

FRANCIS GALTON AND WILLIAM BATESON ON CLASSICAL ATHENS: EUGENICS, GENETICS, AND THE STUDY OF ANCIENT HISTORY

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ABSTRACT

This article analyses the interpretations of Athenian history offered by Francis Galton and William Bateson. The first section discusses the much-cited assessment of the proliferation of eminent men in classical Athens offered by Galton in Hereditary Genius (1869); the less positive use of Greek history in Galton's 1905 paper 'Restrictions in Marriage'; and the response to Galton's eugenics among classicists, particularly in Alfred Zimmern's 1911 The Greek Commonwealth. The second section draws on previously unused archival material to explore the Mendelian history of Athens offered by Bateson in Australia in one of his 1914 Presidential Addresses to the British Association for the Advancement of Science. It shows how he both drew on and departed from advice he had received from classical scholars as he fashioned a response of sorts to the explanation of Athenian genius offered by Galton in Hereditary Genius. It ends by looking at how Bateson's analysis was received by an ancient historian present at the meeting, J.L. Myres. The article sheds light both on the intellectual and institutional contexts in Victorian and Edwardian Britain which made the intermeshing of Biology and Classics possible and on the continuing authority enjoyed by classical antiquity among scientists at this time.

KEYWORDS

Francis Galton, William Bateson, Alfred Zimmern, eugenics, Classical Athens, Pericles' citizenship law

The statistician Francis Galton (1822–1911), inventor of the word 'eugenics', and the biologist William Bateson (1861–1926), whose reading of Mendel led him to coin the word 'genetics', were both products of the intensive classical education typical of elite families in nineteenth-century Britain.¹ That education is reflected etymologically in the famous words they invented as well as in Bateson's specialist coinages ('allelomorph', 'heterozygote'). Yet neither man looked back on his education with full approval: Galton, who was originally taught Latin and

¹ For detailed biographies see Pearson 1914–1930 and Cock and Forsdyke 2022. For the impact of Mendel see Bowler 1989.

Greek by his sister at an unusually young age, recorded in his autobiography that he found ‘abhorrent’ the study of ‘grammar and the dry rudiments of Latin and Greek’, while Bateson, though a strong supporter of the maintenance of compulsory Greek at Cambridge, similarly lamented the domination of language over content in the various contributions he made to debates on the value of classical and scientific education.² Despite these criticisms, both Galton and Bateson were in some of their more popular writings willing to use classical examples, to pay tribute to the excellence of Greek culture, and even to use their scientific knowledge to try to explain it.

The goal of this article is to analyse the interpretations of Athenian history offered by Galton and Bateson. This analysis will shed light both on the intellectual and institutional contexts which made the inter-meshing of eugenics and genetics with Classics possible and on the continuing authority enjoyed by classical antiquity.³ The first section discusses the differing accounts of Athens Galton offered in his 1869 monograph *Hereditary Genius* and in a paper on ‘Restrictions in Marriage’ that he gave at the Sociological Society in 1905; it ends by sketching the response to Galton’s eugenics in one of the most famous early twentieth-century works of ancient history, Alfred Zimmern’s 1911 *The Greek Commonwealth*. The second section draws on previously unused archival material to explore the Mendelian history of Athens offered by Bateson in one of the Presidential Addresses he gave in Australia at the 1914 meeting of the British Association for the Advancement of Science (BAAS). It will show how he both drew on and departed from advice he had received from classical scholars as he fashioned a response of sorts to a question posed by Galton in the work to which we now turn. I will end by looking at how Bateson’s analysis was received by an ancient historian present at the meeting, J.L. Myres.

The paper as a whole will show amateur and professional scholars interacting in a range of institutional settings in a period of increasing specialisation. On the one hand, while Galton operated in various fields without any formal university ties, the generation of Bateson was marked by a stronger, more independent presence of Biology as a discipline

² Galton 1908: 20 (cf. 59 on the narrowness of Cambridge Classics); Bateson 1928: 425–48 (a collection of three papers, including the evidence he gave in 1920 to the government-appointed Committee on the position of Classics in British education and his review of that Committee’s Report). For Bateson’s defence of compulsory Greek, see Cock and Forsdyke 2022: 525–30.

³ Contrast the argument in Ward 2024 that classicists used biological metaphors as a way of drawing on the authority of science.

within British universities. On the other hand, at a time when the standing of Classics was challenged by new disciplines in the human and natural sciences, ancient historians such as Myres and Zimmern met that challenge by engaging with some of the new disciplines. It is against this broader intellectual context that the attempts to which we now turn to explain ancient history through science are to be understood.

I. Francis Galton, eugenics, and classical Athens

I.1 Illustrious Athenians in *Hereditary Genius*

Hereditary Genius was Galton's first detailed exposition of the researches into heredity that became his main intellectual interest following the publication of his cousin Charles Darwin's *Origin of the Species* in 1859 (prior to that he had received a sporadic medical education, gained a Pass degree in Mathematics at Cambridge after a nervous breakdown, and used the wealth he inherited on his father's death to fund travel in the Near East and southern Africa).⁴ The book was preceded by two articles in *Macmillan's Magazine* four years earlier in which Galton had floated his ideas about inherited excellence, but without any reference to the Greeks.⁵ The earlier sections of the book itself partly follow the pattern of the articles in offering statistical analysis of British families of high ability in particular areas (including the Cambridge Classical Tripos and north-country wrestling). But the range is wider in the lists of men distinguished in wider categories such as generalship, science, and poetry, and here some Greeks are included, among them six of the fifty-nine commanders, as well as six of the fifty-six poets, into whom Galton enquired.⁶ It is only, however, in the third last chapter, 'The comparative worth of different races', that the ancient Greeks rise to real prominence. Galton contrasts first the abilities of the 'Negro' and 'Anglo-Saxon' races, and then the calibre of the inhabitants of different parts of the British Isles, before concluding with a lament for 'the draggled, drudged, mean look' found in English towns and cities. He then shifts suddenly to the Greeks, 'the ablest race of whom history bears record' on account of the quantity of their 'still unsurpassed' masterpieces in relation to the population that

⁴ Galton 1869. A second edition appeared in 1892, but without any changes to the main text. For discussion see Challis 2013: 45–66; Butler 2015.

⁵ Galton 1865.

⁶ Galton 1869: 143 (including the Macedonian kings among the Greeks), 221. See also 187, 192 on scientists (Aristotle, Galen). Galton's method was to list those in each category into whom he had enquired and outline the family-histories of those with notable relations.

produced them.⁷ This initial verdict is offered with a much scantier statistical treatment than Galton used in studying recent social phenomena. It is a testament to the broader Victorian fascination with ancient Greek culture that, as Galton's biographer, the eugenicist-statistician Karl Pearson, noted, it was probably the most quoted section of the book.⁸

Galton next zooms in on the Greek city that produced the most masterpieces — Athens:

Of the various Greek sub-races, that of Attica was the ablest ... she built up a magnificent breed of human animals, which, in the space of one century — viz. between 530 and 430 BC — produced the following illustrious persons, fourteen in number:

Commanders: Themistocles (mother an alien), Miltiades, Aristides, Cimon (son of Miltiades), Pericles (son of Xanthippus, the victor at Mycale).

Literary and Scientific Men: Thucydides, Socrates, Xenophon, Plato.

Poets: Aeschylus, Sophocles, Euripides, Aristophanes.

Sculptor: Phidias.

Three of the commanders (Themistocles, Miltiades, Pericles) and all four poets had appeared in Galton's earlier lists. Earlier, only two of the poets (Aeschylus, Aristophanes) were among those highlighted as having really distinguished relations, though it was acknowledged that some of the others in both categories had gifted relations.⁹ Here, Galton tweaks his list by inserting three biographical parentheses that point to the question of inheritance, two of them (on Pericles and Cimon) suggesting connections surprisingly neglected in the earlier lists.

Both the choice of Athens and the list of eminent Athenians are indebted to traditional canons of taste. The five generals he named were

⁷ Galton 1869: 329–32.

⁸ Pearson 1914–1930: 2.108. Examples of its reception include Benjamin Kidd's well-known *Social Evolution* (1894: 272), where it supports the argument that human evolution is not primarily intellectual; Cooley 1897 (a detailed discussion of Galton's use of fame as a criterion); Hopkins 1899: 194 (accepting in moralizing vein Galton's stress on courtesans' responsibility); Shelton 1915: 111 (criticizing Galton partly on the grounds that 'there was no department of State eugenics' in classical Athens). For the Victorians and ancient Greece see Jenkyns 1980; Turner 1981.

⁹ See note 6 above. William Bedham Donne, the official censor for London theatre, wrote to Galton with further evidence of inherited talent among the Athenian dramatists (UCL Archives, GALTON-2-4-1-4-6, 30 March 1870).

all familiar from the ancient biographies by Plutarch and Cornelius Nepos (Plutarch covered all but Miltiades, Nepos all but Pericles). His chronological demarcation led to the omission of one earlier figure whose *Life* Plutarch wrote, the statesman-poet Solon, as well as various late-fifth or fourth century generals covered by Plutarch, Nepos, or both (Nicias, Alcibiades, Thrasybulus, Conon, Iphicrates, Chabrias, Timotheus, Phocion, Demosthenes). The demarcation itself owed much to the sense fostered by one of the writers on the list, the historian Thucydides, that Athens' greatness declined with the onset of the Peloponnesian War in 431 BCE. As for the philosophical and artistic figures, Galton brought together besides Thucydides the six most famous fifth-century Athenian authors, omitting only three of the canonical Attic orators (Antiphon, Andocides, Isocrates).¹⁰ Again his cut-off leads to the omission of some well-known figures, including the other canonical Attic orators (Aeschines, Isaeus, Hyperides, Lycurgus, Dinarchus, and, most famous of all, Demosthenes),¹¹ the comic playwright Menander (who was known at the time only through scattered quotations), and the sculptor Praxiteles.

