by the Egyptians... [that have] been taken by Mr. Flinders Petrie from the monuments in 1887...'.⁴⁸ Galton asked Petrie to work on this project because '... his studies on the skull measurements of racial types, [Galton] needed photographs of the heads of different enemies and allies – Libyans, Hittites, Syrians, Nubians and Beduin – depicted on the walls of temples and tombs in Egypt...'.⁴⁹ In other words, in order for Galton to build a useful working database for biometric racial comparison, he needed data. He had some trouble collecting useful data in England, for the very few subjects from whom he could obtain data had culturally uniform family backgrounds and were of Caucasian descent. Ancient Egyptian monuments and skeletal remains, on the other hand, were able to provide more diversity of racial types than were available in England at the time.

After skillfully finishing this photographic compilation, Petrie continued working for the Galton Laboratory, collecting, measuring, and delivering skeletal remains. Over the course of his excavations, he sent back thousands of skulls, bones, and even fully articulated skeletons for the labs at UCL. By 1895, the Laboratory at UCL had requested so much material from Petrie that there was no more room for the skulls and skeletons. Not only did the annual reports from sites such as Gizeh and Rifeh, Abydos, Qau and Badari, Naqada and Ballas, and El Amrah document the finding of the cemeteries and the subsequent excavation of human remains, but also scientists from the UCL labs noted their appreciation of Petrie's indispensable contributions. For example, in 1894, Pearson asked Petrie to find at Naqada, if he could, 100 skulls 'of a homogenous race'.⁵⁰ In the end, Petrie was able to send over 400 specimens of crania – some with full skeletons – to Pearson for his study. Petrie himself

⁴⁵ Nicholas W. Gillham, 2001, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics* (New York: Oxford University Press), p. 308; he makes these claims citing *Janus in Modern Life* as well as Petrie's first letter to Galton in 1880 in response to his call in *Nature* for 'cases in support of Galton's research on the mental visualization of numbers and calculations' (Gillham, p. 308; Francis Galton, 'Visualised Numerals', *Nature* 21 [15 January 1880], pp. 252–256).

⁴⁶ William Matthew 'Flinders Petrie', in B. Trope, S. Quirke and P. Lacovara (eds.) *Excavating Egypt: Great Discoveries from the Petrie Museum of Egyptian Archaeology*, University College London (Atlanta: Michael C. Carlos Museum at Emory University, 2005), p. xv.

⁴⁷ Petrie, *Racial Photographs*.

⁴⁸ Petrie, *Racial Photographs*, frontispiece.

⁴⁹ Drower, *Flinders Petrie*, p. 106.

⁵⁰ Cicely D. Fawcett and Alice Lee, 'A Second Study of the Variation and Correlation of the Human Skull, with Special Reference to the Naqada Crania', *Biometrika* 1:4 (1902): 411.

used the skulls and their measurements in his excavation report of that year, as well as in his theory about the New Race.⁵¹ About ten years later, he sent almost 2,000 skulls and skeletons, ranging in date from the twenty-sixth to the thirtieth dynasties, from the cemetery at Gizeh and Rifeh.⁵² Again, in 1925, Petrie and his crew sent at least 140 mandibles, among other human remains, from a Middle Kingdom site at from Qau and Badari.⁵³ As a result of these, and thousands of other specimens from cemeteries all over Egypt being sent to London, the Anthropometric Lab was expanded in order to keep them.⁵⁴ Finally, by 1932 the collection was so extensive that on hearing of Pearson's retirement, Petrie wrote to him about:

The various collections of skulls & skeletons which I have, at your desire, sent to you for personal use, from time to time, are (by the large number from single localities) especially provided for the mathematical treatment which cannot be applied to small quantities. I should wish therefore that these be kept in the Galton Anthropometric Laboratory, and not be regarded as general anatomical material.⁵⁵

However, Petrie did not simply dig up bones and send them to London, he had a sincere interest in the work being done with the remains. In 1894, Petrie wrote to Pearson with some statistical advice:

