

2.0 Man after the *Origin*: Debates and Institutions in London and Beyond, 1860-1865

2.1 Introduction

When Darwin published *The Origin of Species* in November 1859 he made no explicit mention of man, except for a promising sentence: “Light will be thrown on the origin of man and his history”.¹ Nevertheless, it was easy to infer from a general reading of the work that humans were related to progenitors similar to apes.² Several authors have highlighted the importance of the subject of the origin of man that emerged from that time, whose reflection can be seen in the reviews of Darwin’s work,³ the public interest generated by the contacts and experiences of travellers with Indian tribes and primates⁴ or by the human “attractions” presented as spectacles,⁵ and the discussions around the complicated issue of slavery.⁶

These events and discussions occurred mostly in the early 1860s in London, where the principal learned society on the study of man was based, the Ethnological Society of London (ESL), which in turn was the meeting place for

¹ Darwin 1859: 488. Darwin showed a clear interest in man from his beginnings as a naturalist, as were their notebooks. These materials, together with the experience gained during the voyage of the Beagle, as his contacts with Fuegians, Gauchos, black slaves, Hottentots, were instrumental in the development of which would be his most important work on Man, *The Descent of Man* (1871) and *The Expression of Emotions* (1872). See Richards in Hodge and Radick 2009, Rodriguez-Caso *et al* 2012, Radick in Ruse, 2013.

² Radick in Ruse 2013: 175. For an ample discussion on the topic of Man in *Origins*, see Bajema 1988, Bowler 1989, Cooke 1990.

³ Ellegård 1990.

⁴ For example, the accounts of the travels around the world of naturalists like Darwin, Livingstone, Tylor, Wallace, among others. See Stocking 1987: Ch. 3, Sera-Shriar 2013b: Ch. 2.

⁵ Browne and Messenger 2003, Qureshi 2011.

⁶ Desmond and Moore 2009.

those interested in these discussions. The topics treated in ESL were essentially the outlines of the proposal of the founder of ethnology, James Cowles Prichard.⁷ However from 1861 the situation changed under the guidance of the former colonial administrator John Crawfurd, whose personal interests were much closer to those of his friend, the perennial president of the Royal Geographical Society, Sir Roderick I. Murchison, in which ethnology became an extension of geography, always from the empire's interests in having better information not only of the territories but also from indigenous peoples inhabiting them.⁸

For all that historians of science, such as Desmond and Moore in *Darwin's Sacred Cause*, and more recently Sera-Shriar in *The Making of British Anthropology*, have done to improve our knowledge of the debates on Man in Britain in general, and in London in particular, in the first half of the 1860s, what has been missing up to now is a vivid sense of how London functioned scientifically in relation to the provinces, and in particular how, from 1863, and the founding of a new society, the Anthropological Society of London, the annual British Association meetings taking place outside of London served to mediate, and shape, the debates in London.⁹ This chapter aims both to provide the background necessary to understand the ESL-ASL rivalry and to chart its growing dynamics at the first three BAAS meetings to take place after the ASL's founding.

From the above, this chapter will focus on showing the general situation of the sciences of Man in the first half of the 1860s. The first section will serve to

⁷ Stocking 1987: 48-53, Withers 2010: 168-173, Sera-Shriar 2013b: 27-30.

⁸ Stocking, 1987: 245, Stafford 1989: 221, Withers 2010: 172.

⁹ Stocking, 1987: 254. In a more specific way, BAAS became the place for the battle on Darwinism, a situation that frequently ended in the case of Man. See Ellegård 1990: 67.

expose the main features of the two learned societies devoted to the study of man, provide a brief history of ESL until 1859, giving way to the process that resulted in the founding of ASL, with James Hunt as the main promoter of this breakup, in order to have an overview of the respective development of each society. The next section will show the overall features that were the difference between the two societies, with particular emphasis on the origin of man, politics and religion, since as noted by authors such as Stocking these were the main disagreements that stood out in their coexistence over eight years. Finally, the last section will serve to emphasize what happened at BAAS meetings from the appearance of ASL in 1863, a time in which the annual meetings of the Association became the battlefield in search of legitimacy for the proper study of man.

2.2 Institutional Background on the Sciences of Man

A. Ethnological Society of London until 1859

During the nineteenth century in Britain, the study of man grew to such an extent that a number of different groups came into existence as forums for sharing their common interest. One of the first groups to be formed from a purely philanthropic and humanitarian interest was the Aborigines Protection Society (APS), influenced mainly by Quakers and Evangelicals, who during the 1830s expressed their concern over colonialist policies and the treatment of the 'uncivilized'.¹⁰ It was only in 1807 that the slave trade was abolished, particularly thanks to the efforts of William Wilberforce, which resulted in the

¹⁰ Stocking 1987: 240-241.

Slave Trade Act, while it was only in 1833 that slavery was finally formally abolished in the British Empire, thanks to the Slavery Abolition Act.¹¹

It is worth mentioning that before the appearance of ESL, another learned society briefly emerged called ‘Anthropological Society of London’, which was founded by the engineer John Isaac Hawkins, a fervent practitioner of mesmerism who was President of the society throughout its existence. The society functioned from February 1836 to 1842. Unlike that society with the same name founded nearly thirty years later, this society was consolidated as a phrenological club, which later became the ‘Christian Phrenological Society’. Although short-lived due to financial difficulties, it is one of the first organizations in which phrenology and anthropology are explicitly related in a society devoted not to philanthropy but to empirical practices.¹²

APS focused on humanitarian and missionary work, which over the years not entirely satisfied some of the members who showed an academic interest in the ‘uncivilized’, dark-skinned races of non-Europeans who were around the world. One of these characters, who deeply marked ethnology as a discipline was the Bristol doctor James Cowles Prichard. His vision, based on philological studies especially, found a group such as the APS in which to consolidate, despite efforts to incorporate the ethnological theme in both APS and in BAAS. Prichard made the first presentation on ethnological topics in 1839 in the ambit of the Association, ‘On the Extinction of Human Races’, but it did not have the impact he expected.¹³ Nonetheless, the Association set up a committee led by Prichard

¹¹ Carter and Mears 2011: 99-100.

¹² Jorion 1981: 142-143.

¹³ Stocking 1971: 371, Stocking 1987: 243.

himself in order to prepare and circulate a questionnaire to help the voyagers to collect ethnographic information.¹⁴



Figure 2.1 James Cowles Prichard¹⁵

An event that prompted some members of the APS to seek a more focused academic institution was the creation in 1839 of the Société Ethnologique de Paris.¹⁶ The Quaker physician Thomas Hodgkin was one of the first to suggest expanding the APS along these lines, especially after a visit to Paris where he could see the success of the new society.¹⁷

¹⁴ Morrell and Thackray 1981: 284-285, Stocking 1987: 243, Withers 2010: 169-170, Sera-Shriar 2013b: 72.

¹⁵ Cunningham 1908.

¹⁶ On the state of French ethnology at the beginning of nineteenth century and its influence on early British ethnological methods, see Stocking 1964, Sera-Shriar 2013b: 54-56, 64-71.

¹⁷ Ringer 1980: 711-712, Stocking 1987: 243.

Such success became apparent with the formation of auxiliary societies, even in the Port of London. The internal situation of the APS in 1842, especially after the tragedy of the Niger expedition, led to a reorientation. As part of this reorientation it was proposed that the Society begin a policy of defending the weak by recording their history, that the best way to help Aboriginal people was to study them.¹⁸

This reorientation was not entirely successful. In July 1842 the then Secretary of the APS, Richard King, proposed the formation of a new society to adopt the ‘ethnological’ vision on the same lines proposed in Paris. Although the response was poor at the beginning, the eventual support of Hodgkin was fundamental for the establishment of the new society under the name of the Ethnological Society of London in 1843. The main purpose of the new group, according to King and Hodgkin was “to create a forum where ‘gentlemen of science’ could discuss the anatomy and physiology of different races, examine historical records, trace the form and meaning of various languages, present papers, and debate issues such as whether all humans shared a single ancestral origin”.¹⁹

With the formation of the new society, there was a situation that was recurrent throughout the years with other societies devoted to the study of Man, in that some of the new members of the ESL maintained a dual affiliation with the APS.²⁰ ESL members accepted the new institutional vision, in which ethnological research was emphasised above humanitarian or philanthropic interests. At the same time, King recognized the importance of the British Empire

¹⁸ Stocking 1987: 244.

¹⁹ Sera-Shriar 2013: 57.

²⁰ Stocking 1987: 244-245.

in the ethnological enterprise, since the development of ethnographic materials were tied to imperial expansion.²¹

By the late 1850s the situation seemed to improve for ESL with the contributions of new members representing the latest trends in the fields of physical anthropology and archaeology. Among those members were included Joseph Davis, Joseph Thurnam, John Beddoe and Robert Knox, who had been expelled in 1855 but was reinstated in 1858.²² Among the prominent figures with interests related to archaeology were Henry Christy, Lane Fox and John Evans, though undoubtedly the most outstanding member who joined at this time was James Hunt. These new members helped to definitively change the scope of ethnology.

B. James Hunt as Institutional Instigator

As recently noted by Sera-Shriar, historians of science have paid little attention to Hunt, a physician and speech therapist well known at the time. Born in 1833, his early interest in medicine was given by the influence of his father, Thomas Hunt (1802-1851), a speech therapist known for having developed new techniques for the treatment of stammering and stuttering. Hunt succeeded in improving the techniques developed by his father, based on the knowledge of anatomy and physiology, which he obtained studying in Cambridge and Giessen, Germany. It was during his stay in the latter that he came into contact with transcendentalism and comparative anatomy. Hunt's career as a therapist allowed him to obtain large financial resources, plus the ability to treat influential figures

²¹ Sera-Shriar 2013b: 63.

²² Stocking 1987: 246-247. For a recent study about the role of Knox and the development of observational training in ethnology, see Sera-Shriar 2011.

of London society, both of which were important for his future as a promoter of anthropology.²³

His initial interest in ethnology emerged from his own interest in medicine and in language, issues that were at the core of the discipline.²⁴ But his view was that anthropology should be based on anatomy and physiology, a position he would keep in the coming years.

Tort portrays Hunt as an extremely dynamic man, which was apparent from the moment he joined the ESL in 1856.²⁵ This dynamism was notable, considering that four years after joining as a member, he was appointed Assistant Secretary of the Society along with Thomas Wright in 1859, a position he maintained until his resignation in 1862. As noted by Sera-Shriar, Hunt was a “young and ambitious researcher, he was very active at the society and consequently his status rose quickly”.²⁶ By the late 1850s, the ESL maintained a humanitarian element, influenced in the Quaker roots of the APS, which collided sharply with the racial views held by the new members, especially by Hunt.²⁷ With the death of Prichard in 1848, the leadership of the Society seemed to be filled, and in that sense Hunt “recognized that there was an opportunity for him to position himself as a scientific reformer, and he set out to establish and promote what he believed to be a sound disciplinary foundation built upon rigorous theoretical and methodological principles”.²⁸

²³ Sera-Shriar 2013b: 111.

²⁴ Sera-Shriar 2013b notes the cases of James Cowles Prichard, Robert Gordon Latham, Richard King and Thomas Hodgkin.

²⁵ Tort 1996, vol. 2: 2290.

²⁶ Sera-Shriar 2013b: 111.

²⁷ On this matter, Hunt said his view on race was always influenced by the teachings of Robert Knox. See Stocking 1987: 247.

²⁸ Sera-Shriar 2013b: 111-112.

In his role as secretary, Hunt was assigned the task of reviving the *Journal* of the Society. In this regard, it is worth noting the importance Hunt gave to communicating the different tasks and activities of the members of the Society towards a larger audience. Just to note, these tasks were particularly emphasized within the scope of the BAAS, from his belief that the presence of an autonomous space would consolidate ethnology.²⁹ The reports made by Hunt on some engravings found in Sierra Leone, resulted in a complicated discussion which ended up in organizing a committee to resolve the differences between some of the members involved. This committee was formed by Hunt with Hodgkin and Christy, the latter two both renowned abolitionist Quakers. In the minutes of the Society there is only reference to “some differences of opinion” as a result of these discussions, but as a consequence of this Hunt decided to resign from the ESL. There was more to Hunt’s resignation than a disagreement about art. Sierra Leone was a colony of freed slaves that had been of interest to humanitarian groups and British missionaries for many years. These engravings therefore represented for some members of ESL, particularly those more closely aligned with humanitarianism, an example of the capabilities of the blacks, which had little to do with the ‘primitive’.³⁰ Another important point is that from the beginning of 1860s Hunt believed that ethnology lacked sufficient observational evidence – such as that provided by anatomy and physiology – due to an overemphasis on the study of language and a dependency on biblical explanations for origin of humans. This last point contrasted with his polygenist vision, in addition that the ESL had an increasing presence of personages who

²⁹ Sera-Shriar 2013b: 112.

³⁰ Stocking 1987: 247.

sought to reform ethnology from the perspective of Darwin's ideas, such as Alfred Russel Wallace (1823-1913), John Lubbock (1834-1913) and Huxley.³¹

This situation prompted Hunt to found a new learned society focused on the sciences of Man, the Anthropological Society of London. Hunt had several justifications for why was it necessary to found a new group: he considered necessary the existence of a "publishing body", the main discussion topic had to be physical anthropology, and especially he should have the possibility to freely discuss "various exciting questions which current events were bringing into prominence", in other words the American Civil War. This set of reasons account for the need for Hunt to create a forum in which to present racial and political issues in an institutional framework that would justify it.³²

In a similar manner to what happened with ESL in its foundation, Hunt modelled the ASL on the French example. The model was the Société d'Anthropologie de Paris, founded in 1859 by French physician and anthropologist Paul Broca, and conceived anthropology as the science that was in charge of the study of Man's whole nature. From this idea Hunt considered that anthropology could deal with the big issues of Man (man's relationship with nature, his physical, psychological characteristics, etc.), while ethnology solely focused on describing the history of the races.³³ This vision was that which Hunt would take care to defending and spread through the new metropolitan learned society.

³¹ Sera-Shriar 2013b: 112-113.

³² Stocking 1987: 247.

³³ Hunt 1864: lxxxiv-lxxxvii, Stocking 1987: 247-248.



Figure 2.2 Paul Broca³⁴

C. Anthropological Society of London (1863-1871)

The new society gave new impetus to the study of man in Victorian England. From its beginning, it was founded “with the object of promoting the study of Anthropology in a strictly manner”,³⁵ following Hunt’s vision, which as mentioned above was inspired by the anthropological proposals of Broca. The ASL grew rapidly, in the next two years reaching 500 members; the dynamism of Hunt moved the Society in general, although one cannot fail to note that the internal life was marked by continuing problems between members and numerous resignations. The progress of the society inspired similar societies in other cities in Britain, the most notorious being Manchester.³⁶

³⁴ "Paul Broca" by anonymous/unknown - Wellcome Library. Licensed under Public domain via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:Paul_Broca.jpg#mediaviewer/File:Paul_Broca.jpg.

³⁵ Rainger 1978: 51.

³⁶ Stocking, 1987: 248.

Following one of Hunt's biggest concerns, the Society was distinguished by a profuse publishing activity, which included translations of foreign works,³⁷ the *Anthropological Review*, the *Journal* and even a *Popular Magazine of Anthropology*. Both the *Popular Magazine* and the *Anthropological Review* were bodies that Hunt also used to disseminate his own ideas.³⁸ But again, the ASL institutional life revolved around the interests of Hunt, and as we will see one of these interests, possibly the brightest, was the search for recognition for anthropology in BAAS.³⁹

But unlike the ESL, the focus of the "anthropologicals" was not only the analysis of scientific issues, but there was a clear mixture of science and political manoeuvring.⁴⁰ Even in his *Introductory Address on the Study of Anthropology*, Hunt's approach to anthropology was emphasised in scientific terms, differentiating between ethnology and anthropology, always placing the latter as a much broader discipline to the study of man. Explicitly, Hunt wanted to make it clear that the new society would be based entirely on empirical observations to discuss the real place of blacks in nature for example, with the hope that "the objects of this Society will never be prostituted to such an object as the support of the slave-trade, with all its abuses".⁴¹

³⁷ For example: *Introduction to Anthropology* (1863), by German psychologist and anthropologist Theodor Waitz (1821-1864), *Force and Matter* (1865), by German philosopher and physician Ludwig Büchner (1824-1899), *The Plurality of Human Race* (1865), by French naturalist and anatomist Georges Pouchet (1833-1894), *The Travels of Pedro de Cieza de León, A.D. 1532-50, Contained in the First Part of His Chronicle of Peru* (1865), by Spanish conquistador and chronicler of Peru Pedro Cieza de León (1520-1554), among many other examples.

