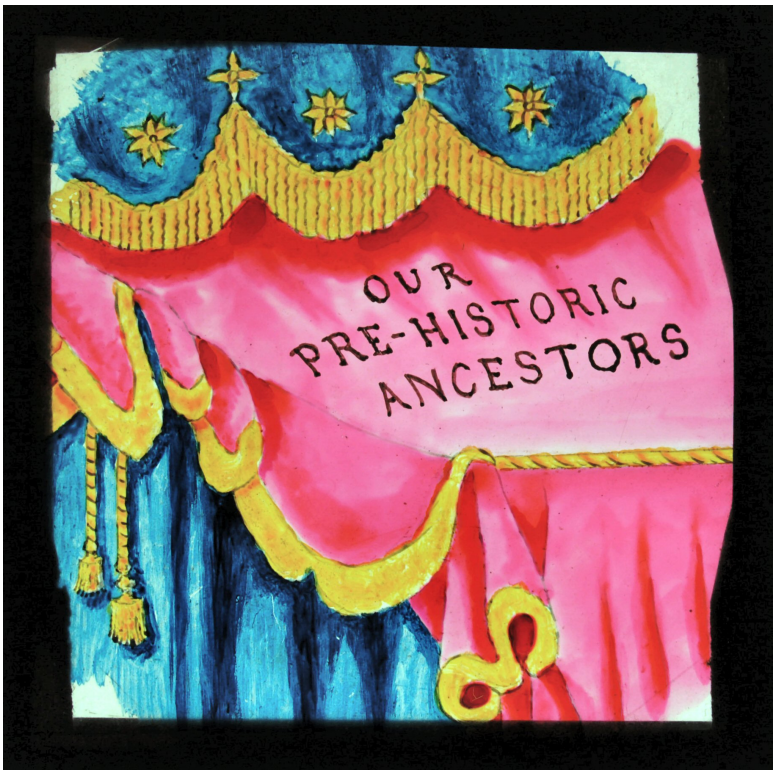
Town and Gown: Amateurs and Academics.

The discovery of British prehistory, Oxford 1850-1900:

A Pastime Professionalised.

Elizabeth Megan Price, University of Oxford
School of Archaeology



Late nineteenth century title lanternslide for a lecture on prehistory

(private collection)

‘Call complete

No scholar’s learning that is not replete

With knowledge of his native land. You seek

Antiquities. Must they be marble, Greek,

Or Roman? Grander monuments of stone

Await you in a landscape of your own…

Look not to Italy or the Levant.

Let your Parnassus be our White Horse hill

Your muses comb their hair by Letcombe Mill’

From *Skyhorse* by Jon Stallworthy, 2000 AD

Abstract

This investigation into the origin of a collection of nineteenth century lanternslides revealed evidence of the social, intellectual and cultural importance of various scientific societies in Oxford, and the contributions made by those involved, particularly the creator of the lanternslides, H. M. J. Underhill, (1855–1920). Evidence gathered from primary sources showed a fluidity of relationships between the supposed 'town and gown' in late nineteenth century Oxford which consisted of a community of citizens, amateurs and academics, all of whom were linked by a growing interest in the real and mythological British past.

Following a discussion of the key intellectual and social influences in Britain during the latter half of the nineteenth century, including the implications of the emerging evidence of an ancient human past, the thesis focuses on individual case studies. They illustrate the roles of overlooked or neglected individuals whose work contributed to the growth of today's discipline of British prehistory. Several people, now forgotten, including Underhill were contemporaries of Arthur Evans and Edward Tylor whose social circumstances made it easier for them to become prominent academics.

The results of this research indicate that a new approach is required in the history of archaeology; one that would draw attention to the vital contributions made by forgotten or overlooked individuals, societies and popular publications. Further attention to these issues will shed new light on the way that prehistoric archaeology moved from an antiquarian pastime to an academic discipline between 1850 and 1900.

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Preface and Acknowledgements

This thesis introduces the question of overlooked or neglected individuals from 'town and gown' in late nineteenth century Oxford who contributed towards the foundations of the present discipline of British archaeology. The research focuses on the activities of particular people whose work, though unmentioned in the history of archaeology, affected the manner in which British archaeology and prehistory were taught in Oxford.

The principal sources for this research have been the equally overlooked archives that relate to the various nineteenth century Oxford societies and the individuals who supported them. The majority of these archives have not, yet, been formally catalogued in accordance with the latest digitised technology. It is only with the enthusiastic assistance given by various archivists that I have been able to excavate these buried sources. They range from proceedings of societies, lanternslides, photographs, paintings and unpublished diaries.

Because of the absence of formal cataloguing procedures in various archives, the reference information given in this thesis is possibly irregular. It is hoped that as a result of this work, more archives will achieve academic recognition. An added drawback has been the constant state of flux of the holdings of the museums in Oxford. During the course of this research, The Rolleston Archive, for example originally held by the Sackler Library has been transferred to the Ashmolean Museum and is now in the Museum of Natural History, where incidentally Rolleston carried out his research and teaching.

The lanternslides of H.M.J. Underhill were discovered through reorganisation of workspace at the Institute of Archaeology, by Deborah Harlan, the Archivist from 2001 to 2004, and I am grateful to her for unearthing this hidden treasure. In 2004 we co-authored the Underhill website: http://web.arch.ox.ac.uk/archives/underhill/

The following libraries and museums have been the main sources of information about the social and intellectual world of nineteenth century Oxford:
The Bodleian Library: Particularly Colin Harris in the Department of Modern Papers (room 132) and Nigel James in the Map Room. Their first hand knowledge of non-digitised illustrations and documents has been invaluable. The maps and charts in the appendices have been produced through the technical guidance of Nigel James. Julie-Ann Lambert provided access to the John Johnson Collection.
At the Museum of the History of Science, the Archivist Tony Simcock has been able to produce lost archives, lanternslides and photographs as well as valuable reference books from his own collection.

At the University Museum of Natural History (the University Museum in this research), Stella Brecknell provided information about the history of the museum and access to various journals. George McGavin, Assistant Curator of Entomology, examined Henry Underhill's notebooks at the Museum of the History of Science and found them remarkable.

In the city of Oxford itself, the Centre for Oxfordshire Studies has provided vital material covering the life of individuals outside the University through its access to

contemporary local newspapers and journals. I am grateful to the Director, Malcolm Graham, for sharing his knowledge of the people and places in nineteenth century Oxford.
Further afield I have received assistance from the Centre for Local History at Camden Library, Holborn, where a small archive on Edgar Barclay is held.
The Art Curator at Salisbury Museum and Art Gallery gave me access to an uncatalogued collection of Edgar Barclay's works in the Young Gallery in Salisbury Library.

The following organisations and their staff have also provided valuable support:
Ashmolean Museum: Arthur MacGregor, the late Andrew Sherratt, and Sue Sherratt.
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Magic Lantern Society: Richard Crangle, Ian & Daphne Mackley, Lester Smith.
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Finally, a loving thank you goes to my husband, who supported and worked around my thesis, and to my family, Iori and his wife Sam, and Abi and her husband, Jim who, although presenting me with a granddaughter apiece, have not made excessive calls on my time.

Megan Price
Wolfson College Oxford
March 2007

Introduction

This research was initiated by the discovery of a collection of hand painted lanternslides found in the basement of the Institute of Archaeology in Oxford. The slides were in a box labelled H.M.J.U., *The Great Stone Circles of Britain* and included images of Avebury, Stonehenge and the Rollright Stones. A search for their creator revealed that Henry Michael John Underhill (1855-1920) was a nineteenth century amateur archaeologist, Oxford citizen and 'High Class Grocer' (John Johnson Collection, Bodleian Library).

In February 1896, Henry Underhill gave a talk on the *Great Stone Circles of Britain* in the University Museum to 'a large audience' (*Oxford Chronicle*, 26 February, 1896). Over sixty members of the Oxfordshire Natural History Society listened to a lecture illustrated with over thirty of Underhill's own hand painted lanternslides.

The 'large audience' consisted of people who lived and worked in the City and University of Oxford; members of the supposed 'town and gown'. Many individuals present were connected to the University and its museums and currently involved in the new science of prehistoric archaeology. They included Edward Tylor, Keeper of the University Museum, Arthur Evans, Keeper of the Ashmolean Museum, and Edward Poulton, Hope Professor of Zoology (*Jackson's Oxford Journal*, 7 March 1896).

Both of the press reports above stated that 'an interesting discussion ensued' after Underhill's talk. The questions raised in this discussion were not reported at the time, but the circumstances of this occasion raise many important issues concerning the

state of public knowledge in late nineteenth century Britain, issues that have formed the core of this research.

Further investigations into these individuals revealed a web of intellectual networks that appear to have crossed many social, geographical and intellectual boundaries in nineteenth century Oxford. Many of the achievements of amateurs and academics from both 'town and gown' were realised through their membership of local scientific societies.

Little research has considered the impact and contribution local societies have made to the present disciplines of the human and social sciences. Their work, however, was a foundation for today's academic and theoretical approaches. By the late nineteenth century, local intellectual societies, together with the increased publication of popular books and journals, were disseminating the more academic scholarship emerging from discoveries of the antiquity of humans and their material culture to a wide audience. These factors made scientific knowledge readily available to the interested layman (see Chapters 2 and 8).

Individuals like Henry Underhill provided the infrastructure and administrative support that enabled these local intellectual societies to succeed. By the end of the nineteenth century, many of the cross-disciplinary relationships demonstrated by these societies diminished, and the work of the eclectic amateur became superseded by that of the rising professional.

Underhill was well known in Oxford in the 1890s for his finely detailed hand-painted slides and for his magic lantern talks. The contribution of amateurs to early archaeological studies has often been neglected in histories of the discipline.

Not only has the work of the amateur been marginalised, the medium through which they presented their work also calls for further research. The latest discoveries of British prehistory were disseminated to the public in the nineteenth century through books, popular journals, talks illustrated by lanternslides and wall-charts and occasionally models (see Chapter 8).

By the 1890s, Underhill appears to be one of the few remaining amateur antiquarians in Oxford. The subject matter of his lanternslide collections formed particular categories, developed chronologically and intellectually through distinct disciplinary fields. The philosophical direction of these interests signals the trends of much popular scientific thought in nineteenth century Britain. From the early 1870s Underhill's interests embraced natural history, collecting and illustrating local

specimens. In the 1880s his interest in folklore was influenced by a revived interest in anthropological circles in the cultural significance of folk tales. By the 1890s, Underhill concentrated on recording the monumental remains of a British prehistoric past. Underhill and his Collections are discussed in Chapters 7 and 8.

Rather than investigate the many contested semantics and methodologies of other scientific disciplines and the processes of their institutional growth, this thesis discusses the individual aspirations and ambitions demonstrated by people in Oxford who became inspired and subsequently involved in new scientific discoveries and whose work contributed towards the eventual academic discipline of prehistory. It demonstrates the growth and decline in significance of the contributions made to studies of the past by involved and dedicated amateurs operating from outside academic circles.

This study of the social and cultural roles of nineteenth century amateurs and the growing body of professionals aims to highlight the different discourses that took place where discoveries of the prehistoric past were exchanged between actors from different social and institutional foundations.