Galton went on to attempt a correlation of the Athenian and other races. His method was based on the assumption that the distribution of human ability in different races follows a similar bell curve. Dividing the curve into sections covering grades A–G and X for ascending and a–g and x for descending quality, he compared the calibre of the individuals in each race who fell into the same grade. With the help of a figure for the population of Attica drawn from William Smith's *Dictionary of Classical Geography*,¹² this method yielded the result that the Athenians were two 'grades' above 'our race' and the British two above the 'African Negro'. As has often been noted, this judgement reflects the questionable criteria Galton used and the bias in the surviving historical record; the arbitrariness of the procedure is shown by the decision to grade Toussaint Louverture as an X in the 'negro race' (one in 1,000,000 frequency) and equivalent to an F among the British (one in 4,300).¹³ Himself aware that some readers would be sceptical (at least with regard to English inferiority), Galton asserted that evidence of 'the quick intelligence and high culture of the Athenian commonalty' could be found in the fact that 'literary works were recited and works of art exhibited' before them 'of a far more severe character than could possibly be appreciated by the

¹⁰ Galton twists chronology slightly by including Plato: the reference work he used for the population of Athens (note 12 below) places his birth in 429 or 428 BCE.

¹¹ Omitting the Syracuse-born Lysias.

¹² Smith 1863: 106.

¹³ Galton 1869: 327.

average of our race, the calibre of whose intellect is easily gauged by a glance at the contents of a railway book-stall.’¹⁴ Galton seems here to ground the contrast between Athens and England in the difference between an idealized image of ancient civic performance and the mechanization and individuation characteristic of modernity. This temporal contrast opens up at the same time the possibility of change for the better in the future — the ambition of Galton’s later eugenics (he coined the term in 1883).

Besides grading Athenians, Galton sought to account for their rise to greatness and their subsequent decline. He saw their rise as largely due to ‘a system of partly unconscious selection’: ‘Athens opened her arms to immigrants, but not indiscriminately, for her social life was such that none but very able men could take any pleasure in it; on the other hand, she offered attractions such as men of the highest ability and culture could find in no other city.’ The decay of ‘the Athenian breed’ after the start of the Peloponnesian War was, by contrast, the result of lax social morality, avoidance of marriage, and the fact that the most accomplished women were courtesans and so ‘infertile’, while ‘the mothers of the incoming population were of a heterogeneous class.’ The constancy of migration he in turn saw as a result of Athens’ coastal position.¹⁵

Galton’s narrative seems problematic on many counts. In his biography of Galton, Pearson, in many respects a keen follower of Galton, pointed to some of these problems. It consists of a series of impressionistic statements unsupported by evidence. It assumes that all male Athenian citizens could delight equally in the plays staged at Athenian festivals — but Pearson objects that that is a very small percentage (2–3%) of the total population of Attica: women and children, slaves, and resident aliens are ignored.¹⁶ In any case, the tragedies, according to Pearson, appealed to ‘primal passions’ that were stronger because the Greeks were closer to ‘the primitive savage’ — and the audience at the time may have preferred lewd comedies. While modern scholars would not phrase their objections in those terms, Pearson does make the case for a historicized understanding of the past as opposed to Galton’s absolutism: ‘who can tell,’ he asks, ‘whether Raphael or Phidias was the greater artist?’ He is also justified in accusing Galton of taking at second-hand the opinion of classical scholars — ‘men whose lives have been

¹⁴ Galton 1869: 330–1.

¹⁵ Galton 1869: 329, 331.

¹⁶ A similar point was made in a review in the *Pall Mall Gazette* on 18 February 1870 (Challis 2013: 56). Challis reports that Galton wrote to the editor the next day admitting that he should have made Athens 1.5 rather than 2 grades above the British; I have not been able to locate this letter.

devoted to the study of an isolated, if brilliant incident in the hundreds of thousands of years of human evolution.¹⁷ Besides the points raised by Pearson, one might note that Galton's account pays no attention to the various well-regarded later Athenians whose biographies were written by Plutarch or Nepos or to any of the non-Athenians such as Aristotle whose flourishing careers at Athens could have suggested non-biological explanations for Athens' high proportion of geniuses.¹⁸ Nor does it engage with any of the political explanations of Athens' cultural superiority offered by earlier historians.¹⁹ Galton focuses instead almost entirely on the opportunities for marriage in changing social conditions. The unquestioned priority he gives to those changes seems as naïve as his argument that the weakness of European culture in the Middle Ages was largely due to the celibacy enjoined by religious orders.²⁰

For all its sketchiness, a key point to emerge from Galton's account is that the Athenians are not models of racial purity. As already anticipated in the mention of Themistocles' 'alien' mother in the initial list, one reason for their greatness is interbreeding with the immigrants who were naturally drawn to Athens on account of its geographical position. And while interbreeding with low-quality immigrants is in turn an explanation for Athens' decline, there is no mention of formal measures to restrict marriage in Athens of the sort we will find him discussing later at the Sociological Society. One such measure was a citizenship law passed by Pericles in 451 BCE which limited Athenian citizenship to those with two Athenian parents. The date of this law was discovered only in 1891, with the publication of a papyrus of the Aristotelian *Constitution of the Athenians*, though the law itself was previously known from anecdotal sources. While *Hereditary Genius* was written before the date was known, even its earliest possible date within Pericles' ascendancy (normally thought to start around 460 BCE) would be too late in the time period on which Galton based his estimate of Athenian excellence (530–430 BCE) for the law to have any statistical impact. As it is, the failure to deal with restrictions is in keeping with Galton's acceptance of racial mixing elsewhere in his book, for instance in his praise of the good quality

¹⁷ Pearson 1914–1930: 2.107–9.

¹⁸ Galton elsewhere showed appreciation of Aristotle: see his 1863 review of a French edition of the *Meteorologica* (weather was another of his scholarly interests).

¹⁹ On which see Zabel 2016; Murray 2024: 12–166. There was, admittedly, also a trope that the perfection of Athens' cultural achievements was inexplicable: see e.g. Lecky's account in his widely-read *History of European Morals* (1869: 1.418), which stresses the 'scanty population of the Greek States'; the publication dates within 1869 are such that Galton could have read this work.

²⁰ Galton 1869: 343.

of political and religious refugees in the modern world. This toleration of some kinds of racial mixing became widely accepted within the eugenics movement.²¹

It is not that no classical Greek state could have offered itself as a eugenic model. The Spartans were notorious for intervention in child-rearing. In *Hereditary Genius*, however, Galton rejected as pointless any discussion of Spartan social arrangements on the grounds that ‘they are so alien and repulsive to modern feelings’.²² As we shall see, for all the respect he professed for Greece and for Athens in particular, a similar distancing can be detected in the speech he gave at the Sociological Society thirty-six years later.

I.2 Restrictions on marriage at Athens

The Sociological Society had been founded in 1903 by Victor Branford (1863–1930), largely to advance the reform programme (‘civics’) of his friend, the biologist and sociologist Patrick Geddes. Branford sought to add status to the new Society by inviting Galton. Galton in turn saw an opportunity to promote his own agenda. In 1904, he gave a talk to the Society on ‘Eugenics: its Definition, Scope and Aims’. He followed up the next year with the address on marriage restrictions with which this section will be concerned. At the same meeting, he also outlined a programme of eugenic enquiry for a new Research Fellowship he was funding. All these papers were published in the Society’s *Sociological Papers*, together with oral and written comments. At first, Galton’s papers were often seen as a progressive response to the social problems of industrial, urbanised Britain, anxieties about which had been increased by the lacklustre physique and performance of British troops in the Anglo-Boer war. Some favoured restrictions on procreation among the ‘unhealthy’ (‘negative’ eugenics), others encouragement of marriage between ‘healthy’ men and women (‘positive’ eugenics). There were, however, widespread doubts about the practicality of eugenic solutions, and these doubts explain why Galton’s attempt to stake a place for his agenda within Sociology proved a failure. Two years after Galton’s second talk, Branford directed the emerging discipline towards social evolutionism by ensuring the election of L.T. Hobhouse to the chair in Sociology at the London School of Economics and Political Science (the first such position in the discipline in Britain); a product of Oxford

²¹ Galton 1869: 346. Cf. e.g. Inge 1922: 262.

²² Galton 1869: 339.

Literae Humaniores, Hobhouse favoured a historical rather than biological approach to social problems. Galton for his part joined the new Eugenics Education Society, under whose aegis a collection of his eugenic essays was published in 1909.²³

Galton's role in debates on the future of Sociology in the 1900s resulted from his varied biological and statistical researches since the publication of *Hereditary Genius*. While he formulated many different ideas in this period, one key insight yielded by the statistical data he gathered from research into reproduction in sweet peas and in human families was the existence of two general principles that tended to balance each other out in the population as a whole: variation pushed children to the extremes while regression pulled them towards the mean. Moving away from Darwin, he began to argue that evolutionary progress was discontinuous — the occasional result of saltations and of non-regressive children reproducing their own qualities.²⁴ His arguments had some influence on other biologists looking for an alternative to strict Darwinism, among them William Bateson.

There is little sign that either the Athenians' crop of illustrious men or their legislative promotion of racial purity had much bearing on Galton's eugenics during this period. Already aired in the original edition of *Hereditary Genius*, his ambition to improve the quality of the human race was forcefully repeated in the preface to the 1892 reprint, but now without the ancient Greeks as a higher term: 'There is nothing either in the history of domestic animals or in that of evolution to make us doubt that a race of sane men may be formed, who shall be as much superior mentally and morally to the modern European, as the modern European is to the lowest of the Negro races.'²⁵ That omission was made good in a paper two years later where he discussed William Bateson's conception of variation: 'the Greek race of the classical times have [sic] surpassed in natural faculty all other races before or since, and some future race may be at least the equal of the Greek.'²⁶ While the identity of that future race

²³ See in general Renwick 2012: 98–169. For Galton's development, see Redvaldsen 2024: 9–64. For eugenics as a 'progressive policy' (Haddon in Galton 1905: 18) see Freeden 1979. For Hobhouse see Collini 1979, especially 201–2. For broader thematic and geographically-oriented essays on the history of eugenics, with further bibliography, see Bashford and Levine 2010.