³⁸ Stocking 1987: 248.

³⁹ Sera-Shriar 2013b: 112.

⁴⁰ Rainger 1978: 51.

⁴¹ Hunt 1863: 4, Rainger 1978: 52.

However, as has been pointed out by Desmond and Moore, one of the fundamental premises of Hunt and the members of the ASL was his abhorrence of the idea of a common origin for all races, and some of those members were strong supporters of the Confederate side in the American Civil War. In fact, as discussed more fully below, the pro-slavery stance of the ASL was strengthened over the years, as can be seen in publications such as ‘The Negro Race’, by the polygenist American physician and surgeon Josiah Clark Nott (1804-1873),⁴² who had an ASL Honorary Fellowship⁴³ and was described as “the greatest living anthropologist of America”.⁴⁴ Also noteworthy is the first British consul in Fiji, William Thomas Pritchard (1829-1907), who in his short essay ‘On the Extinction of the Aboriginal Tribes’, takes a harsh critique of colonial policies and in particular the decline of indigenous populations as a result of disease and alcohol, introduced by the whites,⁴⁵ a view that was contrary to Hunt’s vision. This kind of writing makes it clear that discussions with political overtones were very common during the short life of the ASL. With these examples, it is worth noting again that both ASL and ESL were groups in which no single vision was shared among members, but instead, there was a diversity of opinion.

In the press one can see a reflection of the impact of the new society. For example, in 25 July, 1863, the *Athenaeum* published a review of ‘The Races of the Old World: A Manual of Ethnology’, written by American philanthropist and

⁴² Nott was influenced by the racial theories of another American physician, Samuel G. Morton (1799-1851), considered one of the founders of the physical anthropology. See Ricardo 2010: 62-64.

⁴³ *TASL* 1863: i.

⁴⁴ Nott 1866: 102n, Desmond and Moore 2009: 332.

⁴⁵ Pritchard 1866.

abolitionist Charles Loring Brace.⁴⁶ Overall, the approach of Brace started from the traditional view of ethnology at the time, a comparative study of peoples, with emphasis on its history and culture. *Athenaeum* highlighted the benefits that the new learned societies would bring to the development of studies of man, and especially the Anthropological Society of London, with particular emphasis placed on the figure of Hunt.



Figure 2.3 Charles Loring Brace⁴⁷

We could read that it was necessary to “give up all dogmas, confess our ignorance as to knowing anything about the laws regulating man’s origin and development, and be willing to begin *de novo*, only basing our opinions on actual

⁴⁶ ‘The Races of the Old World. A Manual of Ethnology’, *The Athenaeum*, July 25, 1863: 106.

⁴⁷ "CharlesLoringBrace". Via Wikipedia - <http://en.wikipedia.org/wiki/File:CharlesLoringBrace.jpg#mediaviewer/File:CharlesLoringBrace.jpg>.

demonstrable facts, and arguing solely from the logical inference of such data”, stating in their opinion the need of a new vision for the sciences of Man.

Another example used to show the impact of the split can be seen in May 1865. In the *Eclectic Review* appeared a provocative piece titled ‘The Dark Races’.⁴⁸ The *Review* was a publication with a monthly circulation of 1500 copies per month,⁴⁹ but this example can give an idea of the impact of discussions about race in the religious sphere and in Victorian society.

The author strongly criticized the ASL’s political stance, especially with reference to some of the publications of the Society with respect to blacks. Although the lists of members of the ASL showed a large presence of clergymen, as discussed below, the treatment of theological themes about man and his place in nature were treated “with scoffing and scorn”.⁵⁰ The author further stated that given the stance taken several years ago by the ESL on these issues, the existence of another society such as the ASL was unnecessary.

In his opinion, the vision established by the “anthropologicals” focused only on the study of the body or skeleton of man, meaning that they missed out on the external, such as the customs, ceremonies, domestic uses, which he considered the focus of the “anthropologicals” was human nature, but regardless the soul. On the other hand, the author highlighted the work of ethnology, the study of humanity in a comprehensive sense, and indeed anthropology was understood as part of this study. In this sense, the author states that the ASL existed solely to keep “the essential debasement, degradation, and simiatic

⁴⁸ ‘The Dark Races’, *The Eclectic Review*, May 1865: 465-477.

⁴⁹ Ellegård 1957: 31.

⁵⁰ ‘The Dark Races’, *The Eclectic Review*, May 1865: 466.

relationships of the black”.⁵¹ In short, to maintain a definite political stance in support of slavery.

These are just some examples of how ASL entered the field of Victorian discussions on Man. In the next section, we will focus on raising generally some of the fundamental differences between the two societies on common issues, but it should be clear that such generalizations cannot cover all of the members of either society, there was great diversity of opinion.

2.3 Points of Disagreement

Having generally raised the history of both societies, the discrepancies that existed between the two groups will now be presented. It should be noted that these differences in many cases are difficult to generalize, considering that both societies shared members, and that there was not necessarily unified criteria around many topics. From classic works like Stocking, one can conclude that in both societies were some generalities: ESL was traditionally associated with monogenism on the line raised by Prichard in the 1830s, on the other hand ASL has been described primarily as polygenetic, also in line with the ideas held by its founder, Hunt.⁵² These generalizations can blur vision on specific policies of any of the two societies, but at the same time it is very useful to locate general postures held by the leaders of both groups.

One of the issues that caused major confrontation between the two groups were the ideas of Darwin. Overall ESL was closer to these ideas, including major supporters of Darwinian (such as Huxley, Lubbock, Tylor, Wallace), although there were also cases like Tylor and Wallace who initially also belonged to the

⁵¹ ‘The Dark Races’, *The Eclectic Review*, May 1865: 466.

⁵² Stocking 1987: 248-254.

ASL.⁵³ In fact over the years the ESL became a bastion of the ideas of Darwin and Huxley Lubbock as president, while ASL maintained strong opposition, as seen in the speeches and publications of Hunt.

Although it's true that Darwin's ideas and monogenism were supported by the ESL as a perfect relationship, therefore no one can say that all members of ESL were evolutionists, or instead all the "anthropologicals" were anti-Darwinians. As already mentioned, the fact that many members belonged to both societies, makes any possible generalization quite complicated. Stocking suggests differences in social origin and status in relation to the members of both societies. The "anthropologicals" seemed to come from social traditional established backgrounds but marginal positions, while "ethnologicals" mostly were from dissenting middle-class backgrounds of the type which can be described as the intellectual aristocracy.⁵⁴

In the next sections, I briefly show three aspects that allow us to understand the differences in general that led to the separation of these two groups. These issues are: the origin of Man, politics, and religion.

A. *The Origin of Man*

When we talk about the origin of man, we refer possibly one of the most controversial discussions that took place in the Victorian era, particularly from the perspectives of science and religion. Monogenist tradition was deeply rooted in Christianity, from the reading of Genesis which established the singular origin of mankind. Prichard was a Quaker, who built this view from his work on the

⁵³ Stocking 1987: 248.

⁵⁴ Stockford 1974: 165-186, Stocking 1987: 251.

history of human races, especially from the study of the origin of language. The proposal of Prichard held a common origin for all human races, and the differences between them were the result of their history. This position was more widely held in the ESL, where in addition to Prichard, there were other great supporters of monogenism such as Hodgkin and the linguist Robert G. Latham. Within the ESL, one can speak of a transition from a classic monogenism, entrenched in religious conceptions, which by early 1860s with the particular influence of Darwin's ideas were considered outdated, to make way for a "new form of monogenism" as it was called by Hunt, a position that considered a common origin for the human races from a naturalistic point of view. It is worth noting the close relationship that existed between the ideas on the origin of man and its political consequences. When Hunt decided to resign from the ESL, it was largely because he wanted to use derogatory illustrations of African people to support the idea of polygenism, which the President Hodgkin strictly opposed. As Kenny mentioned, despite the growing interest in polygenism within ESL, the perspective of most of its members sided with the anti-slavery position, a position not shared by Hunt.

It should be noted here, that as mentioned above, generalizations can be misleading. One of the most important figures in the ESL, Crawford, did not support the monogenist cause, who since joining ESL openly expressed his belief in the existence of different races resulting from separate creations by God in the various regions of the globe. As discussed below, this position was very similar to that held by Hunt.

Furthermore, the emergence of ASL was based on polygenism. The main promoter of this idea was Hunt, who on numerous occasions openly stated his

belief that the races were different by virtue of having a different origin, although it should be noted that Hunt never returned to the idea of special creations. In general, one can assume that those who accompanied Hunt on the adventure of ASL shared a commitment with polygenism, although a review of anthropological publications makes it clear that there was not a level of commitment as that displayed by Hunt. The ASL President never missed an opportunity, whether it was in writing or in meetings, to reaffirm the importance of his polygenist vision, which as we shall see, was intimately connected with his politics.

On this issue, it is worth remembering here what happened to Wallace in 1864. As noted by Desmond and Moore, after returning from the Malay Archipelago, his experience with the Dyaks together with his deep socialist commitment made him reaffirm the importance of a single origin of the human races, but at the same time having known different human groups, convinced him to search for a way to reconcile monogenism and polygenism. On 1 March, 1864, in a “virtuoso performance”,⁵⁵ Wallace presented his proposal to the “anthropologicals” about the origin of the human races from the perspective of natural selection. Returning to the idea of a vast geological time, Wallace stated that all races had a common origin and that natural selection served its function, allowing diversity which then resulted in the different races, to a point in which the anatomical changes ceased, although the brain present in all races, remained under the influence of natural selection, producing different languages, skills, technologies, societies, etc.⁵⁶ Let us remember that Darwin’s ideas were not

⁵⁵ Desmond and Moore 2009: 342.

⁵⁶ Wallace 1864.

appreciated by the “anthropologicals”, so their reaction was totally opposite, as they felt that Darwin’s proposal – and thus Wallace’s – could not really explain how the races could have been homogeneous at some point in history. While it is true that attendees were very harsh in their criticism of Wallace presentation and subsequent publication, it was nevertheless a watershed. Darwin had very favourable reviews despite some theoretical differences, and others represented it as “a new era in anthropology”.⁵⁷

In this sense, we must remember that one of the greatest fears of the Association at the time of accepting the representation of disciplines devoted to the science of man, were its political implications. With this, we can see that although in theory both societies were pursuing a naturalistic study of man, politics was involved on all sides, particularly in the case of slavery. Next, we will see in greater detail the political positions advocated by both groups.

B. Politics

Although the slave trade was banned in 1807, and that slavery had been abolished throughout the Empire in 1833,⁵⁸ the issue did not lose potency. In the early 1860s slavery was given new significance thanks to the American Civil War, and was during this conflict that the two societies separated. As mentioned at the beginning of this section, the ESL was founded from humanitarian and philanthropic interests, which to some extent could be considered contrary to imperial policies. In fact, this was part of the reason that ethnology was initially rejected as part of the BAAS. The founders of BAAS sought to separate science

⁵⁷ Bouverie-Pusey 1864: clxxiii, Desmond and Moore 2009: 343.

⁵⁸ Desmond and Moore 2009: 1.

from political and theological positions, which in their view would allow for different interests and visions to better meet in a single forum.⁵⁹ In the case of ethnology, and particularly the criticisms made by Thomas Hodgkin of the cruelty and devastation caused by the British Empire, it is clear that their fears were not unfounded. Nevertheless, as mentioned before, in 1838 both Hodgkin and Prichard succeeded in presenting their anti-imperialist visions, a situation that led ethnology put back in the dark for several years. It was not until 1842, the time of separation between APS and the humanitarian policies of ESL, that ethnology became a form of science openly supported by the Association.⁶⁰

Ironically, from that moment, ethnology found its place not independently, but with geography, as arranged by Murchison. This view clearly met the intent from both disciplines to collaborate in learning about the territories of the Empire and also from the people who inhabited them. This decision found support from Crawford, who served as ESL president from 1861, who had formerly served as a colonial administrator in India, which makes his support for the decision less surprising, as does the good relationship he had with Murchison for several years. Despite this relationship, it should be noted that throughout its history, ESL avoided religious and political issues. We can see this in their media, items were far from sensitive subjects, well outside politics or religion, and remained close to scientific topics.

At the other extreme, there is the case of the ASL. Although since its foundation was established “with the object of Promoting the study of Anthropology in a strictly scientific manner”, the practice was very different,

⁵⁹ On the relations between science and religion and the origins of BAAS, see Morrell and Thackray 1981: Ch. 5.

⁶⁰ Morrell and Thackray 1981: 285.

because from the start the ASL consciously mixed science with politics, and this occurred mainly due to the enormous influence of its founder and president, Hunt. The scientific approaches supported by Hunt were the basis of a concrete policy on the issue of race. If we analyse the first mentions of Hunt on the work of anthropology, it is clear that between anthropology and ethnology was little difference in practice, because the topics of interest to both groups overlapped. Here we must consider what Stocking emphasised, that Hunt's resignation from ESL was motivated by differences of opinion about the prints found in certain engravings found in Sierra Leone by Robert Clarke, although deep discussion led to the 'advanced' character they could show the people who made these engravings, a very different view to that held by Hunt, who clearly questioned the intelligence of blacks.⁶¹

Hunt's rejection of the single origin of races were held in physical anthropology work, very popular in France and the United States, but of little use in Britain at that time. Hunt was by far the dominant figure in the ASL, the other members who were part of the council as Charles Carter Blake, William Bollaert, Richard Francis Burton, John Frederick Collingwood, Richard Charnock, Joseph Barnard and Berthold Seeman, all shared a polygenist vision, but their contributions were scarce. In fact, the most important function of the members of ASL was to provide the funds necessary to maintain outreach efforts through various media created for this purpose by Hunt.⁶² The dominance of Hunt can be seen from the fact of being one of the few members of the Society who published, in addition to his writings clearly show his politics.

⁶¹ Stocking 1987: 247.

⁶² Stocking 1987: 248.

The case of the American Civil War was revived on numerous occasions, as part of anthropological discussions at meetings of both societies in London, and also in the BAAS. The newspapers reported more than once Hunt showing support to the Southern cause, and Clarke was described more than once as a confederate. It should be born in mind that one reason why no ESL members were identified as North supporters was perhaps largely thanks to the political ambiguity maintained throughout its history.

It is clear that in terms of politics, there was a big difference between the two societies: the ESL was always more cautious, unlike the ASL, which openly mixed political and scientific issues from its founding. As we shall see in the next section, the differences between the two groups not only focused on the political, but also on religious grounds.