Have you tried as a test of the numerical results of mathematical treatment dividing your material causally into two halves and treating each apart; by working out the results from 1/2, 1/3, 1/4 ... 1/10 of the material and tabulating how the resulting elements vary in the smaller, but more checkable groups you would have a fine insight into the extent of variation in the result caused by causal accident in the figures. I have [concluded] from that is a very profitable view to show what uncertainty attends the numerical results.⁵⁶

Petrie filled most of the letter with statistics, but ended his discussion by saying that his interest in the matter 'is brutally practical, & what all in your aesthetical [sic] mathematics'.⁵⁷ At this point in time, then, Petrie was not necessarily interested in the racial or biometric components and conclusions of the data as much as he was in the manipulation of the data in, and of itself. As Petrie continued to

⁵¹ W. M. Flinders Petrie, *Naqada and Ballas* (London: Bernard Quaritch, 1896); Fawcett and Lee, p. 411. Petrie believed the New Race was a race of cannibals who had occupied Upper Egypt c. 3000 BC. From the remains in Naqada, Petrie measured skeletons and skulls and reported back to the Anthropometric Laboratory that he had found 'peculiarities' such as 'small hook noses, & strong bones' and 'not a single object in their cemetery or town is in the least like any Egyptian product' (Flinders Petrie, Nagada Upper Egypt, to Karl Pearson, London, 1 February 1895, transcript in the hand of Flinders Petrie, Special Collections, Pearson Papers, University College London, London). In the end, the remains were not of a new race, but of members of a previously unknown period in the Egyptian chronology, the pre-Dynastic era, dating from 4800 to 3100 BC.

⁵² W. M. Flinders Petrie, *Gizeh and Rifeh*, vol. 2 (London: British School of Archaeology in Egypt, 1907), p. 29; G. M. Morant, 'A Study of Egyptian Craniology from Prehistoric to Roman Times', *Biometrika* 17:1/2 (1925): 29–30.

⁵³ W. M. Flinders Petrie, Guy Brunton, and Alan Henderson Gardiner, *Qau and Badari* (London: British School of Archaeology in Egypt, 1927), p. 5; Morant, p. 7.

⁵⁴ Flinders Petrie, Hampstead Heath, to Karl Pearson, University College, 13 August 1895. Special Collections, Pearson Papers, University College London, London.

⁵⁵ Flinders Petrie, Gaza, Palestine to Karl Pearson, University College, London, 24 November 1932. Special Collections, Pearson Papers, University College London, London. It would be useful to investigate how Pearson's successors at UCL viewed the collections. Many thanks to Stephen Quirke who has directed my attention to the fact that these collections, known as the Pearson Collection, are now housed in the Duckworth Anatomy Collection, University of Cambridge: <http://www.human-evol.cam.ac.uk/Duckworth/history.htm> (accessed 1/27/2010).

⁵⁶ Flinders Petrie, Negadeh, to Karl Pearson, London, 13 November 1894. There are other letters to Pearson in which Petrie included graphs, curves and charts. His interests, not to mention his abilities, in statistics were advanced.

⁵⁷ Petrie, Negadeh, to Pearson, London, 13 November 1894.

work in anthropometry and applied mathematics, his interest changed from being 'brutally practical', to being more active in using the calculations and the data to supply useful conclusions for his own historical and sociological work.⁵⁸ He was known to measure and analyze the numbers himself in the field, such as the measurements of the mandibles at Qau. All of the scientists at the Anthropometric Lab at UCL, especially Pearson, continually used Petrie's work.⁵⁹

Civilization and Eugenics

Petrie published two books that were specifically dedicated to eugenics and social issues: *Janus in Modern Life* (1907) and *The Revolutions of Civilisation* (1911). In each of these, Petrie presented ideas about social change that reflected deep-seated eugenic motivation. Significantly, at the same time that Petrie's works were being published, Galton also was publishing two of his key eugenic works, *Inquiries Into Human Faculties* (1907) and *Noteworthy Families* (1911). In fact, the first and second editions of *Inquiries* were published in the same years as *Janus* and *Revolutions*, respectively.⁶⁰