²⁴ See Renwick 2012: 45–69; Radick 2023: 40–65; also more generally Hewitt 2024 on the reception of Darwinian evolution.

²⁵ Compare the correlation of 'English' and 'African Negro' in the passage cited above (text at note 13).

²⁶ Galton 1894: 372.

was uncertain, the Greeks, in Galton's broad-brush judgement, remained the supreme exponents of natural ability in the past.

Galton's Sociological Society address offered a more precise engagement with ancient history. His overarching argument was that human societies have regularly resorted to restrictions on marriage for social reasons. Supporting historical and anthropological evidence was offered in separate sections covering (to use the various section titles) 'monogamy', 'endogamy' ('the custom of marrying exclusively *within* one's own tribe or caste'), 'exogamy' (the opposite custom), 'the complicated marriage restrictions on Australian bushmen', 'taboo', 'restricted degrees', and 'celibacy'. Galton drew from this evidence from four sources: Alfred E. Huth's *The Marriage of Near Kin* (1875), J.G. Frazer's *The Golden Bough* (first published in 1890 and still expanding at the time of the lecture), Edvard Westermarck's *History of Human Marriage* (1894), and Edward Crawley's *The Mystic Rose* (1902). Cumulatively, the restrictions detailed in these works made the *a fortiori* case that future human societies would tolerate eugenic restrictions on marriage since they would produce a much greater societal benefit than restrictions based on religion or tradition.

Galton first brought in Greek history in discussing endogamy. He suggested that endogamic restrictions are found 'chiefly in long settled nations where there is wealth to bequeath and where neighbouring communities profess different creeds.' Noting, however, that this tendency was attended by considerable local variations, he added: 'It was penal for a Greek to marry a barbarian, for a Roman patrician to marry a plebeian, for a Hindu of one caste to marry one of another caste, and so forth.'²⁷ He then returned to Greece in his discussion of 'prohibited degrees'. After suggesting that 'the horror now felt so strongly' at incest 'did not exist in early times', he compared the brother-sister marriages found in the Ptolemaic dynasty in Egypt and in ancient Peruvian royalty. He continued: 'It would be tedious to follow out the laws enforced at various times and in the various states of Greece during the classical ages.' But he did at least specify that marriages between half-brothers and half-sisters were permitted in Athens and that marriages between uncles and nieces were even commended when prompted by family considerations. This historicizing argument allowed him to conceive that 'a non-eugenic marriage should hereafter excite no less loathing than that of a brother and sister would do now.'²⁸

²⁷ Galton 1905: 5.

²⁸ Galton 1905: 10–11.

Galton's lecture did not give Athenian history a privileged place. It is not just that he suggests that detailed engagement with that history would be tedious. His one explicit reference to Athenian law was to a custom (marriage between half-siblings) that he had no wish to revive, while the Greek prohibition on non-Greek marriage was aligned with Hindu caste restrictions (the lecture as a whole added many other customs trawled from the ethnographic literature). The marriage restriction Galton referenced is also vaguely described as a Greek rather than specifically an Athenian practice, and so is a poor fit for his own definition of endogamy: the Greeks were not normally seen as a tribe or caste, but rather as themselves formed from several tribes (Dorians, Ionians, Aeolians, Achaeans) and further divided into tribes within their smaller political units (Athens had four before Cleisthenes' reforms and ten afterwards) — the broad usage resulting from the fact that English 'tribe' covered two different Greek terms, *ethnos* and *phylê*.

To understand Galton's claim that it was penal for Greeks to marry barbarians, we need to look at the sources he names. From these, we can tell that he was drawing on an ill-informed chapter in Huth's *Marriage of Near Kin* which claimed, among other things, that 'the Greeks were essentially an endogamous race, as were most ancient civilizations surrounded by barbarians'; that Greek colonies were peopled by children of mixed marriages who were forced to emigrate; that 'Athenian law prohibited, under very severe penalties, the marriage of a citizen with a foreigner'; and that, owing to their foreign mothers, neither Themistocles nor Pericles was a real Athenian citizen.²⁹ Huth's discussion was no more a defence of endogamy than Galton's lecture: he assigned the two most famous political leaders of fifth-century Athens to non-Athenian mothers (he evidently confused Pericles' Athenian mother and Sicyonian great-grandmother, both named Agariste). Galton's argument that non-Greek marriages were penal was based specifically on the generalization about Greek colonies and the allusion to Athenian law — if one allows that he replaced Huth's 'foreigner' (i.e. 'non-Athenian') with 'barbarian'. For the claim about colonies, Huth offered no evidence; he probably had in mind stories about the offspring of parents of different social status rather than different races,³⁰ and compounded the error by confusion with the mixed marriages of Greek settlers in the colonies themselves (it was there, after all, that Greeks were in closest contact with non-Greeks). For the latter

²⁹ Huth 1875: 19–20.

³⁰ E.g. the alleged settlement of Taras in southern Italy from children born to the women of Sparta while their husbands were away at war; the fathers were said to have been either Spartans who had lost status (the so-called Partheniae) or slaves.

claim, Huth did offer a reference — the entry on marriage in William Smith's *Dictionary of Antiquities* (Galton, as we saw, used a work from the same stable for his population figures for Attica).³¹ What that entry cites is not the Periclean law of 451 BCE mentioned above, but a later and harsher law attested in the Demosthenic corpus (59.16) that was enacted at some point in or after 404/3 BCE. The difference between the laws is reflected in Galton's use of the word 'penal'. There were no penalties for marriage with a non-Athenian under the Periclean law: the disadvantage was that the children of such marriages could not be enrolled as citizens. Under the later law, by contrast, the marriages themselves were penalized.³² While Galton did glance at this one Athenian law as an example of a non-eugenic marriage restriction, at no point in his 1905 paper did he cite Athenian law in support of eugenics.³³

Galton, it has emerged, took somewhat different approaches to ancient history in *Hereditary Genius* and in the Sociological Society paper. In 1869, he stressed the Athenians' quality as an aim to which the British could aspire, but he did not point to any specific measures that they could imitate. In 1905, he did allude to Athenian legislation to support his *a fortiori* argument for eugenics, but he did not stress the quality of the Athenians themselves. To have done so would have undermined his argument, for it would have revealed that a race which did not practise eugenics consciously nonetheless produced so much individual excellence. There is a difference, too, in the texture of his arguments in the different works. The narrative in *Hereditary Genius* is constructed without any open engagement with historical scholarship except for a single citation of one of William Smith's popular dictionaries. The occasion and substance of the 1905 paper, by contrast, reflect the fact that Sociology and Anthropology were emerging in British universities as cognate disciplines rooted in some ways in the traditions of Classics. The paper itself was delivered before or sent in advance to a mixed group of professional sociologists, anthropologists, and biologists together with non-academics with an interest in social reform.³⁴ For all that, Alfred Huth's book, its main source on Greek marital practices, was a thirty-

³¹ Originally Smith 1842: 598 and unchanged in later editions.

³² Harrison 1968: 25–8.

³³ Ward 2024: 266 wrongly claims that Galton cited Athenian marriage law in xenophobic defence of endogamy; her argument implies too that he was alluding to the Periclean law.

³⁴ See Rood 2022: 37–47 on the links among these disciplines, with further bibliography. See too text at note 98 below for Galton's consultation of a classical scholar for a 1907 lecture.

year-old treatise written by a wealthy amateur scholar when he was twenty-five.

Before we turn to one response to Galton by an ancient historian, let us look at the immediate response in the Sociological Society. The spoken and written responses to Galton's paper were recorded in the Society's *Sociological Papers*. Present at the meeting was one of Galton's sources, Ernest Crawley, at this time a teacher at Abingdon School. Seemingly himself drawing on Galton's *Hereditary Genius*, Crawley commented that 'in spite of defects the ancient Greeks in their best period seem to show the results of an *unconscious* eugenic tradition' (my emphasis); that he was not using Biology to promote this classical heritage exclusively is shown by his further comment that he believed 'the same is true of the Japanese' — then in vogue owing to their military successes against Russia.³⁵ Among those who sent written comments, another of Galton's sources, Alfred Huth stated that 'the Spartans practised what Mr. Galton has christened "Eugenics".' He may have wanted to suggest by this brief comment that Spartan practices supported Galton's argument that a eugenic state policy was feasible even if those precise practices were not necessarily to be revived (in *Hereditary Genius*, we recall, Galton had disclaimed any appeals to Sparta). Huth did not turn to ancient history simply for validation, however, for in claiming that the human race had experienced 'a decided general improvement in looks and figure' he expressly excluded 'idealistic' Greek portraits — an assessment that counters the use of statues such as the Belvedere Apollo in racial taxonomies.³⁶ Another correspondent, the physician Max Nordau, a Hungarian-born Jew, criticized any eugenic use of 'white skin, clear eyes and fair hair' as markers of physical superiority, appealing (like Crawley) to the achievements of the Japanese and noting that favouring 'the northern type' meant excluding Italians, Spaniards, and Greeks — 'which would not be to the taste of these nations'. Nordau also made an implicit appeal to idealistic Greek statuary in arguing for the importance of nurture over nature: 'Marry Hercules with Juno, and Apollo with Venus, and put them in slums — their children will be stunted in growth, rickety and consumptive.'³⁷ While these different responses illustrate the variety of ways the classical paradigm could be exploited both for and against eugenic

³⁵ Galton 1905: 21.

³⁶ Galton 1905: 28–9. For Greek statues as emblems of white superiority see e.g. Challis 2010, esp. 98, 102–3; owing to a much-cited dictum of Benjamin West, the Apollo Belvedere was also used in positive though qualified comparisons with the indigenous inhabitants of North America and southern Africa (e.g. Tylor 1881: 59).

³⁷ Galton 1905: 31–2.

proposals, the precise details of Athenian law towards which Galton had loosely gestured played no part in the discussion.