C. Religion

The ESL was more open to include religion as part of its discussions. As already mentioned, the ESL was founded after the split with the APS, which itself had been formed from a distinctly religious commitment, because the preponderance of Quakers and evangelicals among its founders.⁶³ Over the years, the commitment to the humanitarian mission was declining, to become the main reason why some members sought to establish an alternative, much more attached to the natural human study. As previously mentioned, monogenist posture, maintained mostly within ESL was associated initially with a view much closer to traditional religious views, in which the common origin of man is associated with the original couple described in Genesis. This position, to the

⁶³ Stocking 1987: 245.

extent that religion lost influence within ethnology, led to a new interpretation, in which the origin was associated with a common origin for all races of men, an argument that later found strong support from the recognition of the antiquity of Man and the work of Darwin and Wallace.⁶⁴

The founding of the ASL had nothing to do in principle with a concrete support or opposition to religion, but from the political positions held throughout its history there are elements of criticism from Hunt and some other “anthropologicals” towards the work of the missionaries. This situation resulted from the support given by missionary groups in regions of West Africa, which started from a vision in which there was no superiority of whites over blacks. This situation drove some members of the ASL, which were congenial with the missionary work, to look for new institutional alternatives, even closer to more traditional views of religion. Among them, the best known was James Reddie, who promoted the creation of the Victoria Institute in 1865 (also known as the Philosophical Society of Great Britain), as a repudiation of publication of Darwin’s *Origin of Species* and *Essays and Reviews*, considering that conducive to “erroneous views of nature”.⁶⁵ The aim of the new institution was to defend the truths revealed in the Scriptures, which over the years consolidated as a profoundly creationist institution. Hunt also reaffirmed his position with the publication ‘On the Negro’s Place in Nature’, which maintained his rejection of missionary and humanitarian work. This reactionary stance against religion was one of the triggers for the weakening of ASL in their later years, and that at least

⁶⁴ Rodriguez-Caso *et al* 2012: 268.

⁶⁵ Numbers 1993: 141.

255 resignations were due to the alienation produced by offensive statements relating to religious themes.⁶⁶

But when referring to religion, we should not just focus on the beliefs of its members, but also in the way as learned societies approached their study, particularly in relation to the “savages”. In ethnological descriptions of various tribes, important parts of the information were on the beliefs of the societies’ members, but also on the way that, as learned societies, they approached the study of the religion of others, particularly with the understanding that Christianity was the pinnacle of civilization, all part of a clear vision of progress, which was a typical idea in Victorian culture.

The interest in this kind of description can be found at ESL from its inception, as when Prichard mentions:

The intercourse of traffic between neighbouring countries, the introduction of a new religion or of new habits of life, especially when rude and barbarous tribes have been brought into near connection with civilized ones, have given rise to great changes in the original idioms of nations, and have caused languages originally different to approximate.⁶⁷

For ASL, we can mention here the dispute that occurred in 1865 between the historian and explorer William Winwood Reade (1838-1875) and the first Bishop of Natal, John William Colenso (1814-1883).⁶⁸ On 14 March, Reade presented a paper on the work of missionaries in West African communities, in which he criticized the fact that after many years of effort the natives had not changed their pagan beliefs, because from their perspective the British Christianity contained elements that blacks could not assimilate. For Reade, missionary work was a waste of economic resources, and that although the missionaries try hard, he

⁶⁶ *Journal of ASL* 1869: v, Rainger 1978: 69.

⁶⁷ Prichard 1848: 316.

⁶⁸ Reade 1865; Colenso 1865.

referred to blacks in this way: “No one will be rash enough, I presume, to say that God created these wretched creatures in order to punish them hereafter; and I have already shown that Christian missions do not tend to elevate them in the moral scale”.⁶⁹

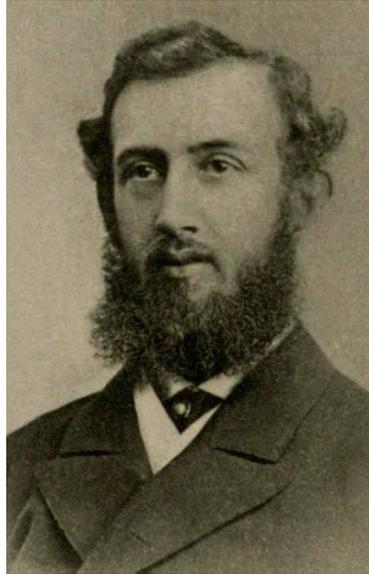


Figure 2.4 William Winwood Reade⁷⁰

At the next meeting Colenso replied to Reade, taking a vigorously opposing view. From his experience working in South Africa, he was able to highlight the enormous efforts of the missionaries throughout Africa, and he put a special emphasis on the ability of Africans to believe in the Christian God in the same way as the whites, and he conceived that they were part of the same family:

But I do say that this feeling of love for our kind – this sense of the essential brotherhood of the great human family, – whether sprung from one first pair or more, whether developed from lower races or not, – which binds us all together as beings gifted with reason and conscience, and therefore capable of knowing, loving, and glorifying our Creator, and of loving and honouring each other, as reflecting the image of God, – this

⁶⁹ Reade 1865: clxviii.

⁷⁰ "William Winwood Reade (1910) headshot" by See source information. - *The Martyrdom of Man*. Licensed under Public domain via Wikimedia Commons - [http://commons.wikimedia.org/wiki/File:William_Winwood_Reade_\(1910\)_headshot.jpg#mediaviewer/File:William_Winwood_Reade_\(1910\)_headshot.jpg](http://commons.wikimedia.org/wiki/File:William_Winwood_Reade_(1910)_headshot.jpg#mediaviewer/File:William_Winwood_Reade_(1910)_headshot.jpg).

spirit, in short, which prompts the missionary to go, and the friends of missions at home to send him, while at the same time they are not found neglecting the calls which God makes upon them in His Providence nearer home at their very doors, – is quite as noble and generous as the spirit of scientific inquiry, which carries men into other fields of arduous and patient labour, and which has led, I believe, a recent traveller to risk the dangers of the West African coast in search of our (supposed) ancestral ape.⁷¹

As can be seen, in both cases religion ended up playing an important role in the way in which both societies ended up defining their respective views on sensitive issues such as the origin of man, or the diversity of races. So, briefly these are the general characteristics of the two societies. Considered next is the main topic of their discussion throughout their eight years of coexistence, the dispute for recognition within BAAS.

2.4 BAAS Meetings, 1863 – 1865

Discrepancies between the two groups as we have seen occurred on different topics, but above all the objective of both groups was to establish a position within the scientific community. As part of this dispute, the BAAS forum became an ideal battlefield. From the formation of the ASL in 1863, one of its main aims was to open a specific space for the study of Man, and thus the recognition of anthropology as a discipline.⁷²

Since the inception of the BAAS, ethnology had been excluded due to its relation to sensitive topics in the political, social and religious senses.⁷³ The first attempts to incorporate anthropology were made by Prichard who in 1832 was the first to contribute with a presentation on the contributions of philology and

⁷¹ Colenso 1865: cclxxxi.

⁷² Stocking 1987: 247-248, Sera-Shriar 2013b: 112-113.

⁷³ Morrell and Thackray 1981: 283.

anatomy to human history. After this first attempt was excluded another attempt, made in 1834, was apparently refused by two of the founders of the Association, Harcourt and Phillips, who believed that Man's place in the animal kingdom was not subject to discussion and that talk about races affected their Eurocentric sense of superiority.



Figure 2.5 John William Colenso⁷⁴

An attempt to incorporate ethnology into the BAAS program was made by Hodgkin in 1837, to propose a presentation that sought to defend the policies of the APS, but it is clear that the Association had greater affinity for the promotion of colonial policies, making his criticism's untenable for some of the managers of

⁷⁴ "John William Colenso by Carlo Pellegrini" by Carlo Pellegrini - Published in Vanity Fair, 28 November 1874. Downloaded from <http://www.darvillsrareprints.com/Images/images/Vanity%20Fair/Clergy/colenso.jpg> Transferred from en.wikipedia; transferred to Commons by User:Dcoetzee using CommonsHelper. Original uploader was Craigyl44 at en.wikipedia 20 January 2006 (original upload date). Licensed under Public domain via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:John_William_Colenso_by_Carlo_Pellegrini.png#mediaviewer/File:John_William_Colenso_by_Carlo_Pellegrini.png.

the Association.⁷⁵ Despite these attempts, Prichard managed in 1839 to have the Association establish a committee to prepare and circulate ethnographic questionnaires. He even managed to obtain funds, but as pointed by Hodgkin, were really insufficient: between 1839 and 1842 were assigned £33.⁷⁶

In relation to colonialist policies, and the frictions between the Association and the humanitarian APS, it is worth recalling here Morrell and Thackray's description of Hodgkin and Prichard presenting at the meeting of 1838, which in their opinion explains why the managers of the Association resisted the claims of ethnologists. On the one hand Hodgkin and Prichard's proposals sought to emphasise the APS political vision, while on the other hand they condemned the British as "the greatest exterminators of aborigines and that man, the highest of animals, was nevertheless 'an object of natural history.'"⁷⁷

With the founding of the ESL in 1843, as a result of the separation of the APS, every element related to philanthropy or criticism of British colonialism was removed. In fact, by excluding all those elements of friction, ESL adapted itself to the BAAS view of science. According to Morrell and Thackray, "The fit remained less than perfect, because a natural history of man could obliterate the distinction between the physical and moral which was so precious to the liberal Anglicans".⁷⁸

From the separation of both societies, Hodgkin in his role as chairman of the APS sought no more pressure on its case and its connection with ethnology in the BAAS. In fact this prudence paid off: in 1843 and 1844 were allocated £40

⁷⁵ Morrell and Thackray 1981: 284, Stocking 1987: 243.

⁷⁶ Morrell and Thackray 1981: 284-285.

⁷⁷ Morrell and Thackray 1981: 285.

⁷⁸ Morrell and Thackray 1981: 285.

by the BAAS for ethnological research. Another achievement was that in 1844 there was established a subsection for ethnology in Section D, which on this occasion belonged to the same Hodgkin, Richard King and Robert Gordon Latham. It was not until 1846 that ethnology was designated as a subsection in the Report.⁷⁹

Despite these achievements, including the fact that in 1847 Max Müller listened to more than a dozen presentations, the concern did not decrease for the Association in the sense that ethnologists could introduce political or religious topics. On the other hand ethnologists extensively discussed the subordination of the discipline to zoology, as in the opinion of Prichard ethnology was not dealing with current issues of nature, but rather with the history of the past, so that discipline would be more related to other fields such as geology or archaeology.

The subordination of ethnology to zoology did not last long. In 1850, Sir Roderick I. Murchison, who in turn did not agree with the subordination of geography to geology, managed to establish an exclusive section which brought together geography and ethnology.⁸⁰ This success of Murchison was also a clear reflection of the trust still existed in this era on colonialist and imperialist policies in the context of BAAS.

In a similar way, the consolidation of Section E under the new vision established by Murchison, coincided with a decline in the ESL, which resulted in the new section being dominated by geographers. Among the reasons explaining this decline it was believed that the Crimean War had been a factor, or perhaps a renewed influence of religion. In fact the situation within ethnological science

⁷⁹ *Report* 1846: xv, Morrell and Thackray 1981: 286.

⁸⁰ *Report* 1850: xv.

was not healthy. The results of ethnographic questionnaires proposed by Prichard had not produced the expected results.⁸¹ From these situations, the role of ethnology in the BAAS but also outside it, decreased markedly, with the exception of the work of Prichard, especially the third edition of his *Researches* (1848).

The situation of the sciences of Man in BAAS was stable from Murchison's decision to gather in the same section geography and ethnology. As mentioned above, the internal situation of ESL underwent a series of changes. This situation was reflected in turn in the state of ethnology in the BAAS.

From this moment, tensions between the two societies were transferred to the field of BAAS in what became a relentless search for the recognition of the respective views on the study of man.

A. *Newcastle 1863*

This meeting in Newcastle in 1863, described as a “feast of reason”,⁸² was the first meeting in which was given openly a confrontation between the two metropolitan societies in the BAAS forum. It should be noted that this year was very important for the sciences of Man, especially thanks to the publication of Darwin's ideas. Two works marked the discussion, *Antiquity of Man*, by Lyell, and *Man's Place in Nature*, by Huxley.⁸³ These early approaches to the study of man reflected the interest that existed between some big names in both the origin of man and his place in the natural history. In this sense, Darwin's proposal gave a new frame for these discussions.

⁸¹ Stocking 1987: 243.

⁸² *Newcastle Courant* August 21, 1863.

⁸³ For a discussion about the influence of Lyell's account on Lubbock's *Pre-Historic Times*, see Wilson 2002.

As pointed out by Ellegård, this meeting was the first occasion in which reference was made to Darwin's ideas in a presidential speech.⁸⁴ The engineer William Armstrong, a traditional discourse in which he recapitulated the achievements of science throughout the year, when making mention of the achievements of biology, highlighted the role of Darwin's vision as a feasible option in order to account for the way in which natural phenomena such as evolution could be explained rationally, a view that in the opinion of the same Ellegård was generally shared by the informed public.⁸⁵

Despite this first mention of Darwin, the meeting was not characterized by an increased presence of Darwinian ideas in presentations or discussions. It was rather Huxley who attracted the most comment. Rolleston in his role as chairman of the Physiology subsection commented favourably to the recent book of Huxley and other presentations supporting the naturalistic view of the origin of man and his relationship with other organisms such as chimpanzees. However, the impact of those discussions was minimized by the absence of Huxley, a situation which caused great dissatisfaction among the public.⁸⁶

But anthropological subjects were present not only through Huxley but as mentioned before by those applying Darwin's theories to the case of man, in this case through one of the most controversial issues for the British society at the time, the place of blacks. Discussions focused in section E with two very active protagonists in the discussions, the presidents of the two learned society devoted to the study of man: John Crawford, president of ESL, and James Hunt president of the newly founded the ASL.

⁸⁴ Ellegård 1990: 73.

⁸⁵ Ellegård 1990: 74.

⁸⁶ Ellegård 1990: 74.

Despite the differences that had already emerged after the appearance of the ASL as a split of ESL, both maintained a common point in their discussions: their rejection of Darwin's ideas. It is also interesting to note that despite differences both held on the origin of man, both defended polygenism, and in both cases defended the superiority of white over black. The press highlighted the political implications of this discussion, to the point of characterizing Blake Carter as a confederate, alluding to the political slavery and racial supremacy held by the Confederate States of America.

Hunt would become the star of this discussion. With two presentations, one on 27 August on anthropological classification and another the next day about the physical and mental characteristics of black people, he made clear his stance that from the anatomical data one could justify not only the different origins for races but also slavery.⁸⁷ This position was articulated in response to Huxley, who from his Hunterian Lectures claimed that anatomy could not justify slavery, and polygenism was absurd.⁸⁸ In fact, the title of the presentation (and subsequent publication) by Hunt was a word game referring to the work of Huxley. Huxley promoted the idea of a common ancestor, whose origin was in the ancient past, but stated that slavery had no place within that vision. This vision was shared also by Darwin, on the understanding that provided a new basis for understanding the sciences of Man, a vision that Hunt never accepted.

⁸⁷ *Report* 1864: 139-140. Later, Hunt presented the issue again at a meeting of ASL on 17 November with the title 'On the Negro's Place in Nature', which in turn was published as a pamphlet of 60 pages per Trübner and Co.

⁸⁸ Desmond 1994: 325.

As it has recently been noted by Sera-Shriar, discrepancies between the two characters were key to the future of the human sciences in England.⁸⁹

During this meeting there took place the first attempts by the ASL in their quest for recognition for their discipline. Although not specifically the BAAS forum, Hunt had made it clear from his first speech as president of the ASL that one of the key objectives of the new learned society would be seeking recognition for anthropology. At the meeting of 3 November, 1863 of the ASL, he highlighted the efforts to negotiate with the General Secretary of BAAS, the possibility of a different subsection within section E in which exclusively would be read presentations on anthropological issues, and even “ethnologicals”. As the report’s author Blake mentioned, negotiation yielded no satisfactory result for the cause of the ASL and presentations were conducted entirely in the manner previously agreed in Section E. This situation did not discourage the members of ASL, but encouraged them at future meetings of the BAAS to continue striving for this recognition, while also attempting to promote the image of anthropology in a new sense for the public, defining what were the true objects of anthropological study and holding up examples of poor anthropological research.⁹⁰

At least for Hunt and other members of ASL, their presence within section E was a breakthrough, but it was clear that there was still much to be done in the search for anthropology’s consolidation. Hunt mentioned how difficult it had been to have to hear a lot of frivolous objections against the recognition of anthropology as a proper name, since in his opinion the practice

⁸⁹ Sera-Shriar 2013b: Ch. 4.