In this case, each author's works were part of a supportive network arguing for a general theoretical and empirical base for public eugenic action. It is also important to note that, at the time when Galton's and Petrie's ideas were being publicized, there were many significant advances occurring in the discipline of eugenics. In the United States in 1904, Charles Davenport established, and became the director of the Cold Spring Harbor Laboratories, where he set up a Eugenics Record Office and almost single-handedly founded the American eugenics movement.⁶¹ In the same year in Britain, Pearson persuaded Galton to speak about the benefits of eugenics to a large audience at the Sociological Society in London, 'and his address was reprinted on both sides of the Atlantic'.⁶² In the first two decades of the twentieth century, 'among the thinking classes of the Anglo-American community, Francis Galton and his eugenics were suddenly very much in season'.⁶³ Into this welcoming environment came Petrie's ideas about the development of civilizations.

Petrie's first book, *Janus in Modern Life*, outlined the ways in which societies had been developing and the directions in which he believed they needed to continue. Petrie briefly explained his theory:

[The Roman god] Janus, who looked to the past and to the future, was the god whose temple stood always open during war, that he might bring peace upon earth. And in our day it is only the view of the past and the future which can warn us of evils to come, and save us from violence and confusion.⁶⁴

It is not surprising that Petrie may have considered himself to be a sort of modern-day Janus who could take on such a daunting task: he was not only a historian and archaeologist familiar with the material that he was presenting, but he was also a strong believer in the powers and benefits of eugenic advance. He believed that he could promote eugenics by justifying it with historical and material evidence, the strongest evidence that an archaeologist could present. Petrie recognized that in Galton's *Hereditary Genius* the statistical evidence clearly favored practicing eugenics but that 'the historical

⁵⁸ In the Huxley Lecture, 'Migrations', Petrie also presented charts, graphs and calculations of his own in order to prove his ideas about the migrations of civilizations and the changes in race that resulted.

⁵⁹ See Karl Pearson, 'On Some Applications of the Theory of Chance to Racial Differentiation', *Philosophical Magazine* (January 1901): 110–124; and E. S. Martin, 'A Study of an Egyptian Series of Mandibles, with Special Reference to Mathematical Methods of Sexing', *Biometrika* 28: 1/2 (1936): 149–178; other *Biometrika* citations above.

⁶⁰ 1907 and 1911.

⁶¹ Kevles, pp. 41–56.

⁶² Kevles, p. 57. I have been unable to locate a copy of this address, however.

⁶³ *Ibid.*

⁶⁴ Petrie, *Janus*, p. vii.

consequences have not been sufficiently noted'.⁶⁵ Petrie corrected this insufficiency in *Janus*.

In the first chapter of *Janus*, Petrie stated that 'the character of a people is the essential basis of all their institutions and government', and if a state is successful it is because a majority of its people, especially those in positions of power, were of good character.⁶⁶ He supported this argument by citing specific theories from *Hereditary Genius*, that is, that 'mental qualities are inherited', and by giving historical examples such as the family lines of Roman emperors and notable English families.⁶⁷ Petrie rejoiced in the fact that criminals were forced to emigrate, but at the same time he lamented the fact that many of the mentally fit of western Europe were being lost by emigration to America: 'At first we succeeded in getting rid of some amount of less desirable stock along with the capable stock; but in later years most countries will not admit any but good stock, and we lose the valuable examples of national character without any compensation'.⁶⁸ He was worried that England was being drained of its capacity to function as a society, which, according to his theories, would lead to 'a serious danger of national collapse'.⁶⁹ Attention to the present states of national character, as well as possible future changes, occupied a majority of the book; however, in the end, he offered a solution to prevent England's worst fears from coming to pass.

Petrie focused here, mainly on how the individual affected societal development. There was some discussion comparing a competitive capitalist economy to a communist one. For Petrie and other social evolutionists at this time, competition was the only way to advance, and so therefore, communism was detrimental to civilization, both in theory and in practice. *Janus* explained Petrie's rejection of social welfare and distribution of wealth, claiming that it 'has proved an entire failure in national economics'.⁷⁰ According to Petrie, having a welfare system allowed those who were not competitive to remain so. He argued that in a welfare system, the population was basically given permission to stagnate economically and morally, to produce offspring that would behave in the same manner, and continue to hurt society.⁷¹ In order for this not to happen, society must provide situations for competition, 'and every such opportunity is the making or marring of the man who rises to it or who falls before it'.⁷² The man who rose to the occasion would be a good component of society, one who would work and continue to compete with others, making civilization strong, while the one who fell would not be tolerated. This situation represented the primary question that Petrie attempted to answer: what could or should be done in a society to advance through competition?