It focuses intentionally on late nineteenth century Oxford as this period offers a unique perspective of social and intellectual circumstances that no other British city could provide. By the end of the nineteenth century cities such as London, Durham, Liverpool and Manchester were developing their own ways of studying the past, and developing municipal or University museums. However the vital distinction between these cities and Oxford is that they lacked the traditional historical divisions between the 'town and gown', a generic term used to describe the social and cultural existence of an enclosed medieval University foundation within a growing market town of ordinary citizens.

By the middle of the nineteenth century, the University reforms combined with a strong emphasis on scientific knowledge (Stray, 1998), meant that Oxford University was beginning to act as a magnet for intellectual exchange at a far more dynamic level than its academic counterpart, Cambridge. In 1860 it was Oxford, rather than Cambridge, that was the setting for impassioned debates about the meaning of knowledge between the academic networks of the dons, the clergy and the intellectual aristocracy.

At the same time Oxford citizens, although not part of this aristocracy, became influenced and inspired by these events. The local press, *Jackson's Oxford Journal*

and the *Oxford Chronicle* regularly reported discoveries and debates and the academic doors of the University and its museums gradually widened to allow public participation.

As the research progressed, it became evident that no single element; reference material or archive, existed that could contain the multifaceted evidence for the activities of these neglected or overlooked contributors to the early study of British prehistory.

Enquiries into general collections or archives that related to institutional University matters revealed important primary sources buried within them that had survived by default. Two such examples of overlooked individuals are the nature notebooks of Henry Underhill at the Museum of the History of Science (Chapter 7) and Alfred Robinson's personal account of his role as a museum servant at the University Museum (chapter 5). The very nature of the survival of these archives is due to various factors over time rather than a deliberate intention to preserve. Bodleian Librarians such as Bulkeley Bandinel (1781–1861) (*Oxford Chronicle and Berks and Bucks Gazette,* 9 Feb 1861, 5) or Falconer Madan (1851–1935) conserved much in the way of ephemera. Later administrative decisions led to much material remaining uncatalogued during recent digitisation of resources.

Although the element of discovery of this long-neglected material was a stimulus to 'dig deeper' it could also prove frustrating when documents or letters could not be traced, or were in the process of being transferred to another department. However, systematic searching and serendipity has lead to the discovery of many overlooked contributors to the discovery of British prehistory.

Chapter 1 of this thesis begins with an examination of the development of the study of prehistory in nineteenth century Britain. The current literature in the history of archaeology is evaluated and compared with the literature from the established discipline of the history of science. The problems involved in the creation of a reflexive history of prehistory are then discussed. This is followed by a recommendation of the way that relevant philosophical approaches can be applied both to the present discipline of British archaeology and to its historiography in the future.

The next three chapters describe the social and intellectual climate of nineteenth century Britain, providing a cultural and intellectual landscape for the social actors

who later feature in the case studies. Chapter 2 presents a general background to the religious and scientific changes that influenced intellectual knowledge in Britain from the 1850s to the end of the century. Chapter 3 discusses the questions of social and cultural identity and the professional status of University teachers during the intellectual transformations that were happening at the time. Chapter 4 examines nineteenth century Oxford and the 'town and gown' phenomenon that provided the setting for the social, cultural and intellectual relationships where the pursuits of the past were followed. A map of nineteenth century Oxford indicating the people, museums and other places discussed in this thesis appears in Appendix 1 and a chart of significant social and cultural events in Appendix 5.

After establishing the social, intellectual and cultural setting of nineteenth century Britain and the specific environment of the City and University of Oxford, the focus of the thesis then turns to various individuals in Oxford and their social and intellectual networks within 'town and gown'. Chapter 5 presents case studies of the 'Gentlemen and Players' who individually and sometimes idiosyncratically contributed to the growth of knowledge in nineteenth century Oxford. Appendix 2 is a timeline showing the life span and comparative and intellectual affiliations of the *dramatis personae*. Appendix 3 shows the roles and interests of those featured in this thesis. This is followed by a prosopography in Appendix 6 of others whose names are mentioned but who do not appear in the main body of the text.

Chapter 6 examines four influential nineteenth century Oxford societies, of which the individuals discussed in Chapter 5 were members; the Ashmolean Society, the Oxford Architectural and Historical Society, the Junior Scientific Club and the Oxfordshire Natural History Society. The contributions made by these societies to the dissemination of knowledge in town and gown will be examined.

The two final chapters examine the life of Henry Underhill and his role in the intellectual society of nineteenth century Oxford. Chapter 7 provides the background to his eclectic interests in natural history, anthropology and archaeology and examines his responsibilities as an Oxford citizen and amateur teacher and lecturer. Appendix 5 shows maps of Underhill's visits to the archaeological sites where he created his lanternslides and the places he visited with the Oxfordshire Natural History Society.

In Chapter 8 Underhill's collection of archaeological lanternslides are evaluated alongside the work of others, the amateur Edgar Barclay and the archaeologist Arthur Evans. The visual and literary perceptions and interpretations of prehistoric

monuments in late nineteenth century Britain are compared with those of present-day archaeologists. The annotated Collections of Underhill's archaeological lanternslides appear in Appendix 9.

The findings in thesis suggest that the early history of British prehistory needs to be re-balanced. In order to appreciate the fluid and multi-disciplinary nature of nineteenth century scientific enquiries into the nature of human origins, it is crucial to acknowledge the neglected pioneers of that research, together with those whose names are already familiar in archaeology.

Chapter 1 Writing a New History of Archaeology

The science of prehistory's a mysterious sort of game,
In which the winner's privilege is to invent a name
Joan Evans, 1954

Introduction

The present discipline of archaeology could not exist without the material evidence left by people of the past. In the same way, there cannot be a history of the discipline without examining the roles played by those first involved in the investigation of this evidence, the pioneers of British prehistory and of the material evidence they also left behind.

Throughout the thesis, the term 'archaeology' is intended to describe the study of British prehistory as it developed in the mid-nineteenth century. Similarly, the 'history of archaeology' refers specifically to the history of British prehistory during the course of its transformation in the latter half of the nineteenth century from an amateur pursuit to an intellectual discipline.

The evidence presented here is intentionally Oxford-centric. It traces the experiences of various individuals who played a part in the discovery and dissemination of the past. It is neither an institutional history nor a history of the growth of an academic discipline because, at that time, prehistoric archaeology was an integral part of the growth of scientific knowledge into the ancient past. Until the late nineteenth century, archaeology was accepted as an intellectual culture but not as an intellectual discipline.

The manner in which intellectual interpretations of British prehistory were communicated through the social and cultural networks of nineteenth century Oxford is examined through the various activities of members of its supposed 'town and gown' divide. The evidence shows a fluidity of relationships between this divide and demonstrates that both citizens and academics were linked by their common interest in exploring the real and mythological British past.

The distinctive social and cultural nature of nineteenth century Oxford society makes it a unique case study. It was a society composed of individuals from the University

and the City, the 'town and gown' (see Chapter 3). As a result of this cross-fertilisation it was ideally situated for the formation of scientific societies where individuals from various backgrounds could meet on terms of mutual interest (see Chapter 6).

By the 1850s, various intellectual societies involved with the pursuits of the sciences, natural history and the past were already in existence in Oxford. These societies, such as the Ashmolean Society, and the Oxford Architectural and Historical Society, however, were founded exclusively by and for members of the University, who were formally admitted by nomination and ballot. Later, in 1870, the *Oxford Natural History Society* was formed to include a wide selection of the community, from both town and gown (See Chapter 4)

A brief history of British prehistory

Between the 1850s and the 1870s the revolutionary evidence for human antiquity became fully established. The scientific links with the natural sciences were an integral part of this knowledge (Grayson 1983; Van Riper 1993) and the establishment of a science of prehistoric archaeology was considered a major advance in human knowledge (Murray, 2001, 39). However, until the end of the nineteenth century, this science was only an intellectual pursuit. It was discussed at meetings of metropolitan Anthropological and Archaeological societies (Chapman, 1989), at annual meetings of the British Association for the Advancement of Science (Sillitoe, 2005), in future the BAAS, and at local level (see Chapter 6). Prehistory was written about in popular literature (see Chapter 8) but it had not yet been accepted by the academic world as a discipline.

The enquiries into prehistory emerged from the growing evidence for the evolution of anatomically modern humans and the growth and differentiation of their cultural heritage. In the mid-nineteenth century, this enquiry developed in response to a gradual shift from a traditional Biblical version of organic creation, to a more scientific understanding of the universe, the origins of organic life and the development of human society. As a branch of scientific knowledge, the roots of prehistory evolved from a synthesis of evidence from the natural sciences.

The etymological origin of the term 'prehistoric' was coined by Daniel Wilson in 1851 (Preface to his first edition 1851, xviii) to describe 'a field of research which embraces the Prehistoric period of nations and belongs, not to literature, but to the science of Nature.' According to Kehoe, (1991, 467), by the middle of the nineteenth century Wilson already saw archaeology as a science, and was comparing the 'living present' of existing 'primitive races' with evidence from societies in the past. Unlike writers such as Lubbock and Tylor, whose ideas on primitive life were based mainly on reports of travellers and missionaries, Wilson had actual experience of these 'primitive races' in North America (Wilson, 1863; Kehoe 1991, 469).

By the 1860s this 'new archaeology' was developing, combining various strands of geological and material evidence about the ancient past. The notion of a technological progression had already been demonstrated by the Three Age System in Scandinavia (Briggs, 2005, 8-11). Worsaae's system acted as an organising, explanatory principle for the changes over time in the typologies of material culture. At the same time, physical and documented evidence of the antiquity of man was emerging from various excavations in Britain and abroad (see J.H. Parker, this thesis, Chapter 6 and Boyd Dawkins, Appendix).

Following Wilson's 'invention' of the word for 'prehistory' (Chippindale, 1988, 303), Lubbock (1865, 2), introduced the word 'Neolithic' into the scientific vocabulary in *Pre-historic Times*, which was one of the influential and accessible, archaeological textbooks of the nineteenth century (see chapter 8).

By 1870, the word 'prehistory' had been widely accepted as a scientific term. The *'Anthropological Review'* (1870, Vol. 8, 97) for example, praised the *Society of Antiquaries* for including the 'modern Science of 'Prehistoric Archaeology' among its subjects for discussion, and in 1871, Tylor (Vol 2, 401) described 'the history and prehistory of man' in his account of *Primitive Culture*.

To sum up, from the 1850s, the study of ancient Britain experienced a fundamental transformation. From being a peripheral, antiquarian pursuit it was becoming recognised as a legitimate scientific discourse. In 1865, the first International Congress of Prehistoric Anthropology and Archaeology was held in Italy, during a meeting of the S*ocietà Italiana di Scienze Naturali*. In 1867 it was re-named the *Congrès international d'Anthropologie et d'Archéologie préhistoriques C.I.A.A.P.* (Jean Bourgeois, Presidential Address UISPP, Lisbon, 2006), and the debate on human antiquity was internationally established. During that formative period, the

study of British prehistoric archaeology became gradually accepted as a science, gaining both scholarly and popular recognition as an important Victorian scientific and cultural endeavour (see Chapters 5 and 6).