1.3 Eugenics in Alfred Zimmern's *The Greek Commonwealth*

The standing of eugenics in the Edwardian period is seen in the famous 1911 monograph *The Greek Commonwealth* by Alfred Zimmern (1879–1957). Between 1903 and 1909, Zimmern had been a tutor in ancient history at Oxford. During that time he used new approaches in the Social Sciences to change the study of ancient history; he was himself active in the Sociological Society and in the teaching of Sociology at Oxford.³⁸ Zimmern left Oxford to pursue his interests in social reform, especially adult education. His first step, however, was to draw together his teaching of Greek history and his sociological studies in a book aimed to make its readers ‘think about the nature of the XXth century *polis*’.³⁹ It was an opportune intervention, as one reviewer noted, at a time ‘when the gods of the undergraduate are economics and sociology, when social service has become a cult and eugenics a rising constellation.’⁴⁰

Zimmern first referred to eugenics in a chapter on ‘Population’. His liberal politics are revealed in this chapter by his criticisms of the Periclean citizenship law (himself the son of immigrants, he had earlier campaigned against immigration controls in Britain).⁴¹ He began it, however, by declaring that he was interested not only in the quantity of the populations ancient Greek cities supported in a difficult Mediterranean environment but still more in their quality of life — the concern with quality being ‘an old and obvious doctrine which we are beginning to relearn from our eugenists’, though ‘the Greeks knew it long ago’. It was not that Zimmern was simply praising ancient precedent. He went on to condemn the ‘habitual ruthlessness towards the individual’ seen in the philosophers’ praise of Spartan eugenic practices and compared ‘the spirit of hardness, almost of callousness’ in the Greek city — ‘the home of the physically fit’ — with the spirit brooding over a ‘modern residential

³⁸ For Zimmern’s links with the Society see Rood 2022: 35.

³⁹ As he told his mentor Graham Wallas (Rood 2025: 107).

⁴⁰ Lord 1912.

⁴¹ I discuss in a forthcoming article the negative attitude to the law taken by ancient historians at this time.

University'.⁴² He was thinking there of Oxford, whose collegiate atmosphere haunts his reconstruction of the *polis*, glad though he was to have left it.⁴³

Zimmern turned to Galton himself in a long footnote in a chapter on 'Free Intercourse'. Presenting 'the Athenian community during the Periclean time' as 'the most successful example of social organization known to history', 'so arranged ("organized" is too deliberate a word) as to make the most and the best of the human material at its disposal', he cited Galton's assessment of the varying levels of genius of the Athenian, the modern British, and the 'African Negro', and his claim (cited above) that that assessment was confirmed by the works performed at Athens' dramatic festivals. Zimmern then added: 'This is true but the eugenic moral which Galton draws from it is not convincing ... Breed may explain some, but by no means all of the greatness of ancient Greece.' The main causes of that greatness he saw as 'social': 'We are apt to forget that we owe the Parthenon sculptures not merely to the genius of Phidias but also to the genius of the social system which knew how to make use of him. Similarly, we owe the Albert Memorial ... to the social and industrial system which presided over its erection.' He ended by lamenting the 'wastage' caused by 'our own bad management'.⁴⁴ Given that elsewhere in his book he critiqued the workings of European capitalism in Africa and South America,⁴⁵ it is striking that Zimmern does not interrupt his quotation to comment Galton's assessment of the 'African Negro'. While the failure to criticise Galton expressly on this point suggests his adherence to the political and cultural values he found in the Greek *polis*, the note as a whole was evidently included to support environmental rather than biological explanations of political and cultural phenomena.

Zimmern's various references to eugenics were all added to *The Greek Commonwealth* after he had written his first draft. He added them in response to particular criticisms by his mentor, Gilbert Murray, of the 'Population' chapter.⁴⁶ Together, they supported his broader ambition to

⁴² Zimmern 1911: 319, 326 n. 1, 327.

⁴³ See Rood 2026.

⁴⁴ Zimmern 1911: 362 n. 1, quoting Galton 1869: 330–1 (see text at note 14 above). Zimmern might first have encountered the passage in Kidd 1894 (see note 8 above), a book he donated to the Moberly Library at Winchester (*Wykehamist* 338, 27 July 1897, 337).

⁴⁵ See Rood 2025: 129.

⁴⁶ For the drafts see Bodleian Libraries, MS. Zimmern 127.115–56, 286; for Murray's objections, LSE Library, WALLAS/1/46.10 (Zimmern to Wallas, 30 August 1910); for the long footnotes, Bodleian Libraries, MS. Gilbert Murray 116.156 (Zimmern to Murray, 28 March [1910]).

use ancient Athens to critique modern Britain.⁴⁷ Galton would have approved of the aim but not necessarily the way Zimmern sought to realise it.

The new-found academic respectability of eugenic approaches to history can be traced after the publication of *The Greek Commonwealth* too. At Oxford, for instance, eugenics was the topic of an essay in the All Souls Fellowship examination in 1911, and the following year 'Ancient Eugenics' was announced as the title for the Arnold Ancient History Prize.⁴⁸ The winner of the prize, Allen G. Roper of Keble College, who had taken a Second in *Literae Humaniores* in 1910, did, like Galton, find eugenics practised in ancient Sparta, but suggested that it had not taken hold in Athens precisely because it was established in Athens' great enemy.⁴⁹ In addition, Galton's first researcher, Edgar Schuster, included a chapter on 'Ancient Eugenics' (largely devoted to the theoretical ideas of Plato and Aristotle) in a general introductory book on eugenics published in 1912,⁵⁰ while at the first International Eugenics Congress (held in London in 1912) a husband-and-wife team presented a paper that offered a racialized opposition between the darker Mediterranean natives and the fairer, taller peoples who descended from the north and revitalised the south; the husband, the Cambridge Natural Scientist W.C.D. Whetham, was involved in the Eugenics Society founded at Cambridge in 1911.⁵¹

By the outbreak of the First World War, then, the biological, statistical, and historical enquiries into eugenics set on foot by Francis Galton had been picked up in the way ancient historians thought about population in ancient Greece. This respectability no doubt facilitated in turn the responses to the enquiries soon to be launched by William Bateson as Biology took hold as a discipline within the academy.

⁴⁷ The eugenicist Dean of St Paul's (and former Oxford Classics don) W.R. Inge similarly lambasted the Albert Memorial (1921: 40).

⁴⁸ Canning Schiller, an Oxford philosopher who had been converted to eugenics by Plato's *Republic* and often gave a paper on 'Plato and Eugenics' at Oxford societies, reports that he had tried earlier to have Eugenics set as a topic (1926: vii, 128); its appearance may be due to J.L. Myres' return to Oxford as Wykeham Professor (see section II.2 below). The Oxford Union passed a pro-eugenics motion in November 1913 (Searle 1976: 13).

⁴⁹ Roper 1913: 31, cf. 33, 68.

⁵⁰ Schuster 1912: 25–37.

⁵¹ Whetham and Whetham 1912: 241. They added on 242 a Mendelian explanation of 'the apparent prepotency of the darker Mediterranean race'. For their sources see note 78 below.

II. William Bateson, genetics, and classical Athens

II.1 Bateson in Australia

In the summer of 1914, William Bateson, President-elect of the British Association for the Advancement of Science (BAAS), set sail from Liverpool on the *Ascanius* for the Association's annual meeting, which was to be held for the first time in Australia. He was one of over 300 scientists making the journey from different parts of the world for an event that would celebrate scientific achievement, foster a sense of the 'oneness' of the British empire,⁵² and promote the status of the federal Commonwealth of Australia, created in 1901, which had provided significant financial support for the meeting.⁵³ Bateson's task was to give Presidential Addresses in Melbourne and Sydney (the meeting itself was to include sessions in Perth, Adelaide, and Brisbane too) as well as university demonstrations. The addresses were at this time typically major public events which received extensive press coverage.⁵⁴ For Bateson, who was now, after an uncertain career in Cambridge, Director of the John Innes Institute, a new horticultural research centre in Merton (then part of Surrey), they offered an opportunity not just to promote science in general but also to advance the cause of his own branch, Mendelian genetics, in front of representatives of all thirteen Sections of Association.⁵⁵

Bateson had accepted the Presidency in the spring of the previous year.⁵⁶ Not long after, his thoughts turned to the question of race in ancient Greece and Rome. He began corresponding with a number of classical scholars and continued his enquiries until just before his departure for Australia. These enquiries bore fruit in a discussion of Athenian immigration and citizenship laws that he chose to include in the second of his Addresses. The discussion was framed as a test of whether 'Mendelian knowledge' could shed light on the problem posed by Francis

⁵² As anticipated in *The Age* (Melbourne), 22 January 1910. Newspaper articles will be cited from the cuttings in Bodleian Libraries, Dep. BAAS c. 423. For Australian coverage see also the online database <https://trove.nla.gov.au/>.

⁵³ For the imperial aspect of the BAAS's Dominion meetings, see Worboys 1981; for details of the Australia meeting, Howarth 1931: 133–46; for its imperialist ethnographic component, Russell 2021. The Association had met three times in Canada and once in South Africa.

⁵⁴ See e.g. the full-page report of Sir Oliver Lodge's address the previous year (*Times*, 11 September 1913, 11).

⁵⁵ Geneticists had an interest in three Sections, D (Zoology), K (Botany), and M (Agriculture); Bateson had been President of Section D in 1904 and Section M in 1911 and elected President of Section K in 1926 prior to his death.

⁵⁶ Dep. BAAS. c. 234.11 (Bateson to O.J.R. Hogarth, 20 March 1913).

Galton forty-five years earlier in *Hereditary Genius*: ‘the racial characteristics of the Athenian of the fifth century BC.’ While Bateson praised the way Galton had ‘vividly described’ the high quality of the Athenians at that time, his decision to revisit the question in the light of new understandings of heredity implied that he was not satisfied with Galton’s explanations for Athens’ rise and fall.⁵⁷ Bateson did not acknowledge any of the men and women whose help he had sought in the hope of finding a better answer. But the use he made of his earlier enquiries can be traced thanks to the contents of an envelope in his archives in Cambridge marked ‘Correspondence with classical scholars re Greek and Roman race’.⁵⁸ Comparison of the letters contained in that envelope and the Sydney speech shows not just the sources of Bateson’s knowledge of Athenian history but also his willingness to ignore the lessons the classicists had drawn from the facts with which they presented him.