One major stipulation in *Janus* was that changes must be brought about gradually. Petrie argued that violent revolutions do not solve problems and they, in fact, lead 'to worse evils than those which [they] are sought to remedy'.⁷³ He argued in a Darwinian fashion that change must be brought about in small steps – 'small tendencies should be watched' – and, as far as it was possible, these small tendencies should be controlled.⁷⁴ Petrie's solution was 'therefore in the development of the able individuals, and in giving every chance to such whenever they arise, that the hopes of the great mass must lie'.⁷⁵ In order to ensure this course, Petrie suggested the following:

⁶⁵ Ibid., p. 4.

⁶⁶ Ibid., p. 1.

⁶⁷ Ibid., pp. 4–5.

⁶⁸ Ibid., pp. 13–14.

⁶⁹ Ibid., p. 15.

⁷⁰ Ibid., p. 62.

⁷¹ Ibid., pp. 62–64.

⁷² Ibid., pp. 68–69.

⁷³ Ibid., p. 41. He was possibly referring to revolutions such as the Glorious Revolution (England) in 1688, the French Revolution in 1789, and the recent Russian Revolution in 1905.

⁷⁴ Ibid., p. 63.

⁷⁵ Ibid., p. 79.

What we need is to try to give effect to the gospel of giving to him that hath and taking away from him that hath not. The most likely opening for such a line of advance would be giving partial state maintenance to the best stocks, so as to ensure large returns from them, and taxing down the worst stocks – exactly the opposite course to the present craze.⁷⁶

He continued by describing certain government bodies that should regulate this kind of activity. He even referred to forced sterilization of the ‘worst stocks’ of women, so that they might be able to marry and be allowed to have intercourse with their husbands without the state having to monitor their reproduction.⁷⁷ He concluded that the promotion of ‘vigorous strains’ of heredity would produce the men of ‘greatest industry and greatest individuality’, which in turn would lead to the greatest social advance for Britain.⁷⁸

The ideas and actions Petrie argued for in *Janus* were not novel, as Galton’s and Pearson’s previous writings show.⁷⁹ But Drower, like some other historians, views these attitudes through presentist eyes, noting that the ideas in *Janus* ‘which today seem shockingly élitist, attracted little notice in the Press’.⁸⁰ It is indeed true that Petrie’s ideas would not have attracted much negative attention, if any attention at all, because, thanks to other eugenicists and biometricians, the ideas would have been considered theoretically de rigeur.⁸¹ She comments on one ‘condemnatory review’ from *The Academy* which does not seem to mention anything about the ‘shockingly élitist’ views that Drower had pointed out to the reader. In fact, it stated simply that *Janus* was an amateurish work by someone who did not know the subject about which he wrote so assertively.⁸² However, this is a conclusion that any critic might reach when reading the book: there are few sources to which Petrie refers in the text, no bibliography, and many times his support is his ‘strong feeling’.

Four years after *Janus*, Petrie published *The Revolutions of Civilisation*, a short volume, the main purpose of which was to find the ‘real nature of human progress’.⁸³ While in *Janus* he had theorized about the future of civilization while commenting on the past, in *Revolutions* he analyzed the course of two powerful civilizations: Ancient Egypt and Medieval Europe. He used sculpture as the basis for the comparison between civilizations, because ‘it is available over so long a period, in so many countries, and so readily presented to the mind, that it may be well to begin with that as a standard subject for comparison, and afterwards look at other activities’.⁸⁴ These other activities included government organization, architecture, literature, mechanics, science and wealth. In an earlier work, *Methods and Aims in Archaeology* (1904), Petrie had also used Ancient Egypt and early Europe as subjects of comparison. He made the connection there because ‘[t]his subject is not only a fascinating

⁷⁶ Ibid., p. 87.