In Britain, debates concerning the disciplinary boundaries of ethnology, anthropology and prehistory archaeology were destined to take place at national institutions and societies until the end of the century. These discussions were often far from cordial and resulted in factions and the formation of parallel societies (see Stocking 1971 on the origins of the *Anthropological Institute* and Wetherall, 1994, on the *Archaeological Institute*). Similar debates over disciplinary and intellectual identity also occurred at local levels as members of amateur societies attempted to define and legitimise their scholarship (see Chapter 6, on Oxford Societies).

Since their evolutionary growth out of the human sciences in the mid-nineteenth century, the disciplines of prehistoric archaeology and anthropology have been, over time, both subdivided and re-united (see Gosden, 1999), but, in the time scale covered by this thesis, prehistory and anthropology were close biological and intellectual relatives. Historians of archaeology and anthropology, for example Kuklick (1991) and Stocking (1987), have demonstrated that inferences based on ethnographic analogy were a central feature of the many scientific ideas of the late nineteenth century (see for example Tylor, 1871).

Discoveries in geology, palaeontology and biology were validating the emerging evidence of the *longue durée* of human history. The work of the 'Victorian man of letters and cave-hunter' Boyd Dawkins (1837-1929: Dictionary of National Biography, 2004: henceforth, DNB), for example, spanned geology and prehistory in his book *Cave Hunti* (1874). The accumulating evidence from prehistoric sites was used by anthropologists to provide empirical examples of the stages of human social and cultural evolution (Lubbock, 1865; Tylor 1871). Similarly, anthropological accounts were used by archaeologists to endorse their theories of the process of social evolution and of material culture [see for example, Evans (1888) and Fergusson (1872) on the meaning of megaliths Chapter 8].

So far, the impact and subsequent reception of this new knowledge of human antiquity have been examined by scholars from the history and philosophy of science, Turner, (1979) and Bowler, (1987), and religion (Brooke, 1991), whilst the cultural and sociological implications of Darwin's theories of evolution have been

investigated by Burrow (1966), Young (1985) and Beer (1983). In narrative histories of archaeology accounts of early methods and discoveries have been discussed by Grayson (1983), Marsden (1984) and Van Riper (1993).

A major aspect that has been overlooked in these accounts of the discovery of human antiquity is the involvement of people from outside the traditional academic establishments or societies; the public reception of scientific knowledge. This thesis will address the present imbalance found in current historical enquiries.

As Kuklick (1991) pointed out, in the late nineteenth century the universities were not at the forefront of scientific investigation into the past. Initial investigations were carried out by networks of the 'intellectual aristocracy' (Annan 1955). People like John Evans, John Lubbock and Pitt Rivers (see Appendix 2) were prominent members of metropolitan archaeological and anthropological societies, such as the *Society of Antiquaries* and the new archaeological and anthropological societies (see Appendix 5), though not university academics. Enthusiasts at county level were often professional gentlemen, clerics, doctors or lawyers (see Levine 1986).

A significant, though overlooked factor, in the growth of knowledge about the past in the late nineteenth century is the manner in which this dissemination took place at popular level at amateur societies (see Secord, 1994, 2002, and chapter 6) and in commercial journals (see Vann and Van Ardsel, 1994 and chapters 2 and 8). Although the popularisation of scientific knowledge during the late nineteenth century has been comprehensively addressed by historians of science (see for example Allen, 1994; Lightman, 1997, Daunton 2005), the popularisation of archaeology, and in particular the public interest in British prehistory, has yet to be examined (see Chapters 6–8).

In this chapter, after defining the intellectual identity and study of prehistory in the nineteenth century, the ways in which historiographical methods from the history of science can be applied to the history of archaeology will be recommended. In particular, the philosophical approaches to history and archaeology of R.G. Collingwood (1889-1943) will be examined. Although now neglected, these ideas offer a valuable intellectual base in which to write a history of archaeology. The final section of this chapter will discuss the way various research methods were applied to produce this social and cultural history of British prehistory in Oxford.

A historical study of science

The construction of a history is human attempt to establish their social and cultural identity in the world. To centre the argument of this thesis, certain temporal and intellectual boundaries must be established and it is therefore important to accept that the study of British prehistory in the late nineteenth century was an integral part of the widespread scientific investigations into the human past.

Immediately, the term 'science' in the context of the nineteenth century becomes problematical because as an area of human intellectual enquiry, science is culturally and historically determined (Lightman, 1997, Chapter 1). It can only be understood by using contemporary theories and by identifying the way in which it was cosmologically situated, that is by using the nineteenth century approaches to defining knowledge, ordering nature and practising science. According to Lightman (ibid), the intellectual and social transformations of science from the mid-nineteenth century marked a transition from the amateur practice of collecting specimens [or artefacts] as a pastime, to professional scientists paid by the community or academic establishments to carry out research (see Chapter 3)

From the early nineteenth century, subjects that initially formed part of the teaching of science, such as scriptural geology and natural theology, were gradually replaced as more advanced scientific knowledge became accepted. In Oxford, by the 1860s these 'antediluvian' ideas were becoming superseded by new schools of research in the human sciences, scientific geology, physiology, comparative anatomy, craniology, and ethnology. (For Oxford University reforms from 1854, see Brock and Curthoys, 1997, Chapter 23; this thesis Chapter 2). Within the new sciences, the accumulation of evidence for the antiquity of the human past began to form the foundations for the present discipline of British prehistory.

In any age, notions of religious or scientific beliefs depend not only on the social cosmology, but also on the control and dissemination of intellectual knowledge. Many of these issues emerged as the boundaries of science were being re-classified in the second half of the nineteenth century and have been examined in sociological terms by Michel Foucault (Olssen, 1999) and Antonio Gramsci (Joll, 1997).

Some involved what Durkheim identified as systems of belief. Durkheim (1915) suggested that the need for some form of metaphysical, intellectual or scientific belief that would embrace explanations of human origins was an intrinsic and essential aspect of the human psyche. The problems of defining and maintaining a multiplicity

of beliefs became manifest in the way they were re-categorised and re-defined in the nineteenth century. By the 1850s, the new discoveries in science and geology were paving the way for a paradigm shift in previous perceptions of human history.

Approaches to history of science

The history of science is already a fertile area of exploration in the history of ideas, although this is not as yet the case in the historiography of archaeology or anthropology. For these disciplines, the narrative, and historical approach is still a basic feature (Daniel, 1978; Trigger 1989).

Over the last century the historiography of Victorian science has itself evolved and changed from the panegyric writers of the early twentieth century, whose work described the progress of 'the great and the good'. During the 1930s for example the Oxford historian of science, R.T.G. Gunther (1869-1940; and Chapter 7), compiled fifteen volumes describing the '*History of Science in Oxford*.' Like Bellamy's account in 1908 of the Oxfordshire Natural History Society (see Chapters 5 and 6), Gunther published this work privately, possibly to achieve academic recognition. His scholarship often reflects the Whiggish attitudes of a Victorian mind (see Chapter 2), what Charles Dodgson (1832-1898), an observer of the Oxford scene, called 'Anglo-Saxon Attitudes' (1871, 26). However, the works produced by Gunther and Bellamy today provide a unique insight into the intellectual and social milieu that influenced late nineteenth century science in Oxford (see chapters 5–7).

The history of science has now become a highly diversified range of scholarship and over time has moved through various intellectual approaches. It is now a discrete discipline and historians of science now draw on scholarship from philosophy, religion, sociology, history and the classics (for example, Olby *et al,* 1990). This diversity of intellectual perspectives offers a broad vision and receptivity to new approaches. These historians have already considered the impact of the changing relationships between culture, science and religion, from the early years of Victorian Britain to the early twentieth century (see Chapter 2), and these issues are equally relevant to the intellectual development of prehistoric archaeology.

Where British prehistory is concerned, its historiography has not yet reached this disciplinary level. There is as yet no systematic analysis of the contributions made by

individuals to the development of prehistoric archaeology, or of its intellectual grounding within a nineteenth century cosmology. A study of amateur and professional archaeologists by Levine (1986), covering the culture of amateur eclecticism from 1836 to 1886, remains the most significant interpretation of the growth of pre-professional archaeology in Britain. The amateurs examined by Levine were from the middle and upper classes rather than those examined in this thesis who were often tradesmen and wage earners.

Levine provides a valuable starting point for research into the intellectual contributions to archaeology as she specifically analysed the important social contributions of amateur societies, although they appeared to put more emphasis on historical archaeology, architecture and documents rather than on prehistory (see Oxford Architectural and Historical Society, Chapter 6).

In a broader sense, historical and institutional accounts of the discipline of archaeology up to the present day provide an overview of the advances and discoveries of archaeology (see Marsden 1984; Trigger, 1989 and Van Riper, 1993) but not of its social or epistemological underpinnings. The findings from this research provide a contextual foundation for the social and cultural background of British prehistory in Oxford.

Interdisciplinary aspect

From the 1860s as a result of the acceptance of Darwin's theories of evolutionary change and development new ways of thinking about science emerged within different bodies of knowledge (Bowler, 1993). For many people, this fundamentally changed their understanding of the order of nature, culture and society.

In Oxford, the boundaries between scientific disciplines were frequently blurred and contested. In the latter part of the century, established academic disciplines such as *Literae Humaniores* (classics) and history continued to thrive, whereas prehistory and anthropology took longer to mature (see Gosden, 1999).

An investigation into the social and intellectual growth of prehistoric archaeology and its cultural setting in Oxford requires a multi-disciplinary approach that can permeate the arbitrary disciplinary boundaries that were not established until the end of the nineteenth century. Gillian Beer (1996, 18) suggested that this form of methodology

transgresses and 'brings into question the methods and materials of differing intellectual practices'. This style of research may uncover problems that have been overlooked by traditionally established methodologies. In this way, the transformations that occur when ideas change their creative context may lead to fresh ideas (Beer, 1996, 173). By applying various methods of research for this thesis (see below), it became possible to discover the fluidity of social and intellectual relationships across the fields of scientific knowledge (see Chapters 5 to 7).

The wide-ranging research methods required for this investigation into British prehistory demonstrate the need for increased interaction between various academic departments. For example, in the course of the research into the social and intellectual background of Henry Michael John Underhill (Chapters 7 and 8), information has emerged from a wide background of sources. Among these have been academic literature and conferences concerning the history and philosophy of religion, the natural sciences, geology and natural history, and the history of archaeology.

It became abundantly clear that all these disciplines formed the core of nineteenth century British prehistory and that the roots of this knowledge grew from the earlier disciplines of natural history, science, and religion.

This multidisciplinary approach is vital for any assessment of the intellectual negotiations that occurred across the open fields of the mid and late nineteenth century mindscapes. Rather than see the subject-disciplines of geology, natural science and history as separate academic units, it has been more valuable to examine the way that this knowledge was disseminated to the public through the variety of transactions and interactions at intellectual societies (see Chapters 2 and 6).

Luckhurst and McDonagh (2003, 10) used the term 'transactions' to describe the social and cultural networks which generated nineteenth century intellectual knowledge. The case studies that follow suggest that these cultural, social and intellectual transactions played a vital part in forming today's discipline. When examining the history of the growth of British prehistory in the nineteenth century, it becomes clear that no disciplinary subject area can be studied in isolation. The pursuit of prehistory began as a pastime and gradually developed into an academic discipline during a time when many of the present day subject boundaries simply did not exist.