As a product of the Natural Science tripos, Bateson was in some ways approaching ancient history as an outsider, albeit, as noted above, one who was sympathetic to classical education. Unlike Galton, however, Bateson had from birth been embedded in academic institutions (he was the son of the Master of the Cambridge college of which he was later a Fellow, St John’s).⁵⁹ A further advantage was that his brother-in-law William Heitland (1847–1935) was formerly Tutor in Classics, and still a Fellow, at his college. Not surprisingly, Heitland was the first scholar Bateson contacted; in response he received detailed notes on the Roman term *proletarius* and on the Athenian citizenship laws.⁶⁰ Bateson also contacted William Ridgeway, Disney Professor of Archaeology at Cambridge, who was one of the most prominent figures in the small world of Cambridge academia and, like Bateson, a strong supporter of compulsory Greek. Ridgeway obliged with an offprint of a recent article ‘Who were the Romans?’ and a summary of his views on the racial differences between patricians and plebeians at Rome.⁶¹ A supporter of female education,

⁵⁷ Bateson 1928: 310.

⁵⁸ Cambridge University Library, MS. Add.8634/H.58. The contents are not foliated; I will use the labels for each item used by Cock and Forsdyke in the catalogue available at <https://www.queensu.ca/academia/forsdyke/bateson9.htm> (henceforth Cock–Forsdyke; accessed December 2025).

⁵⁹ Cf. Radick 2023: 9: ‘Galton belonged to a scientific world run by cleric naturalists and gentleman amateurs. By contrast, Bateson ... belonged to the first generation of biology professionals.’

⁶⁰ Cock–Forsdyke G6d/1–5. Heitland later criticised Bateson’s political application of biology in his Herbert Spencer lecture (1922, 46–9, on Bateson 1912); cf. text at note 86 below.

⁶¹ Cock–Forsdyke G6d/11; Ridgeway 1907. The term Ridgeway uses is ‘monograph’ but the letter makes clear that he is referring to this article, not his 1901 *The Early Age*

Bateson also contacted two women, Adela Marion Adam, Fellow of Girton, and Melian Stawell, an Australian-born independent scholar who had formerly been a lecturer at Newnham (a college with which Bateson had strong associations through his sister Mary and through its Biology tutors).

Melian Stawell's role proved to be particularly important. She sent him several pages of notes summarising the conclusions of modern scholarship on race and population; for the latter she relied on a recent contribution by her Cambridge friend Robin Mayor (one of many men who maintained a scholarly profile while working at the Board of Education).⁶² She also sent ideas of her own on the Athenian character. In addition, she contacted two scholars on Bateson's behalf. One of these was Allen Leeper, who later had a career in the Foreign Office, but was then based in the British Museum. He was presumably known to Stawell because they both belonged to prominent Melbourne families (like Stawell, Leeper had first come to Britain to take an undergraduate degree in Classics, in his case at Oxford). Leeper offered his thoughts on the Greeks' racial history and on foreign marriages at Athens; he also sought advice from the Liverpool archaeologist T.E. Peet, author of a recent monograph on early Italy.⁶³

The other scholar Stawell contacted was Alfred Zimmern. By this time, Zimmern had joined the Board of Education in a new position to support the evening classes run by the Workers' Educational Association. Stawell may have met or contacted him via her friends who worked there;⁶⁴ alternatively she may have encountered Zimmern or one of his sisters through their work for female suffrage and adult education. Following the widespread press coverage of *The Greek Commonwealth* at the time of its publication, Zimmern was in any case an obvious person to consult. Whatever the original point of contact, Stawell sent Zimmern a letter and in due course forwarded his reply to Bateson; the reply shows that, besides discussing the problem in writing, they proposed to meet in person (which perhaps suggests that the contact did result from prior

of Greece, which does include a brief discussion of Roman origins (254–8). For Ridgeway see Beard 2005.

⁶² Cock–Forsdyke G6d/7. cf. Mayor 1905: 413–14, which offers a much lower slave population than Smith (note 12 above). Mayor was brother of Stawell's Newnham contemporary, the novelist Flora Mayor. Together with another Board of Education employee, F.S. Marvin, she and Robin Mayor had published re-tellings of the Homeric poems for children.

⁶³ Cock–Forsdyke G6d/8–10 (Leeper is the recipient of 8, listed as 'Stawell to British Museum'). For Leeper see the introduction to Hayton 2024.

⁶⁴ See n. 62 above.

acquaintance or mutual friends). Bateson himself then wrote to Zimmern twice as well as sending him a copy of his 1912 Herbert Spencer lecture at Oxford, 'Biological fact and the structure of society'.⁶⁵ Zimmern later recalled this exchange in a lecture he gave in June 1932 after his return to Oxford as Montague Burton Professor of International Relations. Speaking on the Greek *polis* to students starting the second half of the Oxford Classics course, he posed a question that, he suggested, had never been satisfactorily answered: 'How did it come about that civilization sprang into the richest blossom yet known in a certain portion of the Balkan Peninsula during a few generations out of the long ages of recorded history?' He recalled that William Bateson, 'then the foremost British authority on physical heredity', had written to him twenty years earlier seeking information which might support 'a biological explanation', but had to abandon the hypothesis 'since the facts did not bear it out'.

What use did Bateson make of his enquiries into ancient history? His first Presidential Address, 'Heredity', was delivered in Melbourne on 14 August 1914. As the local *Argus* reported in a special supplement the next day, it was attended by the best-known representatives from the University, medicine, the bar, letters, art, and music. After beginning with the boast that it was scientists who made the gathering in Australia possible, Bateson made a more divisive allusion to Charles Darwin (two of whose sons were recent Presidents of the BAAS): 'We read his scheme of Evolution as we would those of Lucretius or of Lamarck, delighting in their simplicity and their courage.' Lucretius was included not just for the alliteration but also to link ancient and modern science while demoting the non-Mendelians to the status of obsolete classics. Now that the study of heredity is focussed on cell division rather than blood, Bateson claimed, 'almost the last shred of that teleological fustian with which Victorian philosophy loved to clothe the theory of Evolution is destroyed.'⁶⁶

His second Presidential Address, delivered in Sydney six days later, was the forum Bateson chose to display the results of his classical researches. His topic now being the more specific 'Heredity in Man', he

⁶⁵ As can be inferred from Zimmern's letter, Cock-Forsdyke G6d/13, which was written on 31 May 1914 on paper filched from Cliveden, where he had been at a Round Table meeting; there are no letters from Bateson or Stawell in the Zimmern papers in Oxford. Zimmern's letter to Stawell (G6d/6), dated only 'Tuesday', was probably written on 7 April: he wrote of meeting Stawell the following Monday, when there would be no Evening Classes (13 April was the Easter Monday holiday: Zimmern then stayed with the Murrays in Norfolk from April 14–27 (MS. Gilbert Murray 555.67)), and he enclosed as written 'the other day' an offprint from the March issue of the *Round Table*. In both Cock-Forsdyke listings, Zimmern is wrongly listed as 'Zimmer'.

⁶⁶ Bateson 1928: 284.

turned to a topic he had briefly covered in Melbourne, the political implications of modern genetics. This issue had been trailed in London newspapers well before the event, with the conservative *Daily Express* opining on 21 June, just before Bateson left England, that ‘the question of heredity will be discussed in a manner which will prove rather startling, perhaps, to the “reformers” of 1914.’ In the event, Bateson rejected the criteria used by eugenicists bent on reducing the reproductive rate of ‘defectives’, embellishing as he did so his conclusion with a classical reference: ‘It is not the eugenicists who will give us what Plato has called divine releases from the common ways.’⁶⁷ He was alluding here to a passage from the *Phaedrus* (265a) which he had identified with help from Adela Marion Adam.⁶⁸ Writing on 23 May, and aware that Bateson was soon departing for Australia, Adam had explained that Plato separated in that dialogue a type of madness produced by human infirmity from a non-degenerative type of madness that was a ‘divine release from customary conventions’.⁶⁹ While Adam equated the two madresses with Nietzsche’s distinction between ‘Their’ (Animal) and ‘Superman’, Bateson, borrowing Adam’s phrase, assimilated the ‘divine release’ to Mendelian genetic mutation. The political spin promised by the *Daily Express* came in the elitist vein in which he hailed the contribution to human progress achieved by outstanding individuals whose genetic character was the result of variation.

It was via Mendelism that Bateson approached the historical question on which he had sought advice from classicists. Ignoring his correspondence with Ridgeway on Roman history, he began by recalling Francis Galton’s analysis of the prevalence of excellence in classical Athens, only to depart from Galton in asserting that ‘Mendelian knowledge’ rendered the question of racial purity all but insignificant. Galton had adopted a mathematical approach to the effect of ancestry, with each generation back making a geometrically smaller contribution to new generations. While Galton’s method still made the language of ‘purity’ pertinent, Bateson opined that ‘a race is pure if it breeds pure’: ‘Historically we may know that a race like our own was, as a matter of fact, of mixed origin. But a character may have been introduced by a single individual, though

⁶⁷ Bateson 1928: 305.

⁶⁸ Stawell also (and presumably earlier) sent Bateson a note suggesting a different passage on madness in the *Phaedrus* (244de) as the one he had in mind (Cock–Forsdyke G6d/7.1).