⁹⁰ Blake 1864.

were carried out for some several years in section E as to force such recognition. Striking in any case, that the main opposition to the presence of anthropology within BAAS did not come from the ESL members, but from people who were “quite incompetent to judge where was [...] required for the progress of a true science of Man”.⁹¹

ASL efforts included the presentation original themes, unlike ESL, whose presentations had been already made in London, but in the opinion of Blake, “the anthropological papers brought up by the delegates of the London Society were read only by sufferance”.⁹² According to Murchison, on the other hand, the presentations that were accepted of ASL were not read in those terms, but there were two factors to consider: the huge number of presentations, and that in the opinion of the members of the Section, the issues corresponded to “ethnologicals” and anatomical issues, which implied that in the background there was big news in the proposals. In fact, Murchison suggested that anthropology was not connected with ethnology, so that its place was the subsection of Physiology, which invited anthropologists to seek accommodation in some other section of the Association more appropriate to their interests.

B. Bath 1864

The search continued for recognition in Bath, a meeting marked by the presidency of one of the most renowned Victorian scientists, Sir Charles Lyell. His speech as president emphasised the meticulous care in the treatment of scientific advances over the past year, but his discussion of Darwin’s work is the

⁹¹ Blake 1864: vi.

⁹² *Anthropological Review* 1864.

most interesting. As mentioned in the previous section, two works were published in 1863 that marked the discussion of the origin of man, especially the clear involvement of evolution. Although Lyell was one of the authors of these books, and that his relationship with Darwin's views were made clear, as president of the BAAS he merely mentioned the issue once and only to refer to the agreement between both of them on the geological record and extreme fragmentation. As noted by Ellegård, this attitude was well received in the press, and especially the religious press,⁹³ considering that this was a meeting in which the religious presence was very strong, with the presence of many members of the Anglican Convocation, in which many evangelical scientists presented a statement in which they reaffirmed their faith in the harmony between God and his Creation. This statement was taken at the meeting of the Association, to counter the advance of the 'heresies' of Huxley. As reported by Desmond and Moore, these "schisms and splits appeared as they evangelized the delegates and destroyed the Association's decades-old veneer of religious neutrality".⁹⁴

The momentum showed by ASL members the previous year, with a large share in number of presentations, and the thrust that Hunt demonstrated especially by seeking recognition for anthropology, decreased markedly. Hunt did not attend the meeting due to illness, so that the responsibility for continuing the negotiations to achieve an exclusive space went to the secretary of the ASL, Carter Blake.⁹⁵ Hunt's proposal, and consequently defended by Blake, was that Section E would include not only geography and ethnology, but also

⁹³ Ellegård 1990: 76.

⁹⁴ Desmond and Moore 1992: 525.

⁹⁵ *Anthropological Review* 1864: 294.

anthropology,⁹⁶ considering a resolution passed last year, which stipulated that one or more sub-sections, “should all endeavour to work harmoniously together”.

Despite having the support of more than 430 members and under the consideration than other scientific societies based in London had appropriate representation in BAAS, the new proposal was not received positively. Although some geographers such as Captain Bedford Pim supported the motion, the rejection of Murchison was decisive, as the idea to incorporate a new theme to the section was practically impossible if one took into account the huge number of submissions already received each year. Moreover, in Murchison’s opinion and other members of Section E, there was little difference between the presentations already proposed by ESL and those proposed by Hunt and Blake, as they were mostly ethnological and anatomical. As has been noted by Withers, Murchison’s position during the meeting, in his role as chairman of Geography was to stress the importance of the discipline, while using their close relationship with issues such as ethnology,⁹⁷ reaffirming his power within the Association.⁹⁸

What is clear from the above is that the absence of Hunt drastically reduced the chances of the recognition of anthropology, as assessed by the “anthropologicals”. On the other hand, the role of “ethnologicals” in the discussions was markedly reduced, considering that the main defence of the place of ethnology in the Association came from Murchison and not from Crawford in his role as president of ESL. A custom that was often given was to present BAAS works that had already been presented at meetings of ESL in London, which was

⁹⁶ BAAS Minute book: 215.

⁹⁷ *Report* 1864: 130-136, Withers 2010: 84-85.

⁹⁸ Howarth notes that this power lasted from 1851 to 1870. See Howarth 1951: 146, Withers 2010: 171-173.

not good for the “anthropologicals”, who felt that the lack of originality affected the possibility of bringing the sciences of Man to a wider audience, as in the case that the newspapers were not interested in cover the BAAS meeting.⁹⁹ Examples of this situation included Crawford and his four presentations, ranging from archaeological topics to the supposed infecundity on what he called “human hybrids or crosses”.¹⁰⁰

Despite the setback, ASL made clear that they would persist in their attempt to consolidate an exclusive space for their discipline. In fact, they made clear their intention to request the opening of Section H, focused especially in anthropology.¹⁰¹

C. Birmingham 1865

As with the previous year, ASL members returned with renewed impetus in Birmingham. Unlike previous years, and from the experiences in Newcastle and Bath, the “anthropologicals” came to the meeting with high hopes for their cause. Again Hunt and Blake were commissioned to present to the General Committee a new proposal, which as we saw in the previous section, intended to open a new section devoted to anthropology. The result of the new account was not expected by the “anthropologicals”, but unlike previous years their discomfort was very noticeable. The Association Council was responsible for opposing this new motion, with a recurring character in this discussion, Murchison.¹⁰²

⁹⁹ Blake 1865: iv.

¹⁰⁰ *Report* 1864: xiii.

¹⁰¹ *Anthropological Review* 1864: 299.

¹⁰² *Anthropological Review* 1865: 354.

After this decision was taken Hunt returned to defend the case to look again for his (and the ASL) position. His defence started making it clear that at no time had he sought to establish rivalry with other societies, but his main goal was that anthropology, or the science of man, should be discussed based on its merits within a purely scientific discussion. He resumed the case of what happened with ethnology and Prichard, because in his mind after the death of the latter, ethnology lost intellectual support to the extent to be added to geography, losing importance in comparison with the rest of fields of knowledge.¹⁰³

To give added strength to his argument, Hunt stated that in his opinion the merits of anthropology should gain a space in the Association, from the large number of submissions that they could bring to the meeting, and the diversity of topics among which were included archaeology, descriptive anthropology or the same ethnology.¹⁰⁴

This defence, though supported by some geographers such as Edward Belcher, again found resistance from Murchison based on two arguments: first, since its inception the Association restricted its sections to seven as cities that received the association each year could not accommodate a larger number, and the second, the proposal of ASL was the first in 34 years for a new section, but in the opinion of Murchison had to be consistent in that if given a place to anthropology, sections would also have to be given to agriculture or phrenology. Murchison's conclusion could not be less daunting: he suggested that ASL in their quest to advance their knowledge, organize their own conference.¹⁰⁵

¹⁰³ *Anthropological Review* 1865: 354.

¹⁰⁴ *Anthropological Review* 1865: 354.

¹⁰⁵ *Anthropological Review* 1865: 355.

Although it was a discouraging proposal, Hunt did not give up and continued his insistence. This insistence eventually bore fruit. Despite Murchison's resistance, some committee members generally had a greater willingness to seek solutions to the immediate rejection. That compromise proposal came from the Irish surgeon and naturalist Edward Perceval Wright. From the large number of submissions proposed by the "anthropologicals" he considered it a shame to lose them, especially from the difficulty to establish distinctions between the values of one science or another.¹⁰⁶ In his view anthropology should be incorporated into Section D for which it was proposed to open a subsection focused on physiology and ethnology, and clarified that he preferred to use the word ethnology as he considered it a better word. This motion was corrected by the antiquary and astronomer John Lee who suggested that this subsection will focus not only in physiology and ethnology but also on anthropology.¹⁰⁷

These proposals were voted, and in principle all were rejected including Hunt's original proposal. From that time the situation was complicated for the "anthropologicals" because despite having more arguments to support their position they could no longer participate.

Hunt resumed his particular battle on Monday September 19 during the Committee meeting of Section E, and again suggested that anthropology should be recognized within the section or that there should be opened a special section for anthropology and ethnology, which resulted in a discussion in which the proposal was simply rejected. The next day, the linguist Kenneth R. H.

¹⁰⁶ *Anthropological Review* 1865: 357.

¹⁰⁷ *Anthropological Review* 1865: 357.

Mackenzie made a proposal that sought to end the dispute between “ethnologicals” and “anthropologicals”.¹⁰⁸ That proposal was simply to replace the word anthropology for the science of Man, unlike the past days resolution did not have much opposition. This resolution made clear the need for a section or subsection in which to discuss issues related to the science of Man. That decision found support from the Committee of Section E and thus the resolution was sent to the recommendations committee, so it was adopted that in the future there would be a special section for the science of Man. This was certainly good news for the “anthropologicals”, who accepted the recommendation without further discussion. It was from here that it was decided that the next meeting would open a special department for anthropology in Section D.¹⁰⁹

Despite this victory, the situation between anthropology and ethnology still had some friction. Following the conclusion of the meeting, the “anthropologicals” met with the geologist John Phillips to solve what they considered important details. Despite having secured the opening of a new section, there was no intention on the part of the Association to remove ethnology from Section E, as “ethnologicals” had also protested his position within the structure of the Association.

Although for the “anthropologicals” this was not the right solution, the position of the General Committee was clearly in favour of allowing both ethnology and anthropology to coexist harmoniously within the Association. The discussion continued, at least among the “anthropologicals” for both ethnology and anthropology to come together in a single section, to thereby eliminate

¹⁰⁸ Mackenzie 1865: 191.

¹⁰⁹ *Anthropological Review* 1865: 365.

relations that did not benefit the interests of science of Man, in a clear critique of the relation with geography, or such as it would be from the next meeting, with biology.¹¹⁰

After three years, the situation for the “anthropologicals” changed for the better. Especially the last meeting made it clear that there was an interest in the Association to accommodate the sciences of Man. As pointed out by Stocking, much of the discussion between the two metropolitan societies focused on the appropriate name to describe a common practice.¹¹¹ What followed was the official creation of an exclusive space dedicated to the sciences of Man.

2.5 Conclusions

After the appearance of ASL in 1863, the environment for the sciences of Man in Britain changed dramatically. The discussion led to a confrontation that was not only between two groups, but was between two views on the scope of practice of the sciences of Man. On one hand, the “ethnologicals” led by Crawford and strongly supported by Murchison in the BAAS, managed to maintain a position of strength, while ironically, ethnology grew strong reciprocal relationship with geography. On the other hand, Hunt pressed for anthropology as a discipline to be recognized as the proper way to study man. Although it can be complicated, there are notable differences between the two groups, especially in relation with the origin of Man, religion and politics, which marked their speech, both in publications and in presentations. Table 1 represents the diversity of presentations in relation to the sciences of Man during the first half of the 1860s:

¹¹⁰ *Anthropological Review* 1865: 366.

¹¹¹ Stocking 1971.

Contents	1861	1862	1863	1864	1865
Anthropology	0	0	6	3	3
Archaeology	0	1	2	2	4
Ethnology	6	2	7	15	11
Philology	2	1	2	0	1
Phrenology	0	0	0	1	1
Racial theories	1	2	3	3	1
Others	3	4	0	0	0
Total:	12	10	20	24	21

Table 1. Presentations related to the sciences of Man in BAAS meetings, 1861-1865

In this sense, BAAS became a battleground in the quest to establish a single view on the study of man, which encountered great opposition from the “ethnologicals”. Despite such opposition, after three years of debate it was possible to open a department for anthropology, but without eliminating the ethnology of Section E. In this sense, it is important to stress, as Goldman has mentioned, that in the nineteenth century “the British Association was the dominant institutionalisation of intellectual life in Britain”.¹¹² In this regard, the definition of Cahan for how we should characterize scientific institutions during the nineteenth century is useful to support the idea that the search for legitimacy within BAAS, a common space for everyone interested in the study of man, was the beginning of the process of institutionalisation of anthropology.¹¹³

¹¹² Goldman 2002: 52.

¹¹³ Cahan says: “...scientific institutions and communities may be characterized as consisting of populations of individuals who share similar cognitive interests and values that serve to provide them with a collective social identity and to advance individual scientific careers and group needs. Such populations are naturally composed of individual scientists and their variegated associates, yet they only become institutions and communities when those individuals – perhaps only few in number – act in concert over an extended period of time and perceive themselves as bound together in some particular professional manner”. Cahan in Cahan 2003: 293.

The role of Hunt as instigator of the new learned society must be recalled, from the perspective of a new space where those interested in the anatomical aspects of man could find a more suitable space for discussion. A point to note in both societies was the continued involvement of religious and political issues as part of their discussions, both in the metropolis and in the BAAS meetings.

From 1863 to 1865, BAAS meetings were the main place to discuss publicly the legitimacy of the two positions on the study of Man, ethnology and anthropology. The close relationship of the first with geography, a relationship particularly championed by Murchison and Crawford, prevented for several years a new space to be created, however, after several negotiations with Hunt as protagonist, a new Department was opened, with the intention of unifying the sciences of Man within the BAAS. The following chapters will aim to present in more detail the consolidation of the sciences of Man, now with the presence of two groups competing in the same space in a search that went beyond justifying a scientific position, but a competition for power over the study of Man.

3.0 Nottingham 1866: Man as an Integral Part of Nature, the Sciences of Man as an Integral Part of Biology

3.1 Introduction

“Men of science as well as other people must eat”¹ announced the *Nottinghamshire Guardian* in early 1866, as part of a series of worried articles relating to the state of preparations for the meeting of the Association in the city in half-a-year’s time. There was some uncertainty about the local organization and if it would present Nottingham in an appropriate manner to the distinguished visitors, the ‘Gentlemen of Science’. The concerns were understandable, as the city had been through a period of dramatic social and economic change in the wake of the Nottingham Enclosure Act twenty-four years before. Among the Act’s casualties was the formerly large proportion of arable land around the city, whose citizens had previously taken for granted easy access to foodstuffs.² Now, however, provision of food was one of several areas where the locals were struggling to meet the demands of hosting the BAAS meeting. No one wanted to make a bad impression on a group of visitors composed, in the newspaper’s words, “of the ablest and most learned men in science and art”,³ whose views

¹ *Nottinghamshire Guardian*, 17 November 1865; 2 February 1866.

² Beckett 2006: 220-252.

³ *Nottinghamshire Guardian*, 2 February 1866. Five days before the start of the meeting another piece, entitled, ‘The British Association’, was published in the same newspaper, in which the concerned tone of the earlier piece gave way to a celebratory, festive one. A striking point worth highlighting in relation to the importance of the meeting for the city was the local perception of men of science as different – as apart from other men – and

were influential across science and politics.

Once the meeting was underway, the excitement was palpable. As the *Daily News* commentator wrote at the time:

The British Association for the Advancement of “Science” has long since demonstrated its value by its success. Tried at first by the severe test of ridicule, and subjected afterwards to the severe test of theological suspicion, it has outlived them both, and its meeting has come to be one of the chief events of the holidays. Provincial towns and cities compete for the favour of its visits, and subscribe large sums to give handsome entertainment. It is a kind of democratic Parliament of science, meeting annually under a President elected for his scientific eminence alone, admitting all who choose to become members to a share in its deliberations, and trusting for support entirely to the popular interest in its scientific objects. The success of such an Association is evidence how large a place science has come to occupy in our modern life. Although science forms as yet but a small part of the education of the young, and the old Universities have only lately and jealously admitted it to a place in their curriculum, it occupies an ever-increasing share of the public attention, and meets us more and more at every turn.⁴

For the purposes of this thesis, the 1866 Nottingham meeting requires close attention not only because it saw the creation of the first Department⁵ of Anthropology in the BAAS, but because the question of the implications for humans of the new evolutionary science hung over the whole of the proceedings. The overall atmosphere of the meeting was marked in a decisive way at the outset by the inaugural address of the elected President, the physicist W.R. Grove, who highlighted the doctrine of continuity, based on the ideas of Darwin. Darwin was not only present through the presentations and discussions of his

the annual meeting of the Association as the time then these great men could get in touch with mere mortals. See *Nottinghamshire Guardian*, 17 August 1866.