Growth of a discipline

In recent studies of the influence of cultural and social issues on the intellectual climate of nineteenth century Britain, it has been argued that grand narratives of progress are no longer appropriate (Daunton, 2005). In order to explain the complex growth of a new discipline, the smaller, micro-studies demonstrate its setbacks and advances more clearly (Sherratt, 1992, 135-142). On the other hand, as Pickstone (2005, 31) suggests, within these small studies, there should also be a contextual framework, placing the analysis within a wider cosmology.

Although this thesis focuses on the history of the growth of British prehistory in Oxford and its acceptance as an academic discipline, the research may help to shed light on the common national trends of the time. By the end of the century, the emergence of professional posts in University departments constructed new intellectual boundaries (Appendix 3a). Frontiers were being built around subjects that had, earlier in the century, been shared knowledge (see the division of George Rolleston's post following his death in 1881 into three different appointments, Chapter 5).

Our intellectual ancestors

The following section outlines the discovery and growth of amateur knowledge about the ancient British past and of its move towards being recognised as an established academic discipline by the end of the nineteenth century.

By the 1870s, the subject of British prehistory appears to have been a multi-headed hydra. It was not so much connected to history, as Levine (1986, 91-4) suggested in her work of the early nineteenth century antiquaries, but more related to the discoveries of the scientific world. Speaking at the meeting of the British Association in Bristol, 1875, George Rolleston (q.v.), believed that the study of prehistory grew more from the evidence produced in geology, physiology and ethnology, than from recorded history or the classics (Rolleston, 1884, 903)

It would appear that in the middle of the nineteenth century, various committees of the British Association were not entirely sure of either the cladistics or the formal identity of British prehistory. Between the 1830s and 1870s, papers presented on evidence

from prehistory were variously included in Section C: Geology and Geography, or section D: Biology (see the meeting in Oxford in 1860 chapter 2). This 'battle for supremacy' is discussed by Timothy Murray (in preparation) and by Sillitoe (2005).

The (pre) history so far

There is currently no substantial or comprehensive record of the growth of British prehistoric archaeology. Prominent archaeologists of the twentieth century (for example Daniel, 1962; Piggott, 1959; Childe 1942 and Graham Clark 1989), made important contributions to the history of British archaeology in general, but did not offer an in-depth analysis of its origin and development. Probably in its early years as a discipline, the theory and practices of archaeology were more applicable to practical excavational procedures, which needed a methodology in order to establish it as an investigative science. In Colt Hoare's phrase, 'WE SPEAK FROM FACTS, NOT THEORY' (Cunnington and Dyer, 1975, 1, 133-134).

There is little evidence for a contemporary reflexive practice of the interpretative meaning of material culture from the pioneers of archaeology, though their methodology was being refined (See Greenwell and Rolleston 1877; Rolleston and Pitt Rivers, 1878). Indeed, until the late twentieth century, it is likely that archaeology was not considered a mature enough discipline to qualify for an analytical or contextual history of its philosophy, or for interpretations of the social and cultural meanings of its evidence to be considered relevant to its practice.

Recent histories of prehistoric archaeology in Europe (*Antiquity*, 2002 Volume 76), and in America (Fagan, 1985) consist mainly of chronological narratives of events rather than an examination of concepts or ideas. *'Antiquity'* (Volume 76) devoted a special section to the history of archaeology, although, apart from Sherratt's account (2002, 151-157) of John Evans, most of the articles were from European archaeologists, rather than British writers.

One of the most widely used textbooks on the subject, for instance, is Bruce Trigger's *History of Archaeological Thought* (1989; also Trigger, 1994). While he explicitly includes an intellectual element in the history of ideas, his work now requires extensive revisions, a fact that Trigger acknowledged when speaking at a recent conference.

According to Trigger it now is time for histories of archaeology to include a broad cultural, social and contextual infrastructure. He stated in a recent conference on the *Histories of Archaeology* that 'over the last ten years, unexpected discoveries and challenges have emerged in the discipline; as well as an exponential increase in the interest in specialised research into the history of archaeology' (Cambridge University, Department of Archaeology, 2004, unpublished).

Trigger acknowledged that the growth of British prehistory is a vast subject, and is ready for further in-depth research. Rather than present another institutional history from official sources, this thesis is based on primary sources that were created at the time and produces evidence for the amateurs and academics who participated in its development. Particularly valuable containers of this evidence are the proceedings of local archaeological societies. This will be discussed in Chapter 6.

Writing in the proceedings of one of these societies in 1857 on 'the new science of archaeology,' the Reverend J.O. Picton, stressed 'the importance of the connection between past and present narratives.'

> *The study of the past in the most comprehensive sense, implying thereby an examination of all existing remains, whether in the shape of architectural erections, written records, spoken dialects, and the implements of warlike, civil and domestic use... In fine, the ultimate aim of this science is to supply such data as will enable us to draw fair inferences as to the state of those who have gone before us, to present us with a vantage ground from which we may discern, as in a bright and well defined prospect, the complexity of life and action which signalised those who are no longer upon earth.*
>
> (Picton, 1857,275).

Not only did Picton anticipate subsequent accounts that would emphasise the importance of making connections between the past and the present (Lubbock 1865; Tylor 1871), he also predicted the ideologies of many contemporary archaeological theorists (for example, Hodder, 1986, 1991; Shanks, 1992; Tilley, 1994; Parker Pearson, 1999; Thomas, 1996 and Gosden, 1994).

It is significant that this vision of the past as a 'bright and well defined prospect' was written by a clergyman and amateur researcher (see Chapter 2 on science and religion). His ideas were formulated in the late 1850s, a period before the boundary lines separating multi-faceted studies were drawn around distinct subject disciplines

and before Darwin's ideas of evolutionary development gradually led to a re-appraisal of human antiquity (see Chapter 2).

British prehistory did not develop in a regulated fashion. Disagreements over 'deep' time and the chronology of material culture prevented intellectual progress, for example Wright's opposition to the Scandinavian Three Age Theory (Evans 1956, 230). This is what makes the study of its history so absorbing. The intellectual arenas where battles for verification and acceptance of scientific research were played out reflect the complex cultural and social networks that were characteristic of the late nineteenth century (Murray, 2001).

For the locally based amateurs, living far from the metropolitan milieu, these issues were probably less significant than their individual interests and particular social networks. Evidence arising from this issue will be discussed in Chapters 5 to 7.

Our understanding of the contexts of prehistoric archaeology and of archaeological knowledge in nineteenth century Britain is still incomplete. In 1989 (p 1), Clark identified the need for a critical history of archaeology; 'the process of this transformation, change, metamorphosis is crucial in our understanding; that of the discoveries of the past but also the [mind sets] of those who were at the forefront of discovery and scholarship'. This process is yet to be accomplished.

The section that follows discusses related examples of histories of archaeology and compares them with Mayr's work (1982) in the history of science.

An archaeology of prehistoric studies

The history of the growth of an intellectual subject currently plays a crucial role in securing disciplinary identity and institutional cohesion. Historiography is a powerful tool in the foundation, definition and status of an academic discipline. It legitimises knowledge and authority at a professional level, and enables the subject to acquire the accredited systems of investigation among its new members.

Since it has been recognised as an academic discipline, rather than an antiquarian pastime, the study of archaeology has had to construct a history, or foundation-text. Often the methods for achieving this have been to recover convenient episodes and perspectives from previous records of archaeological discovery.

It may be that the validity of these earlier accounts need to be re-examined in the light of current approaches. For example, issues of gender, identity and social status in the early years of archaeology were based on a white European male perceptions (this will be expanded in Chapter 3).

The most recent scholarship in the history of archaeology (Christensen 1989; Trigger 1989; 1994; Kehoe and Emmerichs 1999; Schnapp, 1996 and Murray 1999, 2001), has helped to overcome many of the pragmatic, presentist and incrementalist tendencies ingrained in many conventional disciplinary histories (see especially Chapman, 1989, who examined the social networks of archaeological societies). More generally, as Freeman (2004, 7) observes in his study of Victorian geology, historians of archaeology are beginning to show a commitment to explore archaeology from the outside, as much as from inside, as a situated, scientific, cultural and ideological undertaking as a collage of knowledge.

Methodology

One of the few books dealing with methodological approaches to studying the history of archaeology is '*Tracing Archaeology's Past: the Historiography of Archaeology'* (Christensen 1989) which has been a valuable reference work for my own methodology. This collection of papers still appears to be a milestone in historical theory, as since Christensen's publication there have been few further contributions to the theory and methodology of the history of archaeology. For example, Chippindale (1989, 21-34) stresses the importance of excavating, not just printed sources, but archives of manuscripts, letters and diaries and this has also proved an effective method for this thesis. Recently, Mann (2005) developed this approach in his work on using the Bodleian Library as a research tool (see below, this Chapter).

Chapman (1989, 151-163) produced a valuable account of the affiliations and networks of the members of the elite national societies of nineteenth century Britain and the way in which these societies contributed towards the ordering of knowledge. Based on this research Appendix 5 shows the members discussed in this thesis and the national societies to which they belonged. Appendix 6 shows the relationships between members of Oxford societies using information from their publications and proceedings.

Writing history

Corbey and Roebroeks (2001) referred to the various historical approaches used by Ernst Mayr (1982), the twentieth century biologist, when writing the history of biological thought. Chapters 1 and 2 of *The Growth of Biological Thought* offer valuable analytical tools from which to construct a methodology and model for examining the history of archaeology.

Mayr (1982, 2-9) examined various histories of scientific disciplines and discussed the limitations of earlier scholarship. He suggested, like Collingwood (see below), that history is concerned not with events, but with processes that do not begin and end but turn into one another (Mayr, 1982, 6).

Two of Mayr's categories of history are particularly relevant for presenting a history of archaeology in this thesis. Mayr stressed the importance of cultural and social aspects of knowledge and the problematic issues of disciplinary identity that might arise from this type of analysis (see Chapter 6 on Oxford Societies).

Altogether Mayr categorized five types of scientific historiography, although these are not exhaustive. They can, however, be used to analyse most existing forms of histories of archaeology. Following a brief summary of these classifications, the way in which current practices of history of archaeology match the data will then be discussed.

According to Mayr, the most common styles of historical accounts are lexicographic histories, chronological histories, biographical histories, cultural and social histories and problematic histories.

The first category, a lexicographic history, puts a strong emphasis on the questions of 'What, When, and Where?' In the history of archaeology, these are generally descriptive narratives of what happened in the past. This genre of writing is often based on 'Great Discoveries' and is normally lavishly illustrated (e.g. Fagan 1985).

The second category, a chronological history, considers a particular time sequence, for example the events concerning the discovery of human antiquity in the eighteenth and nineteenth centuries. Here the work of Grayson (1983), Marsden (1984) and Van Riper (1993) matches Mayr's criteria.

Thirdly, there are biographical histories. These aim to portray the history of science

through the lives of leading scientists (for example, Galton, 1874). In the natural sciences, examples of contemporary biographies that have addressed the cultural, social, and moral issues of their subjects are those by Corsi (1988) on Baden Powell; Janet Browne (2003) and Desmond and Moore (1991) on Darwin and Desmond's (1999) biography of Huxley.