⁶⁹ Cock–Forsdyke G6d/12 (read ‘Adam’ for ‘Adams’).

subsequently it becomes common to the race.’ Bateson’s adoption of Mendelism marked an emphatic break with Galton.⁷⁰

Bateson used the insights of genetics to try to make sense of Galton’s statistical exaltation of Athens. What he attempted was a brief and tentative Mendelian history of Athens. It is worth quoting in full:

The origin of that constellation of human genius which then blazed out is as yet beyond all biological analysis, but I think we are not altogether without suspicion of the sequence of the biological events. If I visit a poultry breeder who has a fine stock of thoroughbred game fowls breeding true, and ten years later — that is to say ten fowl-generations later — I go again and find scarcely a recognisable game fowl on the place, I know exactly what has happened. One or two birds of some other or of no breed must have strayed in and their progeny been left undestroyed. Now in Athens we have many indications that up to the beginning of the fifth century so long as the phratries and gentes were maintained in their integrity there was rather close endogamy, a condition giving the best chance of producing a homogeneous population. There was no lack of material from which intelligence and artistic power might be derived. Sporadically these qualities existed throughout the ancient Greek world from the dawn of history, and, for example, the vase painters, the makers of the Tanagra figurines, and the gem cutters were presumably pursuing family crafts, much as are the actor families of England or the professorial families of Germany at the present day. How the intellectual strains should have acquired predominance we cannot tell, but in an in-breeding community homogeneity at least is not surprising. At the end of the sixth century came the ‘reforms’ of Cleisthenes (507 BC), which sanctioned foreign marriages and admitted to citizenship a number not only of resident aliens but also of manumitted slaves. As Aristotle says, Cleisthenes legislated with the deliberate purpose of breaking up the phratries and gentes, in order that the various sections of the population might be mixed up as much as possible, and the old tribal associations abolished. The ‘reform’ was probably a recognition and extension of a process already begun; but is it too much to suppose that we have here the effective beginning of a series of genetic changes which in a few generations so greatly altered the character of the people? Under Pericles the old law was restored (451 BC), but losses in the great wars led to further laxity in practice, and though at the end of the fifth century the strict rule was re-enacted

⁷⁰ See Cock and Forsdyke 2022: 117, 174 (and more broadly Chapter 3). Bateson did acknowledge that Galton’s system, ‘though erroneous in fundamental conception, still gives an approximately correct representation of several of the phenomena’ (1928: 336).

that a citizen must be of citizen birth on both sides, the population by that time may well have become largely mongrelised.

He concluded the discussion of Athens by insisting that he was not opposed to racial mixing *per se*: 'Everything turns on the nature of the ingredients brought in.' Whatever the uncertainties in the case of Athens, he drew the clear lesson that the evidence of biology trumps the 'faith' which 'encourages educationists and economists to hope so greatly in the ameliorating effects of the conditions of life' — though he did later make some allowance for conditions in acknowledging that the institution of slavery 'provided the opportunity' for the 'universality of cultivated discernment' at Athens (an echo of Galton's rosy view).⁷¹

That a biologist such as Bateson should resort to ancient history in a Presidential Address at a major gathering of scientists is testimony to the continuing cultural power of classical antiquity.⁷² It may be that the wider audience expected at such an event encouraged the historical excursion. If so, the decision to focus on Greece rather than Rome, despite Heitland's detailed notes and Ridgeway's offprint, was linked, no doubt, to the particular Edwardian admiration for 'the Greek spirit' fostered by Gilbert Murray among others.⁷³ Another spur was evidently the role Athens had played in the biological arguments of Francis Galton; as we have seen, Galton's rhapsody on Athens was probably the most quoted passage from his book.⁷⁴ The swift changes found at Athens were also more promising for Mendelian variation than the more gradual story of the Romans' rise to Mediterranean power by drawing on the strength of those they conquered. Whatever the reasons for Bateson's decision, what stands out in the discussion itself are his assumptions that the analogy with poultry breeding is useful and that its failure to yield reliable results thus far may be due to our inadequate knowledge of the past rather than to the analogy itself. These assumptions point to his confidence that Mendelism held the key to Galton's riddle.

Within his narrative, Bateson attached more weight to an old law which the Periclean citizenship law supposedly re-enacted than to the

⁷¹ Bateson 1928: 310–12, 313–14.

⁷² A revealing indication of this power in another domain is the fact that some of the scientists had sailed on the maiden voyage of the Aberdeen Line's *S.S. Euripides*, which joined a fleet servicing the Australia–England route that included ships named after Miltiades, Themistocles, and Demosthenes (Dep. BAAS. c. 233.165, 234.182).

⁷³ See Turner 1981: 244–63.

⁷⁴ See note 8 above.

Periclean law itself.⁷⁵ His mention of that law suggests that the homogeneity produced by the Athenians' initial practice of endogamy does have some explanatory significance.⁷⁶ His argument was that Mendelian variation creates the possibility of progress, and then some degree of racial stability is helpful in perpetuating for some time at least any useful genetic mutations. It was a message, as Roy MacLeod has suggested, congenial to those in his audience keen that the young Australian Commonwealth would make its own distinctive contribution to the fortunes of the British empire.⁷⁷

How does Bateson's Mendelian narrative compare with the information on Athenian history his classicist informants had offered? Allen Leeper had offered a long-term historical overview, suggesting that foreign marriages played little role in 'the evolution of the later Athenian type', the tendency being 'for the Greek people to revert gradually to the original dark, small type of the autochthonous Mediterranean in spite of Dorian, Macedonian, Gothic & Slav immigrations on a gigantic scale.' Leeper was here following the common racialized opposition of North and South found in some historical and eugenic accounts, though focusing only on physiognomy.⁷⁸ Bateson ignored these racial speculations, which did not touch on the problem raised by Galton of the causes of the distinctive cultural and political peak seen in fifth-century Athens.

Bateson similarly passed over a point made by Melian Stawell. Stawell distinguished between the Athenians' capacity to produce men of genius, which had dried up in the 300s BCE, and their characteristics, which had stayed the same for much longer (she was perhaps thinking of the famous description of Paul's visit to Athens in the New Testament).⁷⁹ Stawell's observation seems to push towards a political rather than a genetic explanation of Athens' great men.

⁷⁵ That there was a previous law is in fact unlikely: see Rhodes 1981: 332. Aristophanes *Birds* 1660–6 attests a Solonian law on the inheritance rights of illegitimate children which has sometimes been linked with the Periclean law (which is referenced at *Birds* 1649–53); it was, however, common for laws of all dates to be attributed to Solon.

⁷⁶ Contrast Bateson's claim earlier in the address that 'if population were homogeneous civilisation would stop' (1928: 308); there he has in mind differentiation of ability rather than race within a community.

⁷⁷ MacLeod 1994: 157.

⁷⁸ See Ridgeway 1901 (with Cook 2014); note 51 above.

⁷⁹ Acts 17:16–34. In 1913 Stawell had presented a paper at the International Congress of Medicine in London arguing the author of Acts (Luke) had read Virgil's *Aeneid* (Stawell 1914).

It was William Heitland who supplied Bateson with the broad outlines of his narrative: the Periclean law had restored the pre-Cleisthenic norm, but had been ‘laxly followed’ (compare Bateson’s ‘laxity’). Heitland’s general interpretation, however, was different from Bateson’s. He stressed in his notes the importance of the racial mixture that was found both in the colonies which produced a large portion of the great men of Greece and among the best men of Athens in her prime. Citing Zimmern’s *Greek Commonwealth*, he noted that Themistocles, the chief founder of the Athenian empire, was one of a number leading Athenians born to a mother who was an ‘Outsider’ mother (modelled on Dutch–Afrikaans *Uitlander*, a word made familiar by the Anglo-Boer war, this usage too was borrowed from Zimmern).⁸⁰ He followed Zimmern again, though without mentioning him, in seeing the Periclean law as ‘a religious reaction from the old family point of view’.⁸¹ Beyond the question of heredity, moreover, Heitland highlighted the many outside influences at Athens during the city’s intellectual peak. Though, as we have seen, he was far from celebrating racial purity, Bateson selected from Heitland’s notes the simpler story about marriage customs that suited his Mendelian hypothesis.

A further sign of Bateson’s independence is seen in the way he dealt with Zimmern’s advice. Even though both his brother-in-law Heitland and his helper Stawell had drawn on Zimmern’s work in their notes and he had at his disposal two letters from Zimmern himself, Bateson’s reading of Athens is implicitly a critique of Zimmern’s argument in *The Greek Commonwealth* that social organisation was more important than breeding. In his letter to Stawell, Zimmern had written that he still believed in the interpretation of the relative weight of nature and nurture he had offered in his book:

I don’t think there is anything in the suggestion that the toleration of foreign elements may have modified the Athenian character. Foreign marriages went on till 446,⁸² when they were prohibited, but they can

⁸⁰ Themistocles: Zimmern 1911: 332–3; Zimmern himself cites Eduard Meyer for the point. For ‘Outlanders’ see Rood 2025: 114.

⁸¹ Stawell was surprised by this interpretation (G6d/8, 9 May 1914): ‘I can’t believe that of Pericles or of his time. I think it was part of his scheme for keeping Athens a small select “school of Hellas” to boss the rest!’ — further evidence of the law’s hostile reception (see text at note 41 above, and Stawell 1908 for her critical view of Periclean imperialism).

⁸² A mistake for 451, or for 445 if Zimmern was thinking of the story at Plutarch, *Pericles* 37.4 that the Periclean law was enforced only after an Egyptian gift of grain to Athenian citizens.

never have been numerous. If Professor Bateson thinks the change may have come about through hereditary, as opposed to environmental, causes, these would have operated in the generation after 446, rather than before, but I do not think there is much in the idea. I still believe what I wrote in p. 362 of my book, that Athens owed more to environment than to heredity, and I am constantly finding instances as I go about the country, which tend to confirm Mr Holmes' dictum, there quoted. I believe we have no idea at all of the vast amount of human waste that is going on. Else why can a good school, or even a good teacher, make such a prodigious change in growing boys and girls?

Zimmern here alludes to the long footnote in which he had dismissed Galton's explanation of Athenian greatness. He had ended that note by wielding against Galton the argument of Edmond Holmes' recent *What Is, and What Might Be*. Holmes had read *Literae Humaniores* at Oxford and then entered the Board of Education and risen to become Chief Inspector of Elementary Schools. In his book, he had promoted a doctrine of self-realisation that combined Buddhism and Hegelianism. At the time he wrote to Stawell, Zimmern was himself an inspector of adult evening classes. He was also revising *The Greek Commonwealth* for a new edition.⁸³ Perhaps prompted by this exchange, he expanded the long footnote on Galton to state that 'two years' experience in the same service as Mr Holmes has tended to confirm my belief in his dictum' (the same phrase he uses in his letter to Stawell).⁸⁴ That Zimmern was Bateson's target is suggested by the fact that Bateson alluded to *What Is, and What Might Be* in his Sydney lecture, dismissing it as 'charming though pathetic' and critiquing its confidence in nurture over nature as well as its biological parallels.⁸⁵ Zimmern, it seems, was misremembering in his lecture in 1932 when he claimed that Bateson had yielded to the classicists' greater grasp on the facts.