⁷⁷ Ibid., pp. 88–89. Gillham refers to Petrie’s idea of *voluntary* sterilization, but that is not an accurate conclusion of what Petrie had in mind (Gillham, p. 308).

⁷⁸ Petrie, *Janus*, pp. 100–103.

⁷⁹ It is important not to forget earlier works by others who introduced these ideas on a large scale, such as: Charles Darwin, 1859, *On the Origin of Species by Means of Natural Selection, or The Preservation of Favoured Races in the Struggle for Life* (London: J. Murray); and, Herbert Spencer, 1860, ‘The Social Organism’, *Westminster Review*, new series 17: 51–68.

⁸⁰ For example, Gillham felt it necessary to point out that Nazi eugenics were not to be blamed on Galton, but that he was simply extrapolating Darwin’s theory and that his ideas should be thought of in the context of the nineteenth century alone and not through the lens of the Holocaust (Gillham, pp. 356–357); Drower, *Flinders Petrie*, p. 303.

⁸¹ A further study of the reception of Petrie’s work, both in the press and outside of the eugenic community, would be useful. Unfortunately, since this is one of the first explorations of Petrie’s eugenic work, very little is available about its reception. It would be a valuable addition to the study of Petrie’s career.

⁸² Drower, *Flinders Petrie*, p. 303; after numerous attempts, I have been unable to locate a copy of this review.

⁸³ Petrie, *Revolutions*, p. 105.

⁸⁴ Ibid., p. 9.

one historically, but it includes a great variety of different kinds of evidence... and evidence which is of various degrees of certainty'. He continued, '[m]oreover this evidence has been more actively and continually attacked than any other class of discoveries of late years, and hence the most that can be argued against it is well known'.⁸⁵ After comparing pottery, paintings, and other objects whose dates were found either by style or by reading explicit royal names, he concluded that studying and comparing a variety of evidence from different areas and periods 'may reinforce the conclusions and render them more exact'.⁸⁶ Therefore, this methodology had precedent in his work, and he drew on that evidence and those conclusions for *Revolutions*.

As he had argued in *Janus*, Petrie argued in *Revolutions* that the more mentally capable individuals in a society, the more the civilization would advance. First, he argued from the physical evidence and the development of political and social ideas that '[w]hat man *does* is the essential in each civilization, how he advances in capacities, and what he bequeaths to future ages'.⁸⁷ Man's continuing legacy was the slow but steady transmission of his intelligence and ability through his heirs; his continuing legacy and responsibility was the advancement of civilization. Then, stating the importance of industrious men, Petrie made an argument for the selection of the most capable:

There is no advance without strife. Man must strive with Nature or with man, if he is not to fall back and degenerate. The harder a nation strives, the more capable it will be. This is not only the slow result of selection, but it is the immediate result of selection, it is the immediate result in each individual, produced by the attitude of his mind.⁸⁸

The operative words in this statement are 'capable, selection, individual'. It is these three points to which Petrie adhered to in his social theory. He had already made clear that slow, gradual selection of capable individuals was much more effective than brief, violent group uprisings, and in *Revolutions* he made it clear that it was only by the hard work of able men that civilization would continue.

In *Revolutions*, Petrie argued that without diversity and competition within societies, there would be no progression. In man's striving with Nature and with other men, the stronger would survive and be selected to continue. This was true in physical abilities, like war and battle, as well as in mental abilities, like art and science. Again he argued against economic, mental and physical equality, because with it, there would be no reason to achieve more. Finally, he claimed that in the not-too-distant future eugenics would be able to establish a new, capable civilization in the place of an old, unfit one. Eugenic practices would:

carefully segregate fine races and prohibit continued mixture, until they have a distinct type which will start a new civilization when transplanted. The future progress of man may depend as much on isolation to establish a type, as on fusion of types when established.⁸⁹

This statement was a strong argument for eugenic practices to begin as soon as possible so that the gradual selection process could benefit man in the near future, as opposed to at an unspecified distant time. The segregation of 'fine' races would be possible, as he had argued in *Janus*, through state-monitored marriages and reproduction, and state-monitored abstinence and sterilization. Although Petrie did not argue specifically for individual practices such as these in *Revolutions*, he built on the context and arguments that had been established in *Janus* and other eugenic works.