⁴ *Daily News*, 22 August 1866.

⁵ During the meeting in Birmingham in 1865, it was decided to rename section Sub-Department, to refer to the subdivisions that were included in each section. See *Report*, 1868, p. xxx.

ideas, but he was also close to figures in key positions in the Association.⁶ For the first time in the history of the Association, the atmosphere was favourable to Darwin's ideas and, more generally, to evolution. This favourable environment is evidenced by two novel aspects of the organization for that year: the name change for Section D from Zoology and Botany to Biology, and within this section, as noted, the first appearance of a Department of Anthropology.

This change was not only nominal, but had a direct impact on the composition of the Section, which now included three specific departments, Anatomy, Physiology and Anthropology, as well as other presentations on Zoology and Botany. Unlike previous years, the sciences of Man on this occasion were relocated from their traditional site in Section E, Geography and Ethnology, to be included as part of the new Section, Biology, in which the study of Man became fundamental. The task was not easy, for, as we have seen, the recent history between the two main learned societies devoted to the study of Man was one of on-going disagreement – so much so that it was felt necessary to find someone who could mediate between them. That responsibility fell to the explorer and naturalist Alfred Russel Wallace (1823-1913), who was recognised as an authority by both sides, and not committed in a partisan way to either the ESL or the ASL. This was thought to be the best solution, since it would maintain a cordial atmosphere among all those interested in the subject. The Nottingham meeting thus became an event in which the life sciences, with special emphasis on Man, played a leading role for the first time in the Association's history.

⁶ Ellegård 1990: 78.

This chapter is divided into three sections. The first section will present in a general way the atmosphere that arose at the meeting, marked especially by the inaugural speech of President Grove, which, again, contained a strong statement of the importance of the ‘doctrine of continuity’ in understanding natural processes, especially in biology. An important part of the speech was an implicit backing of Darwin’s ideas, a situation that was carefully planned behind the scenes, and which finally allowed evolution and Darwin’s ideas to form an integral part of the meetings of the Association. The second section of the chapter is devoted to the renaming of Section D, now Biology, under the presidency of Thomas Huxley, in a clear attempt to unify under a single perspective the study of the various aspects of life. Here was also included a new Department named Anthropology; the topics and presenters who took part in this new venture will be examined in detail. Finally, the third section focuses on that unlikely unifier for the sciences of Man at the 1866 meeting, Wallace. Although his role as co-discoverer of the theory of natural selection with Darwin is well known, Wallace’s anthropological interests have been under-studied, a situation that is no less ironic when one considers that his fundamental interest in natural history from the beginning of his career was, as we shall see, to explain the origin and evolution of Man.

The intention in what follows is thus to give an overview of the progress and consolidation of the sciences of Man during the BAAS meeting at Nottingham. The meeting marked the culmination of years of competing approaches and agreements among stakeholders on the subject of Man. The subject had finally acquired a recognized and common space, which formally

allowed range of interested parties to speak about the sciences of Man as a unified science.

3.2 How a BAAS Presidential Address Could Set the Tone: The Case of Grove at Nottingham

A. William Robert Grove: Continuity, from the Laws of Physics to the Laws of Nature, and the Changing Nature of the President's Role

The situation described in the *Daily News*, whereby the BAAS met annually “under a President elected for his scientific eminence alone,” was actually rather a recent development. In the first few decades of the BAAS, although the presidents mattered, they did not matter as much as their title might suggest. The BAAS was traditionally organised around sections and departments. The Council consisted of those who had attended and presented at a meeting, as well as the presidents of various scientific societies. From 1836, daily business was handled by a secretary and later two general secretaries. The selection of a president was mostly a formality in which social rank and influence played a role. This trend reversed from 1860, however, when the selection of a president began to increasingly rest on “professional reasons”.⁷

George Basalla and his collaborators have analysed the role of the Association in communicating science to the Victorian public, as well as the key elements that made up the Association over time. By their reckoning, the “presidential address soon became the highlight of these meetings”.⁸ The address’s importance can be characterized by contemporary descriptions such as “the principal public scientific pronouncement of the year” or “the speech from

⁷ MacLeod and Collins 1981: 24.

⁸ Basalla *et al* 1970: 4. See also Knight 1996.

the throne of science”.⁹ The presentations within Sections and Departments were often too technical for people not versed in matters of science, while the presidential address was a forum for an eminent man of science to comprehensively explain the progress of science to laymen. Another sign of the importance of the speeches is the newspaper coverage, which included full transcriptions of what was said by the President each year.

If this meeting was clearly devoted to Darwinism, this was not the result of chance. It was due to a plan by established members including William Robert Grove (Figure 3.1), who had previously written to the botanist and Darwinian Joseph D. Hooker asking for some references and suggestions about topics and readings for his Presidential address.¹⁰ Hooker responded with a list of papers: Wallace’s 1864 paper on man and his work on Malay Archipelago butterflies,¹¹ Bates’ works on the Amazon, especially concerning mimicry in butterflies,¹² Hooker’s own works on Arctic and Australian Flora,¹³ and Darwin’s *Orchids* and “Dimorphic condition in *Primula*”.¹⁴

⁹ Cited in Basalla *et al* 1970: 4.

¹⁰ Hooker sent a letter to Darwin on 29 May in order to ask him his opinion about the references he gave to Grove: Darwin Correspondence Database. <http://www.darwinproject.ac.uk/entry-5104/>, and Darwin responded on 31 May, Darwin Correspondence Database. <http://www.darwinproject.ac.uk/entry-5106/>. Ellegård 1990: 78-80, Desmond and Moore 2009: 536.

¹¹ Wallace 1864, Wallace 1865.

¹² Bates 1863.

¹³ Hooker 1847, Hooker 1867.

¹⁴ Darwin 1862a, Darwin 1862b.

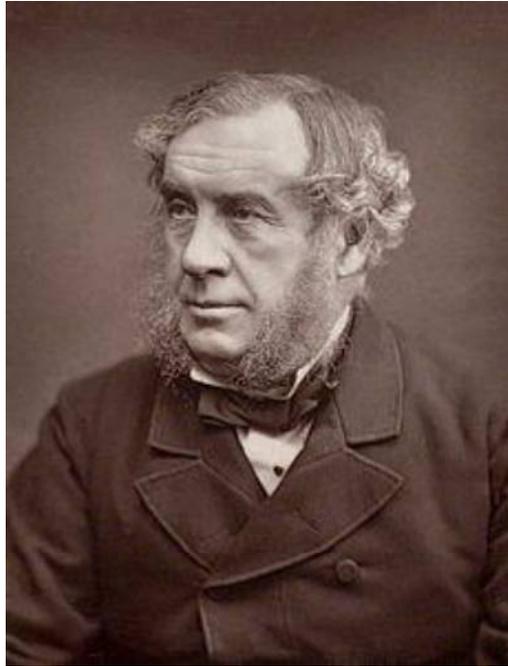


Figure 3.1 William R. Grove¹⁵

It is worth noting in passing, that when Hooker accepted the invitation to give Grove information, it was not a pleasant situation for him. For some years Hooker's relationship with Grove had been strained, as he explained to Darwin on 16 January, 1866: "Would you believe it, I have in cold blood, accepted an invitation to deliver an evening address on the Darwinian theory at Nottingham. I am utterly disgusted with my bravado. The fact is that Grove asked me, & I feel that I ought to make amends for hating him so heartily as I did once".¹⁶ Darwin's opinion about Grove was totally different, and had been for some time. Darwin said he had recently talked with Grove, after the meeting of the Royal Society on 26 January, to the point that "he harangued me to that extent I was half-dead, & he did not at all clearly see what he was talking about. I had thought

¹⁵ Image taken from http://en.wikipedia.org/wiki/File:William_Robert_Grove_2.jpg.

¹⁶ Darwin Correspondence Database. <http://www.darwinproject.ac.uk/entry-4978/>.

you rather unjust about Grove; I humbly axe your pardon".¹⁷

Grove's commitment to Darwinism seems startling, especially considering that he was initially working at a distance from the life sciences as a natural philosopher and judge.¹⁸ He studied classics at Oxford (1829-1832) and subsequently prepared for a legal career in London. The origins of his interest in physics, especially electricity, are unclear, but his commitment to science was clear from his role as founder of the Swansea Literary and Philosophical Society in June 1835 and his acceptance as a member of the Royal Institution in the same year. His work on photovoltaic cells in 1839 won the attention of Michael Faraday, who invited him to present at the Royal Institution. With this and other works, Grove created a reputation as an experimentalist. One of his most famous works was *On the Correlation of Physical Forces*,¹⁹ published first in 1846, and with six editions published by 1874.²⁰

The 1866 meeting began with Grove's presidential address,²¹ which opened by emphasising the role that the Association had played over the past

¹⁷ Darwin Correspondence Database. <http://www.darwinproject.ac.uk/entry-2689/>.

¹⁸ When it was learned that the President would be Grove, the *Leisure Hour* devoted an article to the scientific importance of his work in electricity. His views were characterized as part of the emerging scientific naturalism, the article "In all phenomena, the more closely they are investigated, the more are we convinced that, humanly speaking, neither matter nor force can be created or annihilated, and that an essential cause is unattainable - Causation is the will, Creation the act of God." *Leisure Hour*, 18 August, 1866, 517-520.

¹⁹ Cantor 1975.

²⁰ Despite the importance of the achievements of Grove, there is little material to deepen it. On the life of Grove, see Iwan Rhys Morus, 'Grove, Sir William Robert (1811-1896)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2005 [<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/11685>, accessed 1 July 2014]; on his institutional work, Cooper and Hall 1982; on his contributions to physics, Cantor 1975 and Morus 1991.

²¹ This address was printed in length in *The Times*, 23 August 1866: 4, *The Morning Post*, 24 August 1866: 2, *The Leeds Mercury*, 23 August 1866, *The Dundee Courier & Argus*, 23 August 1866, *Daily News*, 23 August 1866. In others like *The Derby Mercury*, 29 August 1866, *Birmingham Daily Post*, 23 August 1866, *Nottinghamshire Guardian*, 24 August 1866: 5, *Aberdeen Journal*, 29 August 1866, there is just a brief mention of the address, with a special mention of the role of continuity.

years in the advance and support for science, especially with the development of universities as well as the fact that the Government increasingly recognized the importance of men of science in the search for solutions to problems of the country. Unlike in other years, however, Grove preferred to mention what in his view were the lessons of the year, and they were the “the probable prospects of improved natural knowledge”.

These lessons could be summarized, for Grove, in one word: continuity. Far from being new, this word had, of course, had a greater number of applications than previously. In general, Grove explained, new observational, experimental or deductive knowledge “is either attained by steps so small as to form continuous ascent really extremely”. And with the advancement of science, man could discover intermediate steps that unite the apparent scattered instances:

One word will give you the key to what I am about to discourse on; that word is *continuity*, no new word, and used in no new sense, but perhaps applied more generally than it has hitherto been... Thus the more we investigate, the more we find that in existing phenomena graduation from the like to the seemingly unlike prevails, and in the changes which take place in time, gradual progress is, and apparently must be, the course of nature.²²

Some days before the beginning of the meeting, Grove sent some letters to Darwin in order to gauge his opinion about the address to seek advice concerning what he should mention in relation to evolution. Grove sent a manuscript version of his address to Darwin, in which he discusses with Darwin his explanation of adaptation, initially considered from Lamarck’s and Cuvier’s point of view. Grove apologizes to Darwin for not saying much about adaptation, since for him: “the answer would have been that the argument cut both ways as whether an animal by circumstance Natural selection &c became suited to locality in

²² *Report 1867*: liii-lxxxii.

conformation habits &c—or was specially created for particular circumstances the adaptation would equally be a necessity— an animal or plant must within limits be adapted to circumstance or not be at all—”.²³

Grove’s speech and his approach to continuity was mainly based on examples from astronomy, his own area. Grove gave a quick summary of how the Earth was considered plane or at the centre of the Universe until recently, which also suggested a consistency in the positions and movements of meteorites and other stellar bodies. He spoke also of chemistry, to clarify the relationship of continuity between the various elements that make up the matter in the Universe. When Grove was speaking of topics such as geology, for him palaeontology was the embodiment of the idea of the close relationship between changes of climate on the planet and their visible results in rocks or living beings. It was at this point in the address that Grove introduced Darwin’s work.

The discourse around Darwin’s work was a deep philosophical discussion, in which Grove asked himself questions such as how could the first elephant have emerged?²⁴ We can consider that a new race emerged from former parents, but, if they did not exist would the elephant had been created as well, and would this be a signal of the presence of the Almighty? For Grove, it was obvious, thanks to new scientific knowledge, and in particular to the notion of continuity, it was not necessary to accept God’s existence, but instead one should, “be more reverent and more philosophical to inquire by observation and

²³ Grove to Darwin, 31 August 1866. The manuscript version of Grove’s address has not been found. Darwin Correspondence Database, <http://www.darwinproject.ac.uk/entry-5201>.

²⁴ For example, one response can be found here: *Punch*, 1 September 1866: 90.

experiment, and to reason from induction and analogy²⁵ to search for escape from the miraculous explanations.

Despite the sensitivity of the subject, and his confidence that the Association was an unprejudiced forum, Grove finally introduced his position on the role of species, how they had changed gradually to suit their environment, through the action of natural selection: all ideas which had been proposed by Darwin. It has to be noted that Grove did not comment specifically on the validity or the superiority of Darwin's theory of natural selection. He wanted, instead, to show, first and foremost, that thanks to the progress of science, the continuity of natural phenomena becomes much more apparent.

Among the claims that Grove presented in order to assert the relevance of Darwin's ideas were the impossibility of spontaneous generation (largely from the Pasteur-Pouchet confrontation on the topic)²⁶ and the need to clearly establish a species concept and to explore its origins, so that in conjunction with the discoveries of geological phenomena one could understand phenomena like extinction. He laid particular emphasis on the varieties that occupy the gaps between species as an argument with respect to transmutation as opposed to special creation.

Grove also underscored the importance of history and culture in the development of civilisation. On his view, "the superiority of man over other animals inhabiting this planet, of civilised over savage man, and of the more civilised over the less civilised, is proportioned to the extent which his thought

²⁵ *Report* 1867: lxx.

²⁶ For an in depth study on the subject, see Farley and Geison 1974.

can grasp of the past and of the future".²⁷

As noted, presidential speeches initially functioned to recap the most relevant developments in different areas of science throughout the year. Each president sought to emphasize his specialty. Grove, however, was a unique case. As James Moore has pointed out, Grove belonged to a generation of dissident intellectuals who promoted the creed of scientific naturalism.²⁸ He sought to reaffirm that continuity in Nature was already known in relation to physical laws. More generally, Grove's attitude was defensive and careful and even through the point of his address was to showcase evolution, he was discreet and there was very little talk of natural selection.

B. Reactions to Grove's Presidential Address and its Continuationism

Nevertheless, the link between continuity and anthropology was an explicit point of discussion after the meeting. James Hunt, for example, published an article referring to this point, which in general terms reaffirmed Grove's view of the role of continuity in nature, and stressed that it was not a new subject for anthropology,²⁹ since Johann G. Herder (1744-1803), Samuel T. Soemmering (1755-1830) and Charles White (1728-1813) had already made similar proposals.³⁰ In other papers, Hunt rejected the ideas proposed by Darwin, and

²⁷ Again, it is clear that discussions and presentations at the BAAS showed an interest in man, to explain his origins, his anatomy, his culture, his state of civilization, all of these were viewed as aspects of the progress of humanity. *Report 1866*.

²⁸ Moore, 1990: 180.

²⁹ Hunt 1867a.