Biographical histories of prominent archaeologists have not been as forthcoming. There has been little contextualisation in biographies of archaeologists (though see articles on Collingwood's archaeology, Bradley, 1994; Simpson 1996 and 1998). This may be because the discipline of archaeology is relatively new compared to the historiography and practice of science. However, as Champion recently pointed out in his introduction to a Conference on the History of Archaeology (Sebire, 2006b), certain early archaeologists such as Stukeley, Arthur Evans and Pitt Rivers have become 'serial biographees.'

As indicated earlier, the two most relevant categories that correlate with this history of archaeology identified by Mayr are those that impart cultural and social histories, and problematic histories. A cultural and social history will stress that science is a human endeavour and it is therefore inseparable from the contemporary values and intellectual milieu in which it is produced. This emphasizes the external factors that have influenced scientific activity at a given time and in particular circumstances. These are vital issues for this research into the history of British prehistory in Oxford.

The final category of Mayr's analysis, 'a problematic history study,' is one that studies the development of science and its intellectual role in terms of the attempts to solve particular problems. The focus here is on the origins of change in key conceptual issues, what Kuhn (1970) described as paradigm shifts. Considered in this category might be the problems of presenting and confronting the new scientific evidence for human antiquity.

In the chapters that follow, the cultural and social issues that affected late nineteenth century ideas of British prehistory are considered alongside the problematic issues of conflicting intellectual definitions of its subject matter and its practitioners. An integral part of these issues was the transformation of prehistory from an amateur pursuit to a study increasingly dominated by professionals (Levine 1986, and Chapters 3 and 6). The issue of the loss of intellectual status by amateurs in late nineteenth century Britain has yet to be addressed in the foundation accounts of

prehistory.

Although the evidence from Oxford-based case studies emphasizes an initial social and cultural fluidity of shared intellectual interest in British prehistory, the problematic issues are highlighted by the way in which boundary lines between amateurs and professionals became gradually more defined as the University moved towards recognizing British prehistory as an academic discipline (see chapter 6).

By applying Mayr's categories from the history of science to cultural, social and problematic issues in the history of British archaeology, it may be possible to move away from earlier narrative, teleological approaches. If this methodology is applied, future histories will become part of a reflexive and multi-disciplinary process.

The history of archaeology is now ready to include newer approaches suggested by other disciplines and assimilating the contributions made by the founding fathers of its history (for example Daniel, 1975; Schnapp, 1996 and Trigger, 1989). Science, religion and history have already begun to examine and contextualise their epistemological origins and archaeology must follow suit.

Methods of writing the history of archaeology

The history of archaeology and archaeological thought continues to be written mainly by archaeologists for fellow archaeologists or as texts for students. This type of writing reveals the way in which practitioners see themselves and their history in a disciplinary context. Publications for popular interest are often media-led and describe particular archaeological discoveries or periods. These books resemble those produced in the nineteenth century that disseminated the latest archaeological knowledge as part of the general public interest in science (see Chapter 8)

In a later consideration of the history of archaeological thought, Trigger (1994, 121) analysed the differences between internalist and externalist approaches in writing a history of archaeology. Although an internalist approach might be more straightforward, as it would involve applying a chronological narrative, it became evident for this thesis that an externalist approach, although it required fluid and eclectic methods, would be more appropriate.

The most ideal approach for a comprehensive account of prehistory would be one that could blend internal and quantitive methodology with the qualitative breadth of an

external approach. This undertaking is regrettably beyond the limits of this present research.

Problems in writing history

In 1931, Butterfield offered a critique of many past accounts of historical events. These he termed 'Whiggish' histories; those that celebrated, not an impartial evaluation of events, but specifically celebrated the progressive triumph of British institutions and actions [see for example Edward Freeman's *The History of the Norman Conquest of England* (1870) or Galton's *English Men of Science: Their Nature and Nurture* (1874)]. By the mid 1970s, the term 'Whig histories' had become synonymous with a style of writing praising 'famous men' who generated and personified national progress (see, for example, Bellamy 1908; Gunther, 1937).

Jardine (2003, 126-141), a historian of science, commenting on this notion of Whig histories, points out that an exploration of the past should examine the way in which thoughts were conditioned by their circumstances. The historian should not pass moral judgements on past agents or events, but act as a mediator between past and present. As Collingwood pointed out (see below), the work of the historian inevitably mirrors the society in which [he] works. This theory has since been transposed into theoretical interpretations in archaeology. Jacquetta Hawkes, for example, observed that 'each generation gets the Stonehenge it desires or deserves' (Sheridan, 2002, 1086).

What becomes clear is that any account of the history of archaeology requires a variety of approaches. A writer in the present should also be aware of the issues that influence their own world-view. It is essential to see how often these interpretations are themselves conditioned by other factors. This should include a consideration of the dominant contemporary sociological and ideological factors of the time in which they were written. As Jardine cautions, the methods and scope of contemporary history could become irresponsibly promiscuous explanations of theory; '…a dash of Bourdieu and a little Foucault' (2003, 135).

The study of the history of a discipline enables us to analyse earlier historical interpretations, which, possibly, we have quite naturally inherited or adopted. The historian of archaeology should consider the key cultural and historical factors that

have influenced the discipline, and, as a result, gain both an internal and external knowledge of the subject. This suggests that future histories of archaeology must be historical, and contextual, but, in order to avoid yesterday's clichés, we must avoid the creation of new ones.

Culturally determined ideologies are inevitably reflected in the work of writers. One important suggestion in writing a social and cultural history is to avoid what Himmelfarb (1987) terms 'theoretical anachronism', the inclination to apply categories of one period to deeds and works from a period in which those categories were absent. In these circumstances, the Marxist theories implied by Bourdieu's 'cultural capital' or in Gramsci's 'hegemony of knowledge' should be used with discretion when discussing the cultural and intellectual milieu of the nineteenth century.

Himmelfarb cautions that the use of modern sociological theories does not always apply. In particular, she referred to the denigration of bourgeois nineteenth century values as 'middle class respectability,' by later theoretical interpretations that saw ideas of respectability and the virtues connected with it, as instruments of social control (Himmelfarb, 1987, 12). Himmelfarb questions the ideas of Marx and his descendants, suggesting that the 'imposing of alien values' upon a nineteenth century working class was untrue. On the contrary, she suggested, this 'gentrification' could be interpreted more positively as a democratising exercise that might support personal enablement and self-improvement.

To a certain extent these observations are consistent with the results of this research into the cultural and intellectual relationships between Oxford's 'town and gown.' Although among individuals from Oxford who benefited from the 'top-down, bourgeoisifying ethos' of middle class reform and the dissemination of knowledge, Henry Underhill, George Rowell, and Frank Bellamy and Harry Paintin, were never fully accepted by the intellectual aristocracy. Chapter 6 shows that both Bellamy and Paintin felt that they had suffered at the hands of the University when their academic attempts to be accepted were rejected. Bellamy's offer of his philatelic collection was refused by the Bodleian Library and Paintin failed to be considered for an honorary M.A.

Recent research from the history of science also supports the ideas of self-improvement through example. Secord (1994), Alberti (2003a and 2003b) and Allen

(1994) found that working class amateurs gained knowledge and respectability as they widened their social spheres through intellectual pursuits (see Chapter 5, Oxford Scientific Societies). Further research into aspects of social position and knowledge (see Chapter 3) is now required in the history of archaeology.

Interpretations of archaeological thought

The uses and abuses of theory

Not only have the contributions to nineteenth century British archaeology from many overlooked individuals been neglected, the value of philosophical interpretations of archaeology during its transformation from an amateur pastime to a professional academic discipline investigated by the Oxford philosopher R.G. Collingwood (1889-1943) have received little attention. Collingwood was not only one of the few prominent British philosophers of the early twentieth century but also a practising archaeologist of Roman Britain. Intellectual changes in archaeological theory and practice in the twentieth century resulted in Collingwood's work being overlooked and many of his contributions to archaeology have been neglected.

Until recently, Collingwood had become another of the unnoticed contributors to the history of knowledge about the past in Oxford (see also Chapter 5). A study of his work suggests that during the early twentieth century he was an influential intellectual figure and his contributions to the epistemology of archaeological knowledge need to be reinstated.

In many ways, Collingwood is literally and metaphorically 'closer to the ground' than post-modern theorists such as Foucault, Bourdieu and Derrida whose ideas have influenced the present discipline (Thomas, 2000; Gosden, 1994 and Tilley, 1994).

Collingwood's philosophy was 'home grown' in Oxford and he was therefore completely familiar with the implicit cultural codes of the University and of its intellectual rationale (see Chapter 3). His father, Cuthbert Collingwood, was John Ruskin's secretary and biographer and an amateur artist and the young Collingwood grew up in the Lake District within this intellectual milieu. He had a parallel lifelong fascination and involvement in the archaeology of Roman Britain and at Oxford was

elected to a fellowship and tutorship in philosophy at Pembroke College in 1912 and became Professor of Philosophy in 1935 (Collini and Williams, 2004).

Collingwood's synthesis of history and philosophy formed a contemporary contribution to the theories of knowledge, but further light was shed on his ideas when many of his previously unpublished papers were published posthumously in 1995, as *History as re-enactment: R.G. Collingwood's idea of history* (Dray 1995). Even more evidence has recently emerged with the re-issue of his work *The Principles of History* (Dray and Van der Dussen, 1999).

The latter work appeared to have been lost, owing to an oversight by Oxford University Press (Dray and Van der Dussen, 1999, ii), and it was not published in its entirety until 1999. With the information included in this edition, it becomes possible to study Collingwood's ideas on the philosophy of history in full, and, implicitly, his theories of the purposes of archaeological enquiry. Because of this recent scholarship, Collingwood's philosophy of history has now been formed into a heterogeneous collection of intellectual knowledge in which he synthesised ideas about art, religion, science, philosophy, history, and archaeology, identifying 'the complex rapprochement between them' (Collingwood, 1939, 77).

Collingwood observed that historians' perspectives are subject to change with the passage of time, and draws the obvious conclusion 'that history will be constantly rewritten; each generation of historians must rewrite history in its own way' (Dray 1995, 248). History in consequence is 'a growing and changing body of thoughts, decomposed and recomposed by every new generation of historical writers' (Dray and Van der Dussen, 1999, 291).

This suggestion of de-composing, or in today's methodological term, de-construction, anticipated many later post-modern sociologists, who, as I have already indicated, were often operating outside an experience of archaeology, but whose theories have been widely used within it by Shanks (1992), Tilley (1994) and Thomas (2000).

Today, archaeologists apply the term 'contextualisation' to this approach, but in the early twentieth century, Collingwood was already exploring the notions of context, meaning, and nuances involved in 'archaeologies' of texts. As has already been

indicated, by the 1980s these concepts were introduced into British theoretical anthropology and archaeology from the school of philosophy that arose in France in the 1960s. This may suggest that 'we have never been modern' (Latour, 1993). Indeed, as Latour observed, post-modernism is a symptom of a particular social and cultural context, not a fresh solution (1993, 46). If, as Collingwood suggested, past thought is re-thought by the means of the critical scrutiny of contemporary evidence, then this offers an opportunity for current theoretical archaeologists to re-appraise his ideas and incorporate them into their own discipline (though, see below, Hodder 1991; Bradley 1994).