Bateson's antagonism to Zimmern's position was rooted in politics as well as biology. In his reply to Bateson himself, Zimmern had tentatively confirmed some of Bateson's surmises on Athenian marriage: 'the Athenians did not follow any prescription of affinity in their marriages'; 'they became much more exogamous at the end of the 6th century'; and 'marriage between Athenians and foreigners ... can never have been at all frequent.' But he had also cautiously disputed the application Bateson's Herbert Spencer lecture made of 'the polymorphism of man' (that is,

⁸³ In a letter to his mother written in March 1914 (MS. Zimmern 9.275), Zimmern anticipates revising his book while staying with the Murrays in April (see note 65).

⁸⁴ Zimmern 1911: 361 n. 2.

⁸⁵ Bateson 1928: 314.

variations in innate abilities) to ‘the organization of government’ (‘Australia must be a very interesting field of observation for these problems’, he added, evidently with an eye to Bateson’s coming journey). He concluded: ‘I am inclined to think that we in the West have attached excessive importance to the political as opposed to other spheres of human activity. There is surely no reason why a society in which the administration and legislation are in the hands of what you call *minuti homines* should be second rate in all its manifestations.’ Zimmern was here rejecting the hierarchical model of society advanced by Bateson’s lecture, according to which the ‘stratification’ of ‘classes permanently graded’ tends to recur after each disturbance, ‘with the ladder of lords rising from the *minuti homines* below to the king on his throne.’⁸⁶ By rejecting in turn Zimmern’s advice on ancient history, Bateson asserted the importance of biologically dictated hierarchies for the social order.

II.2 J.L. Myres at the Eugenics Education Society

Bateson’s Presidential Addresses were overshadowed in Britain by the outbreak of war. They did nonetheless receive extensive and largely uncritical coverage in the Australian press, with some papers reproducing the speech almost in full or picking out the Athenian section in their sub-headings.⁸⁷ There was a less positive response from some of the science delegates, though they were more concerned with the hostility Bateson had shown to Darwinism or with his downplaying of environmental explanations.⁸⁸ There was, however, one delegate who was in a good position to assess the historical argument: J.L. Myres, the Wykeham Professor of Ancient History at Oxford.

What did Myres make of the speech? Myres was committed to scientific approaches to ancient history. He was present at the meeting as one of the Secretaries of the Anthropology section; he had been that section’s President in 1909 and was later President of the Geography

⁸⁶ Bateson 1928: 354; ‘graded’ evokes Galton’s terminology. This is not the time to discuss how Zimmern’s letter fits into his intellectual biography: it is enough to note that he was distancing himself somewhat from the political emphasis of his book and that at this time he was thinking through the separation of (political) state from (cultural) nationality. For Bateson’s occasional cautious pronouncements on eugenics see Cock and Forsdyke 2022: 357–74; Searle 1976: 12 notes that Bateson was cited by both supporters and opponents of eugenics.

⁸⁷ E.g. *Sydney Daily Telegraph* and *Sydney Morning Herald*, 21 August 1914 (with sub-headings ‘The problem of Athens’ and ‘The decline of Greece’).

⁸⁸ Boney 1998: 328 (drawing on the diary of F.O. Bower); Rendle 1915: 27–8 (reporting a debate of the Biology and Zoology sections on the origin of species).

section. His historical geography had a strong biological dimension: it was concerned with different racial types and with the ways in which humans have adapted to natural environments.⁸⁹ Myres' approach to the survival of ancient populations led to an interest in eugenics, and before leaving for Australia he had discussed giving papers at local branches of the Eugenics Education Society.⁹⁰ (Typical of the age is that he also took with him letters of introduction from the founder of the Workers' Education Association, Albert Mansbridge.⁹¹) Given this background, it is no surprise that in later years Myres commended Bateson's lecture to correspondents interested in biological approaches to ancient history.⁹²

Myres himself developed Bateson's argument in a paper on the rise and fall of population in the ancient world which he gave at the Eugenics Education Society soon after his return from Australia.⁹³ He suggested there that in the liberal regime of late sixth-century Athens the institution of slavery acted as a 'recruiting agency' for good citizens: of the slaves imported from the margins of the Greek world, only the 'most adaptable and efficient under Greek conditions of life' would earn their freedom and through that the possibility of enrolment as citizens. He contrasted this regime with 'the tragic Athenian experiment of an Imperial Democracy living ... on administrative pay', which had proved 'a disastrous failure'.⁹⁴ That comment has to be read in light of the link often drawn by historians between the Periclean citizenship law and the introduction of state-pay for jury service. The unsentimental Myres was offering a reading of Athens' openness to outsiders similar to the line taken by the classicists Bateson had consulted, but giving emancipated slaves a larger share in the picture, with an admiration for efficiency characteristic of the age and of Myres himself.⁹⁵ Though he did not cite the Presidential Address, this

⁸⁹ E.g. Myres 1915: 36–8 (with some relativizing of historical arguments in relation to external events).

⁹⁰ Bodleian Libraries, MS. Myres 70.118, 121.

⁹¹ MS. Myres 70.127–32. Compare the conjunction of 'social service' and eugenics in the review of Zimmern cited at note 40 above.

⁹² MS. Myres 119.41 (Myres to C.H. Russell, 19 September 1919, responding to a query on Mendelism with a recommendation of the 'very interesting' way in which Bateson had illustrated 'the whole eugenic question'); Murphy 1943: 133 (reporting Myres' recommendation in the 1930s for research into a paper on racial interbreeding).

⁹³ For the date of Myres' paper, see MS. Myres 119.43–4. Along with Zimmern 1911, this paper was recommended as the best discussion of Greek depopulation by W.R. Inge (Bodleian Libraries, MS. Eng. lett. c.300.47: letter to Sir James Marchant, 3 April 1917; I am indebted to Martin Hewitt for this reference).

⁹⁴ Myres 1953: 194–5.

⁹⁵ E.g. Myres 1953: 111, 131, 179. For the general Edwardian concern for efficiency, see Searle 1971.

reading strengthens Bateson's presentation of manumission as a further boost to Athens' stock, alongside Cleisthenes' breaking up of 'the old tribal associations'.⁹⁶ That Bateson's Addresses had been published in *Nature* within a week of their delivery would have brought the comparison home to those who paid attention.⁹⁷

* * *

This article has studied two readings of classical Athenian history by leading biologists in the second half of the nineteenth and the early twentieth century. What picture has emerged from these two case-studies? The exchanges we have seen among professional and independent scholars alike have shown some of the fluidity of disciplinary fields and scholarly identities amidst the slow specialisation of academic life in Britain. Seemingly at odds with these developments, we have seen the transcendent cultural authority of classical Greece affirmed in Galton and Bateson's admiration for its culture. For both men, discussion of Periclean Athens was a way of encouraging a broader interest in questions of biology. Other classical allusions crop up in some of Galton and Bateson's other non-specialist writings. In his 1907 Herbert Spencer lecture in Oxford, for instance, Galton illustrated the possibility for sudden changes in public opinion from attitudes to athletic nudity in Greece (as attested in passages in Thucydides and Plato to which W.R. Inge alerted him) and attitudes to beards in his own lifetime.⁹⁸ Chosen to give the same lecture five years later, William Bateson commented that the comparison of the community to an organism 'is as old as Menenius Agrippa, or at least as Plutarch' — a comment that reveals at the same time that he had forgotten or was unfamiliar with the comparison's occurrence in the second book of Livy, a century before Plutarch.⁹⁹ Yet for both men such classical citations were more than mere attempts to boost their authority. Their willingness to defy due scientific caution in offering, however tentatively, explanations of Athenian history was an assertion of the claims of statistical method and of the emerging field of genetics within the discipline of Biology — and in Bateson's case it was done in defiance of the many classical scholars whose opinions had been gathered

⁹⁶ Bateson 1928: 311.

⁹⁷ *Nature* 93 (1914), 635–42, 674–81 (issues of 20 and 27 August).

⁹⁸ Galton 1907: 26–7; UCL Archives, GALTON-3-3-9-3.2-3 (undated: the content and letterhead show that it was prior to the lecture).

⁹⁹ Bateson 1928: 348.

on his behalf and in support of a Mendelian reading that staked a claim to surpass strict Darwinian models of evolution and Galton's attempts at historical explanation.

With Zimmern and Myres, conversely, we see classical scholars of unusually wide-ranging intellectual interests taking an interest in the possible contribution of biology to understanding of the ancient world. For Myres, this interest was part of a serious, lifelong engagement with a wide range of scientific fields through which he hoped to gain greater mastery of the way humans over time had responded to their biological needs and their physical environments. Zimmern, by contrast, was more focused on how historical enquiry into the past could shed light on social and political problems in the present: hence his decision to abandon his academic career in Classics, only to re-emerge some years later in a new discipline, International Politics, where he could discuss current problems directly.¹⁰⁰ Both men (and Myres in particular) achieved mastery in varied fields in a way that would be all but impossible for later generations. For all the interest Myres and Zimmern took in biological approaches, then, it is hard not to see Bateson's investigation of Greek history at a major imperial science congress in Sydney within three weeks of the start of war in Europe as one of the last expressions of the power of a classical tradition that would soon be overshadowed by the increasingly autonomous social and natural sciences.¹⁰¹

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¹⁰⁰ Zimmern was from 1919 to 1921 the inaugural Woodrow Wilson Professor of International Politics at Aberystwyth; subsequently he worked for the League of Nations and became the inaugural Montague Burton Professor of International Relations at Oxford.