³⁰ Soemmering and Herder's proposals were influenced by the *Naturphilosophie* which stressed the unity of organisms. Charles White, on the other hand, a Manchester doctor with deep interests in anthropology, published in 1799 his main work on this subject, *Account of the Regular Gradation in Man, Animals and Vegetables*. This was a series of lectures in which from a strong view that there was a polygenetic proposed general gradation of a species to another, which even suggested relationships between species

not only his. Hunt also criticized some of Darwin's defenders such as Huxley and Wallace. Some of Hunt's harshest criticisms were brought against Wallace and his proposal on the origin of human races by natural selection.³¹

Grove's address drew a swift response, not least in the forms of various sermons that were delivered in parallel with the meeting. It is worth noting that these sermons were primarily focused on achieving reconciliation between Grove's discourse and the different views promoted by religion.³²

One such sermon was by the Rev. Charles Pritchard (1808-1893), (Figure 3.2) Savilian Professor of Astronomy and Fellow of New College, Oxford who delivered sermons in parallel to the annual meetings of the Association on numerous occasions, all of which were published in 1889, shortly before his death. Born in Alberbury, Shropshire, at the age of sixteen he enlisted as sizar³³ in Cambridge. He was elected Fellow of St. John's College, and became a priest in 1831. From 1834 to 1862 he acted as headmaster of Clapham Grammar school. After this time, he retired and began to take an active interest in the Royal Astronomical Society. He started formally a career as an astronomer in 1870

and races, but never came to accept the possibility that a species may give to another. This was the empirical basis for polygenism. See Stella Butler, 'White, Charles (1728–1813)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/29238, accessed 30 June 2014].

³¹ Hunt 1866. For some doctors like William Gilbert Child, Grove's proposal remained on the same level with what had been said by both Darwin and Herbert Spencer. See Child 1869: 136-138.

³² Recently, Toal has highlighted the importance the sermons had in BAAS meetings as part of the rhetoric of conflict within the science-religion relationship, to understand the dynamics of secularization of the nineteenth century. See Toal, 2012.

³³ In Trinity College, Dublin, and in the University of Cambridge, this term refers to an undergraduate student who receives some assistance from the school, such as meals or low tuition, or who was sometimes paid from performing a specific job. "sizar, n.". OED Online. June 2014. Oxford University Press. http://0-www.oed.com.wam.leeds.ac.uk/view/Entry/180585?redirectedFrom=sizar (accessed 30 June, 2014).

when he was elected as Savilian Professor at Oxford. With the support of Warren de la Rue (1815-1889), Pritchard succeeded in establishing a new observatory for the University. His work included the systematic study of stellar photometry and the application of photography to the determination of stellar parallax. He was also a member of the Royal Society from 1840, and received a royal medal for his work as astronomer in 1892.



Figure 3.2 Charles Pritchard³⁴

At the Nottingham meeting Pritchard took the opportunity to give his opinion of Grove's address. Entitled "The Continuity of the Schemes of Nature and of Revelation", Pritchard's sermon addressed the question from two sides: the first

³⁴ Image taken from <http://www.sciencephoto.com/media/227873/view>.

part of the sermon was a discussion of consensus on the role of continuity in nature, the second part was a strong critique of the theory of natural selection.

Pritchard, in a similar manner to Grove, established the continuity of Nature by drawing on different facts and explanations of the physical world. He concluded that: “There is a *Continuity* between the Scheme of Nature and the Scheme of Revelation, as recorded in the Scriptures”.³⁵ On the other hand, he criticized the acceptance of the Darwinian hypothesis as the explanation of the origin of continuity.³⁶ He took as a basis the familiar objections to the evolution of the optical structure of the human eye; in short, he made his criticisms over design. Another criticism brought forward by Pritchard, was the question of time, the millions of years alluded to by Darwin. While discussing the process of natural selection, Pritchard stated that: “It is difficult to assign any approximate limitation to the meaning of the term millions on millions of years”,³⁷ showing in that way his disagreement with the theory, on the basis of current scientific knowledge.

Another sermon given in association with the meeting was “Science: Its Strength and Weakness”, by Rev. Clement Clemance (1829-1895). Clemance was the minister of Chapel Castle Gate, Nottingham, from 1860 to 1875. He organized various committees for workers in the area, with the idea of conducting services to alleviate their needs. His work was very successful in adding to his congregation while the church was repaired in 1864. In 1875, with markedly deteriorating health, he resigned his position, in order to continue his ministry in London at the Congregational Union, where he finally died.

³⁵ Pritchard 1889: 5.

³⁶ Pritchard 1889: 37.

³⁷ Pritchard 1889: 42.

His sermon in 1866 at, or alongside, the Nottingham meeting, sought to build bridges between science and religion. Science, Clemance believed, was the way to understand God's work:

It will be well to state, however, out and out, that we never feel the least disturbed by the apparent conflict between the advance of science and the book of revelation; for these reasons: -Here are two books of God -the world and the word; here are two schemes of man- the interpretation of the world, or science, and the interpretation of the word, or theology. The two books of God are the same age after age, the two schemes of man vary age after age.³⁸

Much of what was said by Clemance was based on making a clear distinction between science as a form of knowledge of nature and religion as a form of belief, and therefore "science and religion [could] be regarded as helpers of each other".³⁹

Responses such as those given by Pritchard and Clemance show that events during the meetings of the Association often went beyond a strictly academic framework. The impact of what was discussed at each meeting reached many different areas, and religion did not escape from the Association's impact.

Grove's approach was risky. From the moment he knew he had been appointed as President, he devoted time and effort to preparing the address. He sought to have available all the information needed to create the best possible account of his view of science. Using the continuity of nature as a metaphorical way of referring to the transformation processes of organisms was a move of such rhetorical force that it proposed a new world view.⁴⁰

One personal response to Grove's address came from Alfred Wallace, only weeks after the end of the meeting in Nottingham. In *The Scientific Aspect*

³⁸ Clemance 1866: 9.

³⁹ Clemance 1866: 21.

⁴⁰ *Freeman's Journal*, 29 August 1866.

of *the Supernatural*, his first spiritualistic writing, Wallace drew on Grove's address to argue that the great law of continuity is found throughout Nature. In addition, however, he advocated a spiritual theory since it gave further support to the idea of progress towards more advanced states of existence.

The general perception was that Grove's speech focused more on a general perspective of the state of science over the past year, than on his own interests or field of knowledge⁴¹ as was common practice among the Presidents of the Association. The point Grove emphasized most strongly was the doctrine of continuity, something which earned him excited applause from the audience. Several publications such as *The Reader*,⁴² *Daily News*⁴³ and *Athenaeum*,⁴⁴ transcribed the speech without further review. The *Derby Mercury* chose not to transcribe it, since in the editor's opinion the address was too long and very technical. Instead the newspaper focused in on emphasizing a single point, continuity, based on the Darwinian theory as an explanation of nature.⁴⁵ The *Manchester Guardian* was a little more explicit, summarizing the whole meeting, with special emphasis on the contributions of astronomy, electricity, and discussing at length the issue of continuity. Grove's speech lasted over two hours but nonetheless was well received by the audience, with sustained and loud applause.⁴⁶

⁴¹ *Birmingham Daily Post*, 23 August 1866.

⁴² *Reader*, 25 August 1866.

⁴³ *Daily News*, 23 August 1866. In a note published the day before, August 22, it was highlighted the choice of Grove as an example of the success of science, in particular his work in electricity, especially by visible signs such as the Atlantic telegraph cable which joined together two continents. Speaking of modern science, physics was consolidated as an alternative to the "old metaphysical thought", in which only the observed phenomena and the facts were that "oblige us to believe". See *Daily News*, 22 August 1866.

⁴⁴ *Athenaeum*, 25 August 1866.

⁴⁵ *Derby Mercury*, 29 August 1866.

⁴⁶ *Manchester Guardian*, 23 August 1866.

One of the most attractive stories not only about Grove but about the meeting in general came out in *Punch*. Under the title, “The Philosophers of Nottingham”⁴⁷ (Figure 3.3), *Punch* presents a caricature accompanied by a poem, describing the great figures of science and the fundamental topics of their presentations. The image shows all recognized figures balancing on globes that followed a spiral path towards the sky. At the top was William R. Grove, associated with two concepts that marked his presence in the BAAS, “continuity” and “correlation”; further down, Sir Roderick I. Murchison, was labelled as the ‘Traveller’s Friend’ along with Thomas H. Huxley who was balanced on an ape skull while playing with some bones. Completing the constellation were engineer Sir William Fairbairn, geographer Matthew F. Maury, geologist Sir Andrew C. Ramsay, chemist and journalist Sir William Crookes, chemist William Odling, astronomer and meteorologist James Glaisher, the natural philosophers John Tyndall and David Brewster, and astronomer William Huggins.

The verse that surrounds the figure begins with an apology for representing such austere and funny characters of science. It then refers to the remarkable points for each one during the meeting. First comes Grove and continuity in Darwinian terms, with the concrete example of biological development of an elephant from the ‘trunk of life’. Murchison’s relevance within the Association as key support for disciplines such as geography and exploration of the most secluded parts of the world, is highlighted, alongside Huxley’s interest in chimpanzee bones.

⁴⁷ *Punch*, 8 September 1866: 99.



Figure 3.3 “The Philosophers of Nottingham”⁴⁸

The general idea of the image conveys a good summary of what was said and done at the Association at this period, with the firm idea of bringing science to the people, like a circus visiting various locations to entertain the audience with various acts. The efforts of the President and the rest of the members of the Association was to present different competing views of nature and science in order to consolidate them.

⁴⁸ Image taken from *Punch*, 8 September 1866, 99.

3.3 How Name Changes at the BAAS in 1866 Reflected the Rise of Biology as a Unified View of Nature⁴⁹

A. *Wider Changes in the Life Sciences, 1831-1865*

It was not only anthropology that found a place at the BAAS in 1866. Evolution also did, thanks to people like Huxley, Wallace and Galton, who pushed for a “reform of Nature”⁵⁰ which would be accepted by bigger audiences. Evolution was only part of a larger vision, a discipline that unified all studies of life. The appearance of Section D, renamed for this meeting as Biology, was a key moment in the consolidation of biology as a field of study formally recognized, especially in the Association. Although the word “biology” was coined some six decades earlier by Jean-Baptiste Lamarck and Gottfried Reinhold Treviranus, its use within the life sciences was limited, hence my need to only briefly highlight here the process of its institutionalisation. Joseph Caron has highlighted the difference between the proposal of the word and the creation of the discipline, based on different traditions of the study of life, especially in France, Germany and England.⁵¹

The aim of biology, according to Lamarck, was the study of everything related to living bodies, particularly their organization and development. In the same French context, August Comte later used the word to refer either to physiology or the goal of biological sciences in the formulation and development of laws of life. In the case of Germany, the definition given by Treviranus, in his work *Biologie; oder die Philosophie der lebenden Natur* (1802), was a

⁴⁹ For a good review about how biology reached maturity in the nineteenth century, see Wilson, 1959.

⁵⁰ Desmond 1998: 350.

⁵¹ Caron 1988.

comprehensive proposal for a new synthetic science of life, but without supposing that this would seek to establish a new discipline as such. Using these two cases, Caron demonstrates that, in the nineteenth century, there was no unified concept of biology. At the same time, “when unification of the life sciences was considered an aim seriously, it was meant to be based on the furthering of existing avenues of specialized research, followed by development of the consequently greater capacity of generalization possible”.⁵²

The British case needs further clarification. The influence of Darwin’s ideas in the history of biology is beyond dispute, but their role in the creation of the discipline is questionable. Authors such as Ernst Mayr have suggested that biology was founded on ideas associated with evolution, and in that sense he claimed that the discipline could not exist without evolution. However, the word biology was used very differently in this context. One of the earliest references is from the chemist and physician Thomas Beddoes, who wrote in 1799, “Physiology therefore – or more strictly biology by which I mean the doctrine of the living system in all its states, appears to be the foundation of ethics and pneumatology”. In 1819, the surgeon William Lawrence referred to the concept proposed by Treviranus in Germany, as a more appropriate term than physiology to study the various forms of nature. Another example was the Cambridge philosopher William Whewell, who in the ninth book of *The Philosophy of the Inductive Sciences, Founded upon their History* (1840), preferred ‘biology’ rather than ‘physiology’ to describe all those sciences whose object of study was life, based on its etymology.

⁵² Caron 1988: 239.



Figure 3.4 Sir William Lawrence⁵³

One of the most striking works of this period is *The Principles of Biology* (1864), written by philosopher Herbert Spencer. From the beginning of the book Spencer made clear that “the aim of this work is to set forth the general truths of Biology, as illustrative of, and as interpreted by, the laws of Evolution”, thereby clearly establishing the relationship between biology and evolution, and to do this, as explained by Spencer, he received the help of Huxley and Hooker, in the form of information and corrections for the book.⁵⁴ The first volume of the book is organised in order to provide first a description of the objective of study, then descriptions of different biological processes – such as growth, development, adaptation, heredity, variation, among others – to finally consider evolution as an

⁵³ Cunningham 1908.

⁵⁴ Spencer 1864, vol. I: v.

explanation of life. The second volume is devoted to expanding traditional topics such as morphology, physiology and the 'laws of multiplication'. With all this, Spencer was giving an inclusive definition for biology, which includes descriptive disciplines as much the new vision based on evolution.

The development of the life sciences at the beginning of the century occurred in a different manner from that intended by the Association. Speaking of the life sciences, it should be noted that we refer to a number of issues addressed from different perspectives all bearing on the study of living matter. The range can be divided mainly between medicine, which in turn covered anatomy and physiology, and natural history, covering topics such as botany and zoology. It should also be noted that in the early nineteenth century, the sciences of Man were not included in the life studies, as in Whewell's proposal.

The life sciences were part of the organizational structure of the BAAS from its inception in 1831. At the first meeting in York, six sub-committees were established, including one for matters of zoology and botany. In the following year, section names were settled, including Zoology, Botany, Anatomy and Physiology. After 1833 there were six sections, four years later this number expanded to seven, and their names were replaced with letters. Section D remained devoted to Zoology and Botany, while Anatomy and Physiology underwent several changes of location, until in 1847 they were completely absorbed by Section D. The case of the sciences of Man was special from the start. Their first appearance was in 1832 in the hands of James Cowles Prichard,⁵⁵ who gave a presentation on philology and the anatomy of man, which was not included in any particular section. In 1837, Thomas Hodgkin founded the

⁵⁵ *Report 1833: 529-544.*

Aborigines Protection Society, and sought unsuccessfully to bring the society's proposal to the Association. One of the reasons why anthropology did not find an immediate place in the organization was the intent of the founders to establish a scientific forum that was not involved with political, social or religious conflicts.⁵⁶

In 1839, Prichard was again the protagonist. He managed to persuade the Association to organize a committee in order to prepare and circulate an ethnographic questionnaire, although, funds for this were considered unsuitable for Hodgkin. Prichard continued his efforts in 1843, and his insistence on establishing ethnology as the proper study of Man united his vision of the APS to that of the newly-formed Ethnological Society of London. This move meant much greater financial support for ethnological research, and in 1846 a subsection was opened in Section D called Ethnology. It was in 1851, at the insistence of Sir Roderick I. Murchison, that ethnology became part of Section E, along with geography, as Murchison thought that both disciplines complemented each other perfectly.⁵⁷

⁵⁶ This approach was the same as was applied in other cases, such as education, medicine, agriculture and phrenology. We must also see that the non-involvement of religion was relative. According to Morrell and Thackray, the foundation of the BAAS was intended to establish a group of people dedicated to science, alternative to Oxford, Cambridge and other learned societies, with an environment dominated by liberal Anglicans, but also Quakers, Unitarians and evangelicals. The environment of inclusion was incomplete, as there was no presence of Jews, Roman Catholics, Methodists, Congregationalists, Baptists, atheists or materialists. See Jack Morrell, 'Founders of the British Association for the Advancement of Science (act. 1830–1836)', *Oxford Dictionary of National Biography*, Oxford University Press. [<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/theme/59216>, accessed 1 July 2014], Morrell and Thackray 1981: 21-29. Moreover, as can be seen throughout the thesis, the religious theme was accepted in both the presentations and discussions, especially in relation to the sciences of Man.