To Collingwood the substance of all history was human action, or *res gestae*. These actions express an agent's thought and include both the rational and irrational. This, I would suggest, refers to his comment that all areas of human emotions and therefore all history of human action is a history of thought (Dray and Van der Dussen 1999, xxxv). If this is so, then an intrinsic part of this thought must be the notion of making sense and engaging with the world, establishing what Bourdieu (1993) later called *habitus*, ordering the whole social cultural and intellectual world.

Towards the end of the twentieth century, Collingwood's ideas began to receive critical attention from British theoretical archaeologists Hodder and Bradley. Hodder (1986, 95-105) reiterated Collingwood's belief that examinations of past events cannot independent of our own social cultural contexts and Bradley (1994, 27-34) examined reports of the way that Collingwood had 'misinterpreted' certain evidence during excavations in 1937 at 'King Arthur's Round Table' in Westmoreland.

Bradley's evidence was based on the sources available in 1994 and he was not then familiar with Dray and Van der Dussen's later publication of Collingwood's work in 1999, or of Simpson's reappraisal of Collingwood as an archaeologist (1998). These later publications vindicated Collingwood's alleged archaeological misinterpretations. Examples such as these supply evidence for the need to review the original texts in the light of factual changes in the evidence.

Collingwood addressed all the activities of the human spirit, as the 'essential' emotions, 'It is clear in the archaeological record that emotions are connected with certain types of actions' (Dray and Van der Dussen, 1999, Chapter 6). Although, at

the time, he offered no archaeological examples, it may be feasible to connect this theory with present-day analyses of human action, for example, the processes involved in the monumentalisation and ritualisation of the prehistoric landscape.

Recent attempts to understand these ritual commemorations of death and memory have incorporated ideas from many disciplines (Bell, 1998; Parker Pearson, 1999). Collingwood's concept of empathy, phenomenology and human action corresponds with many of the ideas that were evolving in the late nineteenth century about prehistoric sites and which are still being addressed today (see Chapter 8).

According to Collingwood, 'As concerns Neolithic man…if you can enter into his mind and make his thoughts your own, you can write his history, and not otherwise; if you cannot, all you can do is to arrange his relics in some kind of tidy order' (Dray, 1995, 155). These issues are discussed in Chapter 8 in relation to interpretations of Stonehenge.

Throughout his work Collingwood emphasised that the aspects of cultural meaning, human action, and contextual history were crucially important, 'All history [then] is the history of thought' (Dray, 1995, 445). I would argue therefore that as archaeology demonstrates the fundamental thoughts and actions of our human past, through accumulating evidence, there is no need to look further than Collingwood's philosophy. His neglected theoretical approaches would complement the work of other neglected individuals discussed in this thesis and should become a fundamental part of the taught courses in the history of archaeological thought.

Research engines

This final section of this chapter discusses the value of research methods for the history of archaeology. They focus on the uses of various primary sources which can contribute towards a more contextualised and nuanced sociological history.

Writing a history of the evolution of prehistory as a scientific discipline should ideally include the archaeological skills of investigation, not only of potentially relevant archives, but also of successive editions of known and familiar sources. This can often reveal substantial changes in the writer's approach to the subject or in their own reflections on archaeology. For example, Collingwood's early ideas about the

philosophy of history had changed by the 1930s (Dray and Van Der Dussen, 1999). Later, Trigger, the 'father of the history of archaeological thought,' reviewed his founding text on the *History of Archaeological Thought* (1989), and stressed the need for a re-examination of the process (1994 and see this Chapter).

In reflections on history of ideas, Michel Foucault used the term 'archaeology' as a metaphor for the excavation of earlier ways of thought, and the stratigraphy of abstract epistemes (Foucault, 1970). It is now time for archaeology to excavate its own foundations using ideas from its own philosopher Collingwood, and the distinctive evidence of the discipline itself, the material culture deposited in archives. These publications and records are the evidence of everyday practices of preceding generations of amateur and professional archaeologists.

Little research has covered the manner in which this evidence can be used to investigate the history of the discipline. A valuable way of tracing the intellectual growth of prehistory is to resurrect neglected or overlooked material from nineteenth century enthusiasts that has gathered archaeological dust. These could play a crucial role in the reinterpretation of knowledge. Archives contain vital material evidence from the past, but their value has been unexplored in many existing accounts of the discipline (see the Underhill archives, Chapter 7)

Long-established institutions, such as museums and libraries have accumulated, not only finds and records from early excavations, but also the incidental accompaniments to their acquisition, as 'containers of time' (Sherratt and Roughley, 2005, 6, unpublished). Beside officially catalogued collections of artefacts or archives, more informal material accidentally accompanying these documents can often be overlooked. In Oxford, often what has survived alongside a more formally curated body of conventional material is in itself a valuable artefactual archive. Information shows that, according to his handwritten account, the illustrations for Tylor's anthropological lectures and publications, for example, were created by Alfred Robinson (MSS Box 1 /ii/3 History of University Museum Archives and Chapter 5).

Recently, as a result of the growing interest shown by research councils and institutions in the archaeological remains of our disciplinary ancestors, collections of archives are being catalogued and placed on the web. In Oxford, these include archives of John Evans and Rolleston. Possibly as a result of enquiries stemming from this research, other overlooked archives have gained official recognition. These

include the Underhill Collection at the Institute of Archaeology and the Folklore Society, the Underhill Photograph Albums at the Centre for Oxfordshire Studies, and Underhill's notebooks at the Museum of the History of Science.

Assemblages of overlooked archives might consist of private correspondence and diaries, annotated personal collections of books and bound and classified offprints. Examples from various Oxford archives include a copy of Darwin's 1859 '*The Origin*' (Fig 1.1), given to George Rolleston, containing his notes in the margin (Museum of the History of Science).

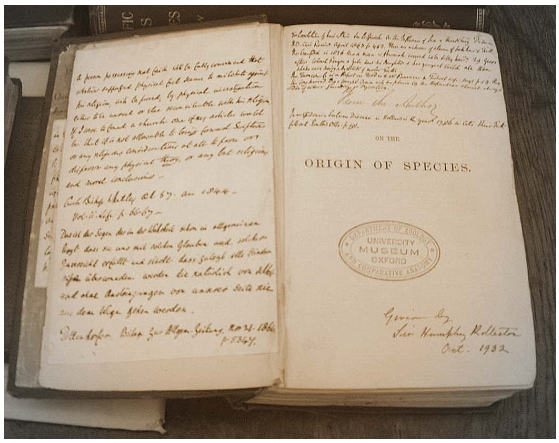


Fig 1.1 George Rolleston's copy of *The Origin*, given to him by Darwin

(Museum of the History of Science)

Personally compiled scrapbooks of newspaper cuttings by individuals such as Edward Tylor's University Museum Scrapbook (Box 2, Scrapbook, University Museum Archives) and collections made by the Bodleian Librarian Falconer Madan (1851–1935) and Harry Paintin, 'Journalist of Oxford' (Paintin MSS. GA Oxon a 22 Miscellaneous Papers, and see Chapter 5), contain unique details of the personal lives and achievements of many of the individuals discussed in this thesis and the way in which they saw themselves (see Chapter 3). They are containers of time which supply evidence for what was considered to be socially, culturally and intellectually important and worth preserving (see Chapters 4–7).

People archives

As Mann (2005, 185) points out, it is important that 'people resources' are not overlooked in academic research. By this, he means that although printed information, and, more recently, web resources are indispensable tools for modern research, the unquantifiable knowledge provided by people with first-hand information must not be overlooked.

For this research into intellectual and social relationships in nineteenth century Oxford, the 'people sources' emerge not only from contemporary diaries and letters (Oxford University, Ashmolean Museum, Department of Antiquities: Personal Papers of Sir John Evans, Arthur Evans and George Rolleston[1]), but also from the current specialists in reference libraries. Librarians and archivists from University libraries and departments and the Centre for Oxfordshire Studies have an extensive knowledge of material that is as yet uncatalogued or electronically recorded. This personal knowledge is intellectually invaluable and economically unquantifiable.

Mann (2005, 231) also refers to 'general and focused browsing,' a technique of searching through deposits of uncatalogued letters and papers. These searches often uncover information that extends far beyond anything currently published. For example, the collection of papers relating to the Ashmolean Natural History Society given to the Bodleian Library in 1914 by F.A. Bellamy (Cordeaux and Merry, 1976; this thesis, Chapters 5 and 6) contained a letter proposing George Rowell's nomination to the Ashmolean Society on 28 November 1846 and his reply of gratitude to Baden Powell (Ashmolean Society 1834–1883, Dep C. 653 61, Bodleian Library).

This information revealed a hitherto unknown connection between the 'town and gown' of mid-nineteenth century Oxford that will be discussed in Chapters 4–6. Similarly, the Acland Papers in the Bodleian Library contained a letter written in 1860 by George Rolleston (Chapter 5) describing his action following the recent meeting of the B.A.A.S. in Oxford that include his comments on the 'Great Debate' (M.S. Acland d 65. 27). Another letter written by Lubbock to Rolleston concerned the same event (Rolleston Archives, Western MS 6119/3, Wellcome Institute London). Information such as this provides evidence of the social networks of those involved in the development of nineteenth century intellectual thought (see Chapters 2 and 3).

[1] The Rolleston Archive, formerly in the Sackler Library, largely uncatalogued, is now undergoing digitisation.

Once information about an individual has been collected, the process of composing their biography needs to be considered. Chapter 5 presents case studies of particular individuals in this thesis. The following section discusses the various approaches to biographical writing.

The term 'prosopography' has been familiar to historians and social scientists for the past century. It broadly describes collected biographies and biographical fragments from groups of individuals who share a common intellectual concern (Shapin and Thackray, 1974). Prosopography was originally used in classical scholarship, to describe the social and intellectual relationships of Greek or Roman politics and power (Pyenson, 1977, 156). It has now come to denote any study that uses collective biography.

A prosopography of nineteenth century Oxford individuals is presented in this thesis in two ways. Appendix 2 places those who, between 1850 and 1900, were connected with the growth of intellectual and scientific knowledge about the ancient past. Their time lines are arranged chronologically, in order to connect them with significant local and national events. The social and intellectual affiliations of these individuals are indicated by different colours; although during the period in question, many social and intellectual links between University and non-University were still fluid (see Chapters 4–6). People from the so-named 'town' are indicated in red and those from the 'gown' in blue.

The chart runs chronologically, showing therefore that people central to this thesis, the amateur archaeologist Henry Underhill (1855-1920), and the botanist George Druce (1850–1932), were contemporaries of professional University teachers such as Edward Poulton (1856-1943), and Arthur Evans (1851-1941). The chart also shows that, earlier in the century, George Rowell (1805-1892), William Riviere (1806-1876) and J. H. Parker (1806-1884) were also contemporaries. Appendix 3 repeats the information alphabetically.

A prosopography of lives of other people mentioned in this thesis can be found in Appendix 8. Like the prosopography of *dramatis personae*, it runs chronologically rather than alphabetically.