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BIBLIOGRAPHY

- Bashford, A., and P. Levine (eds) (2010) *The Oxford Handbook of the History of Eugenics* (Oxford: Oxford University Press).
- Bateson, B. (1928) *William Bateson, F.R.S., Naturalist: His Essays & Addresses, Together with a Short Account of his Life* (Cambridge: Cambridge University Press).
- Beard, M. (2005) “While RIDGEWAY lives, Research can ne’er be dull”, in C.A. Stray (ed.), *The Owl of Minerva: The Cambridge Praelections of 1906* (Cambridge: Cambridge Philological Society), 111–41.
- Boney, A.D. (1998) ‘The summer of 1914: diary of a botanist’, *Notes and Records of the Royal Society of London* 52: 323–38.
- Bowler, P.J. (1989) *The Mendelian Revolution: The Emergence of Hereditarian Concepts in Modern Science and Society* (London: Athlone Press).
- Butler, S. (2015) ‘Nature versus nurture: population decline and lessons from the ancient world’, in H. Stead and E. Hall (eds), *Greek and Roman Classics in the British Struggle for Social Reform* (London: Bloomsbury), 165–82.
- Challis, D. (2010) “‘The ablest race’: the ancient Greeks in Victorian racial theory”, in M. Bradley (ed.), *Classics and Imperialism in the British Empire* (Oxford: Oxford University Press), 94–120.
- Challis, D. (2013) *The Archaeology of Race: The Eugenic Ideas of Francis Galton and Flinders Petrie* (London: Bloomsbury).
- Cock, A.G., and D.R. Forsdyke (2022) *Treasure Your Exceptions: The Science and Life of William Bateson*, 2nd edition (Cham: Springer).
- Collini, S. (1979) *Liberalism and Sociology: L.T. Hobhouse and Political Argument in England 1880–1914* (Cambridge: Cambridge University Press).
- Cook, S.J. (2014) ‘Squaring the shield: William Ridgeway’s two models of early Greece’, *History of European Ideas* 40.5: 693–713.
- Cooley, C.H. (1897) ‘Genius, fame and the comparison of races’, *Annals of the American Academy of Political and Social Science* 9: 1–42.
- Freeden, M. (1979) ‘Eugenics and progressive thought: a study in ideological affinity’, *Historical Journal* 22: 645–71.
- Galton, F. (1863) ‘Aristotle’s meteorology’, *Reader* 1: 289–90.
- Galton, F. (1865) ‘Hereditary talent and character’, *Macmillan’s Magazine* 12: 157–66, 318–27.
- Galton, F. (1869) *Hereditary Genius: An Inquiry into its Laws and Consequences* (London: Macmillan). 2nd edition 1892.
- Galton, F. (1894) ‘Discontinuity in evolution’, *Mind* 3.11: 362–72.
- Galton, F. (1905) ‘Restrictions in marriage’, *Sociological Review* 2: 1–13, with discussion and reply on 18–49.
- Galton, F. (1907) *Probability, the Foundation of Eugenics* (Oxford: Clarendon Press).

- Galton, F. (1908) *Memories of My Life* (London: Methuen).
- Galton, F. (1909) *Essays on Eugenics* (London: Eugenics Education Society).
- Harrison, A.R.W. (1968) *The Law of Athens: The Family and Property* (Oxford: Clarendon Press).
- Hayton, D.W. (ed.) (2024) *Allen Leeper's Letters Home, 1908–1912: An Irish-Australian at Edwardian Oxford* (Cambridge: Cambridge University Press).
- Heitland, W. (1922) *The Roman Fate* (Cambridge: Cambridge University Press).
- Hewitt, M. (2024) *The Reception of Darwinian Evolution in Britain, 1859–1909* (Oxford: Oxford University Press).
- Hopkins, E. (1899) *The Power of Womanhood* (New York: E.P. Dutton).
- Howarth, O.J.R. (1931) *The British Association for the Advancement of Science: A Retrospect 1831–1921* (London: British Association).
- Huth, A.E. (1875) *The Marriage of Near Kin Considered with Respect to the Laws of Nations, the Results of Experience, and the Teachings of Biology* (London: J. and A. Churchill).
- Inge, W.R. (1921) 'Religion', in R.W. Livingstone (ed.), *The Legacy of Greece* (Oxford: Clarendon Press), 25–56.
- Inge, W.R. (1922) *Outspoken Essays (Second Series)* (London: Longmans, Green).
- Jenkyns, R. (1980) *The Victorians and Ancient Greece* (Cambridge MA: Harvard University Press).
- Kidd, B. (1894) *Social Evolution* (London: Macmillan).
- Lecky, W.E.H. (1869) *History of European Morals from Augustus to Charlemagne*, 2 vols (London: Longmans, Green).
- Lord, L.E. (1912) Review of Zimmern 1911, *Classical Journal* 8: 124.
- MacLeod, R.M. (1994) 'Embryology and empire: the Balfour students and the quest for intermediate forms in the laboratory of the Pacific', in P.F. Rehbock and R.M. MacLeod (eds), *Darwin's Laboratory: Evolutionary Theory and Natural History in the Pacific* (Honolulu: University of Hawaii Press), 140–65.
- Mayor, R.J.G. (1905) 'Population', in L. Whibley (ed.), *A Companion to Greek Studies* (Cambridge: Cambridge University Press), 412–16.
- Murphy, J. (1943) *Lamps of Anthropology* (Manchester: Manchester University Press).
- Murray, O. (2024) *The Muse of History: The Ancient Greeks from the Enlightenment to the Present* (London: Allen Lane).
- Myres, J.L. (1915) 'Unity in prehistoric times', in F.S. Marvin (ed.), *The Unity of Western Civilisation* (London: Oxford University Press), 35–68.
- Myres, J.L. (1953) *Geographical History in Greek Lands* (Oxford: Clarendon Press).
- Pearson, K. (1914–1930) *The Life, Letters and Labours of Francis Galton*, 4 vols in 3 (Cambridge: Cambridge University Press).
- Peet, T.E. (1909) *The Stone and Bronze Ages in Italy and Sicily* (Oxford: Clarendon Press).

- Radick, G. (2023) *Disputed Inheritance: The Battle over Mendel and the Future of Biology* (Chicago: University of Chicago Press).
- Redvaldsen, D. (2024) *A History of British Eugenics since 1865: From Francis Galton to Designer Babies* (Cham: Springer).
- Rendle, A.B. (1915) 'The British Association in Australia', *Journal of Botany* 53: 23–34.
- Renwick, C. (2012) *British Sociology's Lost Biological Roots: A History of Futures Past* (Basingstoke: Palgrave Macmillan).
- Rhodes, P.J. (1981) *A Commentary on the Aristotelian Athenaion Politeia* (Oxford: Oxford University Press).
- Ridgeway, W. (1901) *The Early Age of Greece*, vol. 1 (Cambridge: Cambridge University Press).
- Ridgeway, W. (1907) 'Who were the Romans?', *Proceedings of the British Academy* 3: 17–60.
- Rood, T. (2022) 'A.E. Zimmern, Thucydides, and the emergence of modern disciplines', in I. Matijašić and L. Iori (eds), *Thucydides in the Age of Extremes and Beyond: Academia and Politics (History of Classical Scholarship Supplementary Volume 5)*, 25–66.
- Rood, T. (2025) 'Zimmern, Athens, and the British empire: ancient and modern imperialism in *The Greek Commonwealth*', *Modern Intellectual History* 22: 104–33.
- Rood, T. (2026) 'The Greek palimpsest: Alfred Zimmern at the British School at Athens, 1909–10', *Annual of the British School at Athens* 121.
- Roper, A.G. (1913) *Ancient Eugenics* (Oxford: Blackwell).
- Russell, L. (ed.) (2021) *A 'Young and Vigorous Outpost of Empire': The 1914 British Association for the Advancement of Science Congress in Australia* (Clayton, Victoria: Monash University Publishing).
- Schiller, F.C.S. (1926) *Eugenics and Politics* (London, Constable).
- Schuster E. (1912) *Eugenics* (London: Collins Clear-Type Press).
- Searle, G.R. (1971) *The Quest for National Efficiency: A Study in British Politics and Political Thought, 1899–1914* (Berkeley: University of California Press).
- Searle, G.R. (1976) *Eugenics and Politics in Britain, 1900–1914* (Leiden: Noordhoff International Publishing).
- Shelton, H.S. (1915) 'The political aspect of eugenics', *Contemporary Review* 107: 105–12.
- Smith, W. (1842) *A Dictionary of Greek and Roman Antiquities* (London: Taylor and Walton).
- Smith, W. (1863) *A Classical Dictionary of Biography, Mythology, and Geography* (London: John Murray).
- Stawell, F.M. (1908) 'Pericles and Cleon in Thucydides', *Classical Quarterly* 2: 41–6.
- Stawell, F.M. (1914) 'St Luke and Virgil', *XVIIth International Congress of Medicine* (London: Henry Frowde and Hodder & Stoughton), 11–18.
- Turner, F.M. (1981) *The Greek Heritage in Victorian Britain* (New Haven: Yale University Press).

- Tylor, E.B. (1881) *Anthropology: An Introduction to the Study of Man and Civilization* (London: Macmillan).
- Ward, M. (2024) 'Queering kinship against genealogy: crip ancestorship, chosen families, alternative intimacies and other ways of refusing the classical tradition', in E. Haselswerdt, S.H. Lindheim, and K. Ormand (eds), *The Routledge Handbook of Classics and Queer Theory* (London: Routledge), 257–72.
- Whetham, W.C.D., and C.D. Whetham (1912) 'The influence of race on history', in *Problems in Eugenics: Papers Communicated to the First International Eugenics Congress* (London: Eugenics Education Society), 237–46.
- Worboys, M. (1981) 'The British Association and Empire: Science and Social Imperialism, 1880–1940', in R. MacLeod and P. Collins (eds), *The Parliament of Science: The British Association for the Advancement of Science 1831–1981* (Northwood: Science Reviews), 170–87.
- Zabel, C. (2016) *Polis und Politesse. Der Diskurs über das antike Athen in England und Frankreich, 1630–1760* (Berlin and Boston: de Gruyter).
- Zimmern, A.E. (1911) *The Greek Commonwealth: Politics and Economics in Fifth-Century Athens* (Oxford: Oxford University Press). 2nd edition 1915.