⁵⁷ The study of geography as a discipline, beyond and within the Association has been widely developed in recent years. See Livingstone 2003; Withers 2010. See also Beaver 1982.

To summarize: just as the changes that occurred in the name of Section D reflected a complete change in the understanding of the life sciences, so, in the same vein, we cannot underestimate the significance of the explicit inclusion in that section of the sciences of Man, understood now as part of the newly unified study of life. From 1866 on, Man was, for BAAS audiences, a many-sided biological problem.

B. Why Huxley's Involvement in these Changes was No Accident

Thomas H. Huxley's interest in the life sciences stemmed from his medical training in which he had worked particularly on physiology. His first attempts to speak about those sciences as a unified science of "biology" were between 1855 and 1858 when he was responsible for the Fullerian Lectures of the Royal Institution. The Fullerian Lectures were intended to relate to physiology and anatomy. While the subject of his lectures focused on topics that were included within natural history, Huxley entitled his performances "Principles of Biology, Morphology and Physiology",⁵⁸

The 1860s – when Huxley became "Darwin's bulldog" – were the most interesting period for Huxley's anthropological work. The outcome was for him the perfect foundation on which to base his position, especially against theology, and with his passion and his rhetorical abilities would enable him, in the words of Lyons, to "convince men they were monkeys".⁵⁹ It was Huxley who first

⁵⁸ The titles and topics of Huxley's presentations were: *On certain Zoological Arguments commonly adduced in favour of the hypothesis of the Progressive Development of Animal Life in Time* (1855); *On Natural History as Knowledge, Discipline, and Power* (1856); *On the present state of Knowledge as to the Structure and Functions of Nerve* (1857); *On the Phenomena of Gemination* (1858). See Royal Institution of Great Britain, *Proceedings*, 1858.

⁵⁹ Lyons 2010: 452.

seriously raised the issue of human evolution in 1863 with *Man's Place in Nature*, which extensively emphasized anatomical similarities between apes and men. In this work his interest in the sciences of Man was not only on the strictly academic level but also began to focus on the institutional context and the idea of being able to influence the development of the sciences of Man, which can be seen as “the final shot at Owen’s misshapen ape brain”,⁶⁰ especially in the context of discussions in the BAAS. As noted by Bowler, at physical and mental level there was no significant difference in order to separate humans and primates, a materialist explanation that stated some of the basis of “scientific naturalism”.⁶¹ His interest in comparative anatomy, presented in his *Lectures of the Elements of Comparative Anatomy* included several examples comparing mammals with Man, establishing in that way a continuity between all animals:

By the help of these landmarks, chiefly, it has been possible to identify the bones known as basi-occipital, ex- occipitals, supra-occipital; basi-sphenoid, alisphenoids, parietals; presphenoid, orbito-sphenoids, frontals; or, in other words, the constituents of the walls of the brain-case, throughout the whole series — from the Pike to Man. And it is found that these bones, when they all occur together, are so disposed as to form three, originally distinct, segments.⁶²

An example of Huxley’s interest in the sciences of Man is evident on his “On the Methods and Results of Ethnology” (1865),⁶³ a document in which Huxley gave his definition of the various branches of study in science. For him, ethnology was:

...the science which determines the distinctive characters of the persistent modifications of mankind; which ascertains the distribution of those

⁶⁰ Desmond 1994: 307.

⁶¹ Bowler 2009: 124.

⁶² Huxley 1864: 299.

⁶³ Originally published in *Fortnightly Review* 1865: 257-277, was also published in his *Collected Essays*, volume seven, devoted to works published by Huxley on various anthropological and ethnological themes.

modifications in present and past times, and seeks to discover the causes, or conditions of existence, both of the modifications and of their distribution.⁶⁴

In that sense, it was a branch of anthropology:

... the great science which unravels the complexities of human structure; traces out the relations of man to other animals; studies all that is especially human in the mode in which man's complex functions are performed; and searches after the conditions which have determined his presence in the world. And anthropology is a section of Zoology, which again is the animal half of Biology—the science of life and living things.⁶⁵

Both definitions reveal Huxley's vision of man's place in nature, but also outlined his view of the organization of the life sciences, with biology as the junction of the various topics.

The differences between Huxley and his notorious enemy in London anatomy, Richard Owen, had a special place within the BAAS meetings, especially between 1860 and 1862. The dispute centred on the anatomical differences in the brain between gorillas and humans. It is a well-known story, about which much has been written, but while it was primarily focused on brain anatomy, we can also see in it the differences between two ways of looking at life, and in particular at man. In Oxford on June 28, 1860, after a presentation by Professor Charles Daubeny entitled "On the Final Causes of the Sexuality of Plants", the confrontation between Huxley and Owen began. This was the first of three occasions on which they would argue about the comparative anatomy of the brain at the Association's meetings.⁶⁶ It was a clash of two different views on the study of life, with Owen focused on the morphological and anatomical, while Huxley focused on the study of history and the transformation of organisms over

⁶⁴ Huxley 1894: 9.

⁶⁵ Huxley 1894: 10.

⁶⁶ Rupke 2009: 194.

time.⁶⁷

This battle of visions can be seen as paradigmatic, and the Association became the battlefield. Traditionally in this section, presentations related to the life sciences. For convenience, the section was often organised in sub-sections that focused on specific topics such as anatomy and physiology. Owen and Huxley's plans for biology aimed to consolidate and unify all of these studies in one discipline, although clearly each subsection would retain something of its own particular vision.⁶⁸

One way to define the differences between these two thinkers is through their metaphysical attitudes to the role of observer in the biology.⁶⁹ Anatomy was a dark science in many ways; largely because it did not offer any guide to defining time structures. Owen's strategy was to give detailed descriptions which contained all the information needed to take the place of the observer, even though this was inconvenient for those who did not have adequate preparation. For Huxley, the observer's role was not necessary, since an observer would only intervene in the process of discovering the facts. Christopher Cosans analyses Huxley and Owen's debates about the brain from this perspective. Owen was inspired by *Naturphilosophie*, and consequently "rejected the notion that [one] should divorce science itself from human values", since he considered the individual to be of vital importance. In this sense, his biology focused on "how organic structure emerges from developmental processes that come from within the individual organism". On the other hand, Huxley believed that Nature generates new species "by treating individual organisms as passive survival

⁶⁷ Cosans 1994.

⁶⁸ Cosans 1994.

⁶⁹ Cosans 1994: 154.

machines”.

From Cosan’s analysis, one can conclude that man was more continuous in Owen’s vision than in that of Huxley. Huxley disagreed with the classification Owen proposed that man was assigned to a separate subclass, arguing that there were no significant differences between the brains of humans and apes. He used other factors to explain these differences, to the point that he “ripped apart the human soul with a war between conscious reason and man’s animal nature”.⁷⁰ His proposal was that science could not account for the reasons that human consciousness existed, and that men of science should restrict their attention only to the fact that consciousness exists and the relations between its different states.

By contrast, Huxley considered that consciousness was no mystery. He believed that the origin of human intelligence was an extraordinary event but not any more extraordinary than the appearance of any other organ. All the distinctive features of man such as social and moral capabilities, served to distinguish between man and beast, as a result of brain development.

Huxley and Owen’s different positions paved the way for the development of biology in England. In the case of the BAAS, the outcome of the discussions in this forum were favourable to Huxley: he finally achieved the name change for Section D (to Biology), and, furthermore, his vision was consolidated within the section’s presentations. This had considerable importance for Huxley in his pursuit of new position for the reconceived science of biology within the Association and the emerging scientific community.⁷¹ Furthermore, the support of other important characters, like Galton, Hooker, and Darwin,

⁷⁰ Cosans 1994: 163.

⁷¹ The *Dundee Courier* emphasized Huxley and Tyndall as perfect examples of the new type of scientist. See *Dundee Courier*, 23 February 1867.

contributed to a better positioning of scientific naturalism.

3.4 Wallace and the New Department of Anthropology

A. Wallace for President

One issue remained to be solved once a space for anthropology had been won; the election of a president for the new Department, especially one who could mediate between the interests of the ASL and the ESL in their pursuit to dominate the sciences of Man. After it had been confirmed that section D would function as an identified division, the Council of the Association unsurprisingly named the section's first president as Huxley. Once Huxley was named President, he began the task of organizing the various sections. In conjunction with the Secretary of the Association, Francis Galton,⁷² Huxley's first proposal was to nominate a President and Secretary of the new Anthropology Department. Huxley's first choices for the roles were Oxford's Professor of Anatomy and Physiology George Rolleston and ASL fellow J. Frederick Collingwood. This proposal was generally supported by the Committee, but there was a strong desire to avoid confrontations between members of the societies. Collingwood was very close to ASL, and especially to Hunt. Rolleston, on the other hand, was not an insider amongst those interested in the sciences of Man. One of Huxley's first tasks was to invite the German zoologist Ernst Haeckel to attend the meeting, a figure who

⁷² Galton's influence within the Association, as Secretary, allowed him to influence many decisions on the organization of sections and departments, as in this case. Although initially attended the meeting, a disease, not identified in their biographies, forced him to leave the meeting. His presentation for this meeting dealt with meteorology and statistics, and was presented in Section A, Mathematics, by the secretary of the Section, the Scottish engineer Fleeming Jenkin (1833-1885). It is speculated that it was this illness that forced him to give the Secretary of the Association and passed the following year, 1867, traveling constantly. See Pearson 1924: 53, note 4.

certainly would give a huge boost to the event, and especially to the new Section of Biology. Unfortunately, the situation in Prussia was complicated because of the war with Austria. As a result, Prussians, including Haeckel, were not allowed to leave the country.⁷³

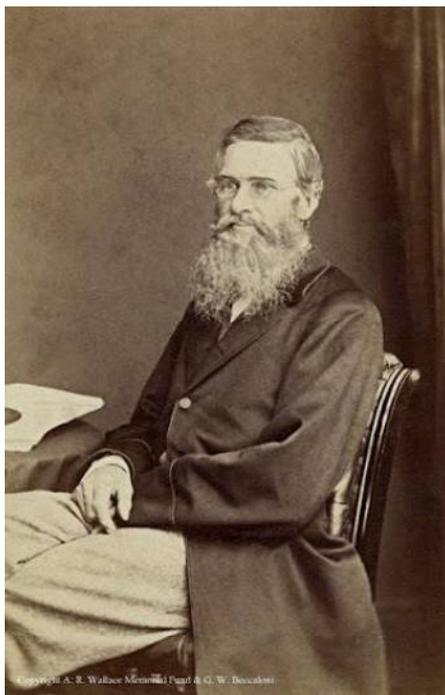


Figure 3.5 Alfred R. Wallace, c.1864-1865⁷⁴

On the particular issue of who should preside over the Department of Anthropology, Wallace was suitable to all parties (Figure 1.4). He was well regarded by the two metropolitan societies, and did not have a specific commitment to either of them.⁷⁵ In addition, he was a widely-recognized figure

⁷³ Huxley 1900: 298.

⁷⁴ See

<https://picasaweb.google.com/WallaceMemorialFund/ImagesOfAlfredRusselWallace#5502394752051185538>.

⁷⁵ He was elected member of ESL on 12 June 1866, but he was a frequent attendee of ASL meetings. See Royal Anthropological Institute, A1, ESL Minutes, 12 June 1866.

in the community, because of his role as co-founder of the theory of natural selection, and for his contributions to anthropology in recent years:

The Council of the Association having named Professor Huxley, F.R.S., as President of the newly created section [Biology], that gentleman communicated through Mr. Alfred R. Wallace his wish that a department of the new section be devoted to anthropology, the other departments being devoted to biology and physiology, and that Mr. A.R. Wallace should preside over the department so constituted. To this arrangement your delegates acceded; and the department, anthropology, having been formed, sat in the People's College, Nottingham, the following gentlemen forming its Officers and Committee...⁷⁶

The choice of Wallace was not a minor decision.⁷⁷ In recent years enormous ideological and practical differences had arisen between the two groups, so the decision was complicated.

The proposal met the necessary requirements. Wallace was familiar to those interested in natural history because of his role as co-discoverer of natural selection with Darwin. Since his return from the Malay Archipelago in 1862, he had become well known within the BAAS as a regular participant, thanks to presentations which focused primarily on issues related to natural history, mimicry, and butterflies and especially his presentations on the various groups of humans he met during his travels, which emphasised the variety of races and their state of civilization. His quiet personality also made him the perfect choice. Finally, he filled the implicit requirement of being involved in anthropological subjects.

Wallace's speech stood out because it was remarkably short. James Hunt noted, "that it had only one fault that of being too short".⁷⁸ Although not long,

⁷⁶ Blake 1867: iv-viii.

⁷⁷ After much consideration, Lubbock and Huxley finally agreed that Wallace would be the best choice. See Lubbock to Huxley, 2 August 1866, WCP3761_L3673_1 to WCP3761_L3673_4, *Wallace Correspondence Project*. There is no reply from Wallace stating his acceptance of the position.

Wallace emphasised throughout his speech the breadth and diversity of those interested in the sciences of Man. As we saw in an earlier section, Wallace's personal perspective went much further than many of his contemporaries'. Especially notable was his desire to retain a focus on man's spirit as an object of study.

Despite the importance of the post, it should be noted that Wallace made no further mention of this fact in his *Autobiography*, or in his correspondence. This is possibly another example of the intellectual modesty that marked his life's work.

B. The Extent of Wallace's Development as Anthropologist up to 1866

Wallace's anthropological interest has not been fully appreciated, apart from a few mentions.⁷⁹ It is clear, however, that Wallace's interest in man was constant throughout his career as a naturalist. His interest developed when he was very young, during a stay in South Wales (1837 – 1839) while working as a surveyor with his brother William. There he learned the reality of farming communities, traditionally excluded from the political and cultural milieu. This experience provoked him to write one of his first essays, "The South-Wales Farmer", written in 1843 but not published until 1905 in his autobiography.⁸⁰ The work was an ethnographic study of Welsh farmers, with extensive descriptions on physical characteristics, including their culture and language.

⁷⁸ [Anon.] 1866: 391.

⁷⁹ Kuklick 1991. Among the exceptions are Henderson 1958, Brotman 2001, Vetter 2009, Lowrey 2010, Ellen 2011, Rodriguez-Caso *et al* 2012.

⁸⁰ Wallace 1905, vol. I: 206-222.

Wallace's interest in human beings was very clear from his first efforts to become a naturalist which he described in a letter, to his friend Henry W. Bates dated December 28, 1845. In this letter he emphasised the importance of some of his recent readings, such as Lawrence's *Lectures on Man, Physical History of Man* by Pritchard [sic], and Chambers' *Vestiges*, as the key to understanding that "the varieties of the Human race have not proceeded from any external cause but have been produced by the development of certain distinctive peculiarities in some Individuals which have become propagated through an entire race".⁸¹

Thereafter, these kinds of writings about travels and experiences would become common, thanks largely to the various groups of people he met during his travels, both in the Amazon and in the Malay Archipelago. One of the characteristics of the trips made by Wallace was that most of the time he was alone, since he did not have sufficient resources to allow him to hire aides and translators. As a result, and guided by his curiosity about the evolution of man, he went and met the most diverse groups and tribes, including Quehianas, Cohidias, Omauas, Macunas, Tucanos, Buahunas and Arikenas in the Amazon and Papuans, Malays, Dyaks and Arru in the Malay Archipelago. He made precise descriptions of many of them, including both their physical and cultural aspects of the tribes. In fourteen years, he had the opportunity not just to study these groups, but also to look for an answer to the transmutation of species, especially of Man.

These experiences and observations resulted in numerous anthropological writings over the next few years. These works are a clear example of his capacity as an observer and most importantly of his distinct vision in comparison with

⁸¹ Letter to Bates, 28 November 1845, cited on McKinney 1969.

other travellers of that time. Although he maintained a clearly imperialist language, judging from books like *The Malay Archipelago* (1869), his was a different view from other naturalists.⁸² He spoke of indigenous groups without a sense of superiority; he acknowledged that as comparative “inferiors” to the British, “non-European peoples” still had potentially the same capabilities and characteristics that could serve them in the future to reach a comparable state of civilization.