In 1874, Francis Galton wrote a collective biography of people from scientific institutions, *English Men of Science: Their Nature and Nurture*. This work was a hagiography of nineteenth century scientists who had published scientific papers. Galton's prosopography included only high-profile members of the scientific

community. It was, in fact, a Whig history of scientific elites, based on an implicit belief that the people involved in science were from within the social and intellectual milieu of the educated classes (Pyenson, 1977, 158). Those outside this milieu from the lower middle classes, the artisan and the autodidact, enthusiasts such as George Rowell or Underhill would seldom have been considered nor included at that time (see Chapter 3, and Chapters 5 to 7).

Amateur scientists on the edge of the scientific community, or individuals belonging to different social groups to established academics, have also failed to receive due recognition. This is an important issue for future historical biographies, even though finding the evidence about them may be more problematical. The contribution of the unknown, the overlooked, or the 'other', like many of the people whose lives are highlighted in this thesis, should be acknowledged contributors to the history of knowledge; this issue is discussed further in Chapters 3 and 5.

Biographies of individuals today are expected to do more than simply relate great achievements. We can no longer rely on accounts which are biased towards a teleological result. The 'tyranny' of many nineteenth and early twentieth century biographies presented fixed representations to project a 'grand narrative' and supported an ideal, rather than a reality, for example Joan Evans' biography (1943) of her step-brother Arthur Evans. Recently, unpublished letters and manuscripts of both John and Arthur Evans have been made available to the Ashmolean Museum (*The Sir John Evans Centenary Project*, work in progress). These items contain new information about their social, cultural and intellectual networks and could, in the future, contribute to fuller multi-dimensional biographies.

In the 1930s Collingwood (Van der Dussen, 1994, 304) argued that biographies deviated from history proper, as they did not explain processes of thought and were therefore merely 'gossip value'. This was an inevitable limitation in the genre of many biographies of the time (Butterfield, 1931) and, as previously mentioned, many prosopographies from classical times were biased either in favour of the subject, sanitised, and unquestioningly laudatory, or blatantly against the subject and completely condemnatory. Collingwood cited the Classics as an example, but the same could be said about the biographical and historical biases of Shakespeare, Jane Austen or Edward Freeman's (1870) version of English history.

Collingwood's argument against biography (Dray and Van der Dussen, 1999, 170) was shaped before ideas of the archaeology of texts were introduced in the later twentieth century and he was writing before the approaches of the *Annales School* towards biography and micro-history (for example Sherratt, 1992, 135-142). He was, therefore, an example of his own theory of the limitations of the personal cosmology of the writer.

In historiographical writing, a biography of a person can be a valuable tool, provided the aforementioned problems are recognised. There are, however, individuals from the nineteenth century whose major contributions to prehistory, and archaeology in general, are yet to receive full recognition. Though Bowden (1984) has produced a biography of Pitt Rivers, there is still a need for reflexive biographies of John Evans, John Lubbock, Canon Greenwell, George Rolleston and Edward Tylor.

In this thesis, which investigates the 'forgotten lives' of ignored individuals, those same individuals also merit more formal biographies. Their roles have been so overlooked that they are not included in any official reference (for example the DNB), nor are their contributions credited in the work of others. Chapter 5 discusses the unpublished biographical accounts of two such forgotten individuals whose archives were found in Oxford, George Rowell and Alfred Robinson. Chapter 7 examines the unpublished journals of Henry Underhill.

The views of the Marxist social historian, E. P. Thompson (2001), are particularly pertinent to this thesis. His research concentrated on those who had been neglected in many social histories. Although his work related to eighteenth century English artisans, his aim was to rescue their lives and experiences from 'the enormous condescension of posterity' (2001, 6). The people he studied had, like many neglected amateur scientists and archaeologists in nineteenth century Oxford, and beyond, 'lived through those times and we did not' (ibid) and their aims were valid in terms of their own experiences and of their interpretations of them. Personal accounts such as those of George Rowell, Alfred Robinson, and Henry Underhill, reveal 'a stratigraphy of social aspirations and silent ambitions' (Crossick 1977, 9-11).

Many of these 'silent ambitions' that provided the infrastructure for this research were hidden in the collections of primary sources in the University and City of Oxford. The final section of this chapter discusses collections of archives that have enriched this research into the social and cultural growth of prehistory.

Oxford sources

Until recently, many of these remains were not considered to be valid contributions to scientific history, but the evidence uncovered for this research demonstrates their richness and diversity. There appears to have been little investigation into the social and cultural aspects of nineteenth century Oxford outside the University (for example Brock and Curthoys, 1997 and 2001). In the early twentieth century Butler (1912) used local archives for her research into the City's social conditions (see Chapter 4).
Similarly, local archives used in this thesis include press reports, proceedings of amateur and professional societies, programmes of social events and personal memoirs, diaries and letters. It would appear that for a social history of Oxford these records have been used only intermittently and are, as yet, intellectually undervalued. However, they provide the tangible memory, the phenomenology of the discipline, and offer a direct link with the people who investigated the past (Schlanger, 2002, 127-31; Archives of European Archaeology Conference 2004).). Their value as historic documents must be considered as the treasure-trove of archaeology.
Many collections that exist today were accumulated for personal motives, for example Frank Bellamy's devotion to the Oxfordshire Natural History Society and Field Club (Bellamy 1908, and Chapter 5). Other archives were not specifically preserved for publication as the authors or their contents may have been considered trivial, redundant or obsolete. Many have survived because they were collected by individuals who later recognised their potential intellectual value. In Oxford, collections in the Bodleian Library made by Gough (maps), Manning (local history), and John Johnson (ephemera) all contain irreplaceable information. Full details of these have been compiled by Cordeaux and Merry (1976).

The serendipitous discovery of a collection of landscape slides by Henry Underhill at the Institute of Archaeology in 2001 led to the discovery of an entire network of intellectual connections. The aspects of Henry Underhill's intellectual and social background and the acquisition and assessment of further archives containing his work are discussed in Chapters 7 and 8.

The contents of these overlooked archives, particularly those that are still unpublished, or even uncatalogued, enable the researcher to move beyond received

ideas and official narratives towards a better understanding of their topics of enquiry (see previous section, Mann 2002). For example, the official *History of the University of Oxford in the Nineteenth Century* (Brock and Curthoys, Vol. 1 1997; Vol. 2, 2000) present a conservative, factual, rather pedantic account of the growth of the University in the nineteenth century. To some extent, the volumes characterise a 'Whig' history, an account of elite success (see Jardine, 2003). The lower ranks from within the University, the support staff, porters, clerks, technicians such as Frank Bellamy and museum assistants George Rowell and Alfred Robinson who are discussed in Chapter 5 are not mentioned except as a footnote; for example Rowell's role at the Ashmolean Museum (Brock and Curthoys, 1997, 601).

Brock and Curthoys (1997; 2000) include no reference to the existence of the Oxfordshire Natural History Society and Field Club before it was amalgamated in 1901 with the older, University-led, Ashmolean Society, or of its relationship with various academics at the University Museum. These events are discussed in Chapter 6. The growth of the study of archaeology by Brock and Curthoys refers only to 'classical art and archaeology' (1997, 607) and British prehistory and anthropology are not discussed in any great detail apart from their acceptance as a diploma subject (Brock and Curthoys, 1997, 354). Thus it appears that the development of British prehistory has also been neglected and overlooked in official histories.

It is therefore only through the discovery of Frank Bellamy's privately published work of 1908 (see Chapter 5), and investigating archives and newspaper reports, that the roles played by the forgotten people from the City and University of Oxford University in the growth of scientific knowledge has been revealed .

Histories of archaeological thought, such as those by Daniel (1962, 1975) and Trigger (1989), that relied mainly upon the published literature, are sufficient up to a point, but deeper epistemological questions are now becoming more interesting to historians of archaeology. Questions of context and reflexivity can only be answered by using information that may be buried in private papers, archives, and individual memories.

There is now an urgent need for selective cataloguing and preservation of unpublished sources, the material culture of the past in order to make them publicly available for reference.

These procedures should also include the preservation of different types of records of archaeological sites. In the nineteenth century they were represented by models (see Henry Browne, Ashmolean Museum Website), wallcharts (see Robinson's work in Chapter 5), lanternslides (Price, 2006) and photographs (Harlan, 2003).

These visual images often convey information about the past that has since been overlooked. The models of Stonehenge and Underhill's Prehistoric and Romano-British slides (see Chapters 7 and 8) are unique records of the history of British prehistory and are themselves both archaeological artefacts and biographical objects.

Some departments have already established programmes for documenting and preserving their histories, for example the Pitt Rivers Museum Relational Museum Project and its on-line database. The remainder must be encouraged to do the same before further important records are lost or forgotten.

This chapter has presented a review of past and present practices in the history of British archaeology. The findings suggest that future approaches to identifying the beginnings of British archaeology should apply historiographical methods used in the history and philosophy of science and re-evaluate its own material culture.

As context, meaning and agency are now key issues in the philosophical interpretation of excavations, they are equally crucial to the epistemological foundation of its discipline.

Chapter 2 Victorian Britain 1850- 1900 Science, Society and Religion.

Oh! Let us never, never doubt
What nobody is sure about!

Hilaire Belloc (1897)

The organisation of scientific knowledge in Victorian Britain 1850-1870

This chapter presents an overview of the fundamental changes that occurred in the cultural and intellectual perceptions of science in Britain from the middle of the nineteenth century. When investigations and discoveries about the natural and

physical sciences began to emerge during the 1840s, existing mytho- historical narratives were questioned and new creation myths needed to be written.

Theories of The Origins

Intellectual reflections on the origins of human existence are a fundamental aspect of human consciousness. Consequently, we construct histories and lineages to explain our world and ourselves. In the past, these histories were expressed in myth, saga, architecture and art. Monumentalisation of the human environment was an intrinsic part of the social and cultural cosmology and, by the late nineteenth century, these prehistoric and historic monuments were capturing the scientific imagination (see Chapters 7 and 8).

Until the first quarter of the nineteenth century, Biblical accounts of human origins provided the traditional history and lineage frameworks for people in the Western hemisphere. For the last 150 years, however, Western science has centred on Darwin's ideas of evolution that in effect were the culmination of evidence and ideas that had been circulating amongst geologists and biologists for many years. These ideas were finally published in 1859 as *The Origin of Species by means of Natural Selection,* henceforth *The Origin.* Darwin suggested that organic life evolved in an extremely long process through the modification of earlier simpler forms.

From these ideas new forms of knowledge evolved that enabled a further expansion of intellectual discovery. Since then, the reception, reactions and analyses that resulted from Darwin's theory of evolution have subsequently produced disciplinary species of their own (Bowler, 1993; Glick, 1988 and Young, 1985).

The section that follows discusses the extent and influence of new scientific knowledge from the second half of the nineteenth century. It provides the background for the contemporary issues of science and religion that, particularly in Oxford influenced the growth of research, into the evidence for a prehistoric past.

Science and Society

Attempts to evaluate the development of intellectual disciplines at any given time must first address the contemporary social and cultural influences at work. In the

nineteenth century, science was central to the intellectual culture and, as Lightman (1997) observed, interested individuals from all social groups defined knowledge, ordered nature, and practised science. There were no boundaries at that time between today's pejorative distinction between amateur and professional (see Chapter 3 for further discussion) and many at the forefront of prehistoric archaeology were often outside university communities.