The social solutions by eugenic methods that Petrie presented in *Janus* and the evidence he used to support his arguments were very similar to what Galton had argued in *Hereditary Genius* and what

⁸⁵ W. M. Flinders Petrie, 1904, *Methods and Aims in Archaeology* (New York: Macmillan) pp. 141–142.

⁸⁶ *Ibid.*, p. 168.

⁸⁷ Petrie, *Revolutions*, p. 123.

⁸⁸ *Ibid.*, p. 125.

⁸⁹ *Ibid.*, p. 131.

Pearson had advocated in his work at the Galton Laboratory. Galton stated that only the traits that 'shall be most advantageous to the future inhabitants of the earth' should be selected.⁹⁰ This selection would bring about change over several generations, implementing the theory of gradualism. Galton had also proposed sterilization, state-regulated marriage and reproduction. Furthermore, Pearson and the Laboratory had drawn the same conclusions as Petrie, in that over time, 'the mean of the population for a given character might be deliberately moved in an evolutionary line of eugenic advance'.⁹¹ It is significant that they came to the same conclusion; however, without state support, the cooperation of scientists, and the understanding and consent of the population, nothing could be done. While Petrie's *expressed* purpose was to demonstrate the path down which civilization as a whole was developing, and in doing so he focused on the individual as the important component of a good society, his *underlying* purpose was to argue socially and historically for eugenic practices. Until Petrie, this discussion had been confined to biology. However, both biologists and archaeologists, represented by Galton, Pearson and the UCL Eugenic Lab at one end and Petrie at the other, agreed that it was the small, gradual changes caused by the controlled selection of favorable traits that would allow civilization to evolve in a eugenically favorable direction.

Conclusions

It is clear that Petrie's life and career consisted of much more than winters in Egypt and summers in England. His corpus of work is extensive and contains a wide range of subjects. The social commentary in his reports and his diaries can teach us much about the importance and influence of archaeology at this time, both within the discipline itself, as well as with regards to the usefulness of physical remains in sciences outside of archaeology. The particular mingling of Petrie's works in both archaeology and eugenics brings both sciences into interdisciplinary studies. Including this facet of Petrie's life demonstrates that there are holes left in the literature about him; it also begins to shed some light on other aspects of the history of archaeology. More importantly, whatever the outcome may have been, it reveals that Petrie was able to lend the authority of historical evidence to the eugenics movement. His historical and anthropological arguments allowed Galton to make his claims more authoritative by combining quantitative data with historical trends in civilization and heredity.

It was noted earlier on in this paper, that one historian characterized Petrie's involvement in the eugenics movement as 'unfortunate' and claimed that he was 'badly misled'.⁹² I would argue instead, that the omission of Petrie from the history and historiography of eugenics is unfortunate, and is perpetuated by those who are misled. In the history of eugenics, it is apparent that there are more than a few authors who believe that they should apologize for their subject's involvement in such a science. These apologies tend to inhibit in-depth work in the history of archaeology and of eugenics, as it is in the present case. We should not be afraid that our heroes' reputations would be tainted. Their influence should instead be embraced while respecting the outcomes of which they could not have known or expected.

Petrie's career was multifaceted and influential. While demonstrating Petrie's wide range of involvement in science at this time, I believe the evidence presented here also points to the larger issue of the polymathic tendencies of many men and women of science in the nineteenth and early-twentieth centuries. The time in which Petrie, Pearson, and Galton were practicing was on the cusp of the dilettante gentlemanly sciences of the nineteenth century and the static specialization of the mid-twentieth century. This situation allowed for people to be experts in one or two areas, while leaving room for interest and involvement in various others. Petrie is easily recognizable as a vital figure in the history of archaeology, but his work in eugenics has, until now, been mostly overlooked.

⁹⁰ Galton, *Hereditary Genius*, p. 1.

⁹¹ Kevles, p. 37.

⁹² 'Petrie', in *Excavating Egypt*, p. xv.