These experiences proved to be of great importance for Wallace’s future. Consider for instance the time he spent living with the Dyaks, a general term for around 200 different Malay groups. During the nineteenth century, Dyaks were enslaved by Malay traders. In Wallace’s view they were easy prey because of their simplicity and honesty, allowing traders and chiefs to cheat and oppress them at every opportunity.⁸³ What most impressed Wallace was their social and moral sense, since there were equal rights for men and women and they always preferred to say nothing when asked a sensitive question rather than lie or reveal a damaging truth.⁸⁴ All these characteristics were for Wallace a clear example of a high moral capacity, evidence he subsequently used to support his particular view of human evolution.

In many of his descriptions of the people of the archipelago, it is common to find references to continuity between races (for example, on *The Malay Archipelago*, 1869), an idea he extended to orang-utans and the human races, based on their physical resemblances. An important point to emphasize is that it was Wallace’s intention to visit this area in particular. He had been deeply

⁸² Rodríguez-Caso *et al* 2012: 263-264.

⁸³ Wallace 1856.

⁸⁴ Desmond and Moore 2009: 341.

influenced by Robert Chambers' *Vestiges on the Natural History of Creation* (1844), in which we find the conclusion that humans originated in South-East Asia and from here migrated first to India and the Middle East and afterwards to Europe and Africa. Chambers' argument was based mainly on comparative studies of the language and physiognomy of every known human race.

One interesting example of how Wallace related his fieldwork on topics such as biogeography with that of human beings is the argument he made for a dividing line between two biogeographic regions, Oriental and Australian (this line would be called later the "Wallace line").⁸⁵ He considered the evidence for this division to be two clearly differentiated distributions of plants and animals. The same logic was also used by Wallace to construct a similar division in the Malay Archipelago between two different indigenous groups, Malays on the north and Papuans on the South.⁸⁶

These kinds of experiences in the field also helped him in dealing with diverse problems related to human beings from a naturalistic perspective, such as the problem of the origin of human races. This was, as we have seen, a controversial issue at the time in Britain, especially among two particular London scientific societies, the ESL and the ASL. On 1 March, 1864, Wallace presented a paper to a meeting of the ASL, entitled "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of 'Natural Selection'" in which he gave a mixed response to the discussion between monogenists and polygenists. He first proposed a unique origin for the human races with a subsequent diversification in different zones of the world into different races. This proposal

⁸⁵ Mayr 1944.

⁸⁶ Vetter 2006.

was based on his experiences with non-European people. Making a utilitarian argument, his view of the relation between different kinds of humans was that in the end all were basically the same, physically and mentally speaking, and because of that he advocated a common origin with subsequent diversification and influence from environmental factors.⁸⁷

Considering this background, three features of Wallace's account of the evolution of the human mind and morality stand out. First, to quote Robert J. Richards, Wallace "conceived the selective environment to be other proto-human groups — which would have an accelerating effect on the evolutionary process since social environments would rapidly change through responsive competition".⁸⁸ Next, the idea that selection worked at the level of the group, instead of at the individual, was a better way of explaining the appearance of altruistic behaviour. In his 1858 essay, Wallace conceived the struggle for existence between varieties instead of individuals, and this thinking continued at least when speaking about the group and the evolution of morality. Finally, in a note added to the published version of his talk to the Anthropological Society, he mentioned the influence of Herbert Spencer's *Social Statics* (1851). Spencer's own early brand of socialism had attracted Wallace.⁸⁹ In *Social Statics*, Spencer gave an account of a gradual and continual adjustment of human beings to the requirements of civil society, with every individual accommodating themselves to the necessities of their fellows, allowing with this, eventually, a classless society in which would emerge the greatest happiness for the greatest number. Spencer supposed that the inheritance of useful habits would be how evolution

⁸⁷ Wallace 1864, Vetter 2009: 5-6, Rodriguez-Caso *et al* 2012: 263.

⁸⁸ Richards in Hodge and Radick 2009: 106.

⁸⁹ Richards in Hodge and Radick 2009: 107.

can progress, an idea that Wallace conceived happens through the action of natural selection.

Since his return to Britain in 1862, Wallace's interest in the subject had been focused on such theoretical aspects as the issue of the origin and diversification of the human races. The 1860s were undoubtedly the most important decade for the intellectual development of Wallace's thinking on the subject of humans. Once he had proposed with Darwin the theory of natural selection, his interest in applying it to the case of man was the next step. However, in his first proposals of the theory there is no mention of the case of man; and this remained the case until 1864 and his presentation to the meeting of the ASL, which first openly exposed his views about the evolution of man. At the same time Wallace's intellectual development changed permanently, due to his involvement with spiritualism, which began in 1865. Much has been said about this aspect of Wallace's work and its subsequent influence on Wallace's conception of the evolution of man, especially his explanations of the intellectual and moral aspects of human evolution.

In the following years Wallace continued writing upon topics related to humans, in which human nature – in every sense – was the focus.⁹⁰ His various and diverse interests played a significant role in his search for answers about what is human: Man's origins, the antiquity of humankind, the diversity of races and so on. In his work Wallace always sought a unifying answer for the nature of human beings, or in his own words, to contemplate “man under all his varied aspects (as an animal, and as a moral and intellectual being) in his relations to

⁹⁰ Rodriguez-Caso and Noguera-Solano 2011: 17-21.

lower organisms, to his fellow men, and to the universe”.⁹¹ He was interested not only in the physical or biological aspects of humankind, but also in explaining features such as the mind, a point that in the end would distance him from Darwin and many other scientists.

C. Anthropology as the Study of Every Aspect of Man

The decision to appoint Wallace as president was welcomed,⁹² and allowed for relaxed moments at the meeting. Evidence for the relaxed atmosphere is apparent in the reaction to his inaugural address. It was unusually short, compared with that in other sections or departments, but was highly specific. Wallace focused on giving a definition of anthropology which in line with what was said years ago by Broca and Hunt was wide enough to include any form of study that had as its object man or even studies in which man was an incidental feature.

One point that continues to draw attention to Wallace’s presidency is his well-known involvement with spiritualism.⁹³ Only a few weeks after the meeting of the Association, Wallace sent Huxley several copies of his recent presentation, “a new branch of Anthropology”, *The Scientific Aspect of the Supernatural*.⁹⁴ Wallace was afraid that he might be subject to harsh criticism, in addition to causing disquiet among his acquaintances. Huxley replied simply that he was not

⁹¹ *Report*, 1867, p. 93.

⁹² In Hooker’s words, “Wallace was no doubt the best in our line”. Hooker to Darwin, 4 September 1866, Darwin Correspondence Database, <http://www.darwinproject.ac.uk/entry-5206>.

⁹³ On the influence of spiritualism in Wallace, see Kottler 1974, Malinchak 1997, Oppenheim 1985: 296-325, Pels 1995.

⁹⁴ Wallace 1866.

interested in the subject, but neither was he interested in putting together a Commission of Lunacy against Wallace, as he feared.⁹⁵

This essay on spiritualism and science is a good example of the scope of Wallace's definition of anthropology and also the manner in which it was understood in the BAAS. This definition was broad enough for studies related to topics such as spiritualism to be considered part of anthropological study.

Now this broad spectrum proposed by Wallace was not reflected in full in the presentations of the new Department. Carter Blake in his report on the sciences of Man in Nottingham, published in the Journal of ASL, raised four areas in which these should be divided, based on the proposal of Hunt: Archaic, Historical, Descriptive, and Comparative Anthropology. These categories include works on the remains of ancient cultures (Archaic), descriptions of the history and culture of non-European contemporary societies (Historical and Descriptive), and physical descriptions (Comparative).⁹⁶ This classification focused on what happened in the new Department of Anthropology, but did not include what happened in Section E, where ethnological presentations were included such as those of Crawford.

Contents	1866	1867	1868, BAAS	1868, Int. Cong.	1869	1870
Anthropology	11	3	8	6	6	2
Archaeology	7	1	0	26	10	17
Ethnology	19	13	7	0	8	6
Philology	0	0	0	0	0	1
Phrenology	0	1	0	0	2	3
Racial theories	4	1	0	1	4	3
Others	0	0	0	0	0	0
Total:	41	19	15	33	30	32

Table 2. Presentations on the sciences of Man in BAAS meetings, 1866-1870

⁹⁵ Huxley to Wallace, November 1866, in Marchant 1916: 187.

⁹⁶ Blake, 1867, p. v-vi.

As pointed out by Charles Withers in his work on the BAAS and geography, the demarcation criteria on the content of the presentations requires caution when interpreting them. In this case, the original proposal of Hunt and Blake can be summarized with respect to three major areas: archaeology, ethnology (as proposed by Prichard) and anthropology (with the understanding Hunt). From an analysis of the presentations, we can consider a broader classification that reflects the diversity of topics related to the sciences of Man. (Table 2)

The emphasis in the presentations, however, was on two main themes: precision in physical descriptions; and Darwinism in explanations. On physical descriptions, John Beddoe took the example of height between the Irish, through statistical proportions to conclude that there was degradation in size which in turn was related to certain surnames, which led him to think of the original differences between races.⁹⁷ Another example linked to the anatomical study of the races came from Huxley, who, presenting two skulls, wanted to highlight the need for care when comparing certain cranial sections, like the super-position of the baso-cranial axes.⁹⁸ In following the argument of his *Man's Place in Nature*, Huxley wanted to stress again that human races were the result of a gradual evolutionary process. Both proposals posed different methodologies from those held by members of ASL. Hunt, through the example of the comparison between Swedish and Norwegian, wanted to establish the effectiveness of his own methods in order to differentiate them.⁹⁹ On the other hand, Carter Blake focused on strengthening what was said by Hunt, through the same methods and interpretations and using current and fossil examples, which mainly sought to confirm the polygenist

⁹⁷ *Report*, 1867, p. 94.

⁹⁸ *Report*, 1867, p. 96.

⁹⁹ *Report*, 1867, p. 96.

proposal.¹⁰⁰ As noted by Sera-Shriar, “for Hunt, the scientific study of races had to base its deductions on directly observable evidence”,¹⁰¹ since for example he considered there was not enough evidence as to explain the origin of humans; this position was entirely based on anatomical and physiological data on his own works, primarily based on the Baconian method of induction.¹⁰² On the contrary, Huxley’s methodology also stressed the importance of observation in the sciences of Man, especially in order “to conduct more focused studies on human variation”,¹⁰³ although Huxley emphasized the separation of ideology from the practice of science, as when he wanted to remove any religious presence from ethnology, as the terminology for example.¹⁰⁴

On the other hand, the discussion of Darwinism had again Hunt as a protagonist. Given the different attempts to bring together the proposal of Darwin with the sciences of Man throughout the 1860s, Hunt believed that the evidence showed the existence of different origins, contrary to what Huxley or Wallace proposed, a single origin.¹⁰⁵ This discussion continued not in the Department, but strikingly in Section E, with the presentation given by James M. Reddie, ‘On the Various Theories of Man’s Past and Present’. Reddie’s paper was read in the Geography section, despite containing a clearly anthropological theme, made clear, that in spite of the creation of an exclusive department in which to discuss subjects related to man, there were parallel discussions and interests in other sections. His main point was also to criticize Darwinism as a possible explanation for the origin of Man, but unlike Hunt, Reddie considered that neither

¹⁰⁰ *Report*, 1867, p. 94-95.

¹⁰¹ Sera-Shriar 2013a: 480.

¹⁰² Sera-Shriar 2013a: 481-483.

¹⁰³ Sera-Shriar 2013a: 485.

¹⁰⁴ Sera-Shriar 2013a: 486.

¹⁰⁵ Hunt, 1866.

monogenism nor polygenism were appropriate options. His proposal was a ‘religious theory’, a vision opposed to Darwinism (which itself he defined as the theory that explained the origin of man from apes) supported on a literal interpretation of Scripture.¹⁰⁶

As we can see, despite the initial thematic diversity posed for the new department, issues such as the origin of man and the implications of Darwin’s ideas in relation to man were the dominant themes. In this regard, the Department became an extension of discussions and meetings happening in ESL and ASL, but now there was a chance to bring them before the public.

3.5 Conclusions

At Nottingham, in general terms, the BAAS became the battlefield between ESL and ASL, since from the foundation of these societies, the search for recognition for their respective disciplines was continuous and determined. According to reports like those of the *Anthropological Review*,¹⁰⁷ the success of the meeting for the ASL can be judged by the number of congratulatory remarks received by its president, James Hunt, afterwards. Such reports even suggested that authentic anthropological work would be, henceforth, solely the preserve of the new department.

The final numbers of the Nottingham meeting, a total attendance of 2303 people, working in twenty-four research committees, with an overall budget of £1751.00¹⁰⁸ suggest a generally successful meeting in which anthropology finally found its own place and made one more step on its path to consolidation as a

¹⁰⁶ Reddie was one of the founders of the Victoria Institute. On Reddie, see Numbers 1993: 141.

¹⁰⁷ [Anon.] 1866: 386-408.

¹⁰⁸ MacLeod and Collins 1981: 280.

discipline. Indeed, the impact of anthropological discussions in Nottingham was so great, that just a few weeks later in Dundee, the city where the next BAAS meeting would take place, local periodicals, summarized Dundee's reaction to anthropology:

Sir,-I have been so puzzled lately with what I have heard and read about anthropology, adaptation, continuity, and so forth, that perhaps you will permit me to suggest to some of your learned readers to tell us, briefly and plainly, what all the rumpus is about. It is not for lack of contributions from correspondents, special and otherwise, that we are in the dark on the subject; but, unfortunately, these effusions have hitherto been more voluminous than luminous –they have left us utterly bewildered as to what the Nottingham savans have been discussing. Indeed, in reference to some of these same special correspondents, an ingenious friend of mine is of opinion that, judging from their antics and extravagance, they offer a fair field for speculation as to whether they are not the “missing link” between the two races; certainly, he says, they partake quite as much of the old monkey as of the new man. He is also of belief that the matter will receive a more direct investigation when the Association meets in Dundee next year.¹⁰⁹

Another letter, from Professor William McDonald, explained that he had listened with much pleasure to the presentations at the Anthropological Section at the last meeting of the BAAS, some of which were very strident, but all of them showed the different and divergent opinions that an association like the BAAS must contain. It was noted especially by the “anthropologicals” that the section made the greatest noise, at least so far as reported by the press. Many people fancied that it was the high point of the meeting. The meeting of the Anthropological Section seemed “to have caused the greatest alarm” among all the sections and departments. The main topic of discussion in the study of mankind was man, the noisy part of the anthropologists at the meeting was very much discordant to most other people involved in the study of man in places like Dundee; but in the

¹⁰⁹ *Dundee Courier*, 19 September 1866.

end it was declared that the Anthropological Section was one of the most important of its sections.¹¹⁰

According to the *Dundee Courier*, the biggest worries were about “a very little childish fear for coarse expressions against their religious views, and to meet and grapple with them in order to bring out the truth”, and the assertion that “the Bible was to be burned by men who rose from a germ and passed through monkeys before they became men was a thing there was no ground for”.¹¹¹ These anthropological discussions concluded with the confession that, beyond the general opinion it was “not unfrequently met with men acting very like monkeys”.¹¹²

As we will see in the next chapter, from one year after the Dundee meeting, the people in the city were already opposing anthropology. The environment was so complicated for the sciences of Man until the point that, as the *British Quarterly Review* explained, “the sub-section devoted to Anthropology was, in deference to local prejudices, it is alleged, suppressed”.¹¹³

¹¹⁰ *Dundee Courier*, 1 November 1866.

¹¹¹ *Dundee Courier*, 1 November 1866.

¹¹² *Dundee Courier*, 1 November 1866.

¹¹³ *British Quarterly Review*, 46, October 1867.