During the nineteenth century science increasingly became part of public education and leisure; it was often disseminated to wider sections of society through popular journals (this chapter), at amateur societies (Chapter 6) and in popular literature (Chapter 8). This information could be 'sensational' as demonstrated by the publication of *Vestiges*, 1844 (Secord 2000, and this chapter), or it could appear 'magnificent', as represented by Paxton's Crystal Palace in 1851 (Lightman, 1997, 2) or cause apprehension, as in the early reception of Darwin's ideas (Beer, 1983; Glick, 1988; Bowler 1987, 1993 and Ellegård, 1990).

The major intellectual transformation that took place during the latter part of the century was the paradigm shift in the understanding of scientific knowledge in which science gradually moved from a theistic foundation to a secular academic and professional discipline.

From the second half of the nineteenth century in Britain, the growth of this knowledge can roughly be divided into three intellectual stages; the first between 1850 and 1860 produced increasing evidence for the antiquity of the earth and of the process of organic evolution. The second stage, from 1860 to 1870 evaluated and digested this evidence and, by the end of the century, the third stage illustrates the acceptance of the evolutionary hypothesis into scientific beliefs and practices.

These 'three ages' of scientific thought can be compared in archaeological terms with Worsaae's Three-Age classification of prehistoric material culture in Denmark (Stocking, 1971, 374) or anthropologically with Van Gennep's *Rites de Passage*, theory (1960) that analysed human experiences of social and cultural transformation. It is within these nominal boundaries that I shall examine the social and cultural development of the study of prehistory as an integral part of nineteenth century science. Not only could scientific knowledge about the antiquity of the earth be divided into three periods (see Chapter 2), the social composition of individuals involved in this knowledge can also be subdivided. It is probably impossible to

identify a single point at which the intellectual division of knowledge was first perceived as an issue, though, according to Pickstone (2005, 32–33), there were broadly three generations of scientist; the Anglican 'Gentlemen of Science' in the 1830s, such as Buckland and Baden Powell (Appendix 6) in Oxford; in the 1850s, then the men of science, Huxley and his followers, and, from the 1870s, the scientific professors (for example Rolleston, Tylor and later Poulton, Chapter 5). These social transformations took place alongside the intellectual shifts of religious beliefs and social identity.

The 1850s in Britain marked a period of revision and reflection on previously accepted truths of human origins. In the course of the following fifty years, the growth of scientific knowledge began to replace the reliance on religious explanations of human origins, and, however distressing to some, the 'Word of God' was replaced by the word of the scientist. According to Poulton (1937), by the end of the century, most people in Britain had accepted scientific explanations for the creation of life and physical matter on earth.

Not only had these explanations of the evolution of organic life been accepted, the public began to witness the harnessing of these sciences for social and economic benefits. Today, just over a hundred years later, in some fundamentalist and creationist circles, these acceptances are again open to question and theories of Creationism as Intelligent Design are now being taught in certain schools and universities (*Editorial, Times Higher Education Supplement June* 22, 2006).

From the 1850s, as the status of religion and science was being transformed, important social and cultural advances were also being made. Medical care, education, travel and entertainment, aspects that affected all levels of society were undergoing improvement both nationally and locally (see Rolleston's work in Oxford, Chapter 5). This also appeared to be a period of social and political optimism in Britain and economic confidence was displayed in colonial expansion and industrial prosperity. In 1851, The Great Exhibition, held in London, celebrated this success showing varied and stimulating exhibits and attracted over six million visitors (Gibbs-Smith 1981). This event also provided the first opportunity for different social groups to intermingle and observe each other. In Oxford special rail excursions were organised for town and gown (see Chapter 4).

During the 1870s and 1880s, the proliferation of theories concerning the great antiquity of the earth, combined with the growing evidence for a lengthy development

of organic species, resulted in a fragmentation of the common cultural context through which scientists, clerics and laypersons had previously been inter-linked (Corsi, 1988; Brooke 1991; Knight and Eddy, 2005). Gradually, with the privatisation of knowledge through the rise of professionalisation (Reader, 1966; Engel, 1983b, Perkin, 2002 and see Chapter 3), and the growth of professionally exclusive societies (Chapman, 1989), the amateur became distanced from the domain of secularised and privatised science (Kohlstedt, 1976; Armstrong, 2000; Desmond, 2001, and see Chapters 6–8).

The mid to late Victorian period, 1860 to 1870, was a time of 'evolutionary' ideas. These ideas arose not only because of Charles Darwin's analysis of organic development (Poulton, 1896; Durant, 1985; Glick, 1988 and Dennett, 1995) but also from a more general enquiry into the nature of belief systems (McLeod, 1996; Silver, 1998; Brooke, 1991; Lightman, 1997). Many British scientists were deeply involved with the general culture of the time and, like Darwin, raised and educated in an Anglican background (Armstrong, 2002). The boundaries between religion and scientific disciplines had not then been defined (Bowler 2001; Knight and Eddy, 2005), yet new ideas and perceptions of science were evident in all realms of Victorian life (Young, 1985). The ensuing discussions about the role of science influenced every aspect of British culture (Beer 1983, 97; McLeod, 1996 and this Chapter).

During the same period, forces of industrialisation, secularisation and urbanisation were transforming much of Northern Europe. It is apparent that, by the 1870s, the entire social structure of Victorian Britain was also undergoing an evolutionary change. The increase of a 'new' middle class and the development of national education made knowledge more accessible (Stray, 1998; Perkin, 2002)

A significant example that illustrates the effect of the growth and spread of information is the repeal of 'tax on knowledge '(Desmond, 1987, 84) in the 1860s. Until the middle of the century, the government taxed paper and levied a further duty on newspapers. These taxes were obstacles to the general dissemination of knowledge, but in 1855 the Stamp Act on newspapers was removed followed by the abolition of paper duty in 1861 (Mitchell, 1988, 781). The growth of knowledge had created a large market for publications of both popular magazines and academic journals, and paper was in great demand.

John Evans (1823-1908) as owner of a family paper mill was able to profit from this particular economic trend (Evans, 1943, 81). The increase in business enabled him to devote more time to his archaeological interests, and later supported those of his son Arthur Evans (1851-1941), although in the 1840s John Evans was obliged to forego a place at Oxford in order to enter the family business (Evans 1943, 65). In the same way, the income from the family brass foundry enabled Edward Tylor to travel in Europe and Central America during the 1850s and 1860s and develop his anthropological theories (Tylor, 1871).

The emergence of this vibrant and successful middle class produced a demand for access to an education that would be both relevant to the time and relevant to the existing class structures (Jarausch, 1983; Engel, 1983a). By the 1870s, efforts to create a more liberal education resulted in the foundation of fee-paying English Public Schools for the upper middle class and voluntary initiatives for the mass education of the lower middle class and working class (Halsey, 1976; Burrow, 1981). Many of these initiatives combined the same religious, liberal and philanthropic ethos of the contemporary education provided for 'English Gentlemen.' Collini (2006), for example, discusses the 'Oxbridge-isation' phenomenon. At this stage, however, secondary education was only available to middle and upper class boys in Public and Grammar Schools (Stone 1974; Stray, 1998).

There was a general consensus amongst contemporary nineteenth century intellectual writers that a liberal education should 'train the mind', though the actual contents of that training were debated. By 1868, Thomas Huxley, a 'man of science' (White, 2003, 1), was warning academics in the British Universities that their scientific teaching was already falling behind that in Europe. Whereas in Germany, the universities were 'corporations of learned men devoting their lives to the cultivation of science, and the direction of academic education' (White, 2003, 88). Writing in Macmillan's Magazine, Huxley saw Oxford and Cambridge as 'boarding schools for youths or clerical seminaries, and not institutions for the higher culture of men' (1868, 367-378).

Huxley believed that a liberal education should include Science, Physical Geography, Literature, French, German and History (1868, 367-378), although history to Huxley was 'not as a succession of battles and dynasties, or a series of biographies, or as evidence that Providence has always been on the side of the Whigs or Tories, but [as] the development of man in times past, and in other conditions than our own' (Huxley,

1868, 370). This view today has a distinctly modern resonance. Similar theories later appear in Butterfield's criticism of 'Whig Histories' (see Chapter 1) and in theoretical approaches to interpreting history (Foucault 1970; Collingwood 1935).

Scientific education

At the beginning of the nineteenth century, scientific knowledge often meant classifying and collecting specimens and artefacts, rather than interpreting their meaning (Levine, 1986; Allen, 1994; Levine, G. 1997; Armstrong, 2000). As scientific knowledge expanded, people needed to make sense of the increasing scale of information. As a result, during the later Victorian period, the 'post Darwinian era,' the structure of scientific knowledge began to take on a new and recognisably modern form (Brown and Van Keuren, 1991). Many of today's disciplines took shape at that time, though prehistory and European archaeology were not recognised as academic subjects until the early twentieth century (Clark, 1989; Gosden, 1994)

At Oxford, the way in which this new scientific knowledge was tested took on a new dimension in response to governmental reforms of the University. In the early nineteenth century students were examined by oral examination but by the 1850s the increasing demand for formalised standards in education led to the development of examination-based scholarship and written tests (Roach, 1959, 134; Brock and Curthoys, 1997, 356).

Towards the end of the nineteenth century, a university education began to achieve a new status (Daunton, 2005, 5–7). More complex knowledge introduced into scientific departments was often supported by the new University Museum teaching collections that gradually replaced the eclecticism of the earlier 'cabinets of curiosity' (Chapman, 1981; Van Keuren, 1984; and see references to Oxford Museums in Chapters 5 and 6).

At one level, the organisation of knowledge became privatised and professionalised with particular codes of language and disciplinary boundaries (Daunton, 2005, 7). Recent examinations of the effects on anthropology have been covered by Chapman (1989), Stocking (1996) and Van Keuren (1984) and on archaeology by Levine (1986). The institutional growth of academic departments in Oxford University has been considered by Brock and Curthoys 1997 (Chapters 15–17).

At another level, because of social and educational improvements the British public were becoming more educated (Hoppen, 1998, 95) and at the same time, more mobile (Freeman, 1999). There was a growing need to explain new developments in science, by popularising it, and, at the same time, developing the strengths of an educated working class. This role was often carried out by popular publications and journals (Gates, 1997, 182; Daunton, 2002, 15) and examples will be discussed below in the section on science and culture. Before then, it is important to examine in brief the philosophical issues of science and religion in nineteenth century Britain and the intellectual and social circumstances from which the new ideas in the human sciences developed.

Darwin and religion

Debates between science and religion became major philosophical issues in nineteenth century Britain. The Anglican Church and other protestant movements had powerful social and cultural influences over the British public (Chadwick, 1970; Brooke 1991; McLeod, 1996). However, by the 1850s and 1860s, scientific discoveries in natural history, geology, anatomy and ethnology were producing evidence that posed intellectual and ethical challenges to many previously accepted cosmologies (Turner 1979, Knight and Eddy, 2005).

The historical and philosophical issues of science and religion in the late nineteenth century have since permeated branches of theology, sociology and science and from the 1970s these questions have stimulated their own research schools and new disciplinary approaches (Glick, 1988). Specific academic departments both in Oxford and Cambridge, for example, have recently been established for the history of science and Oxford now has a Professor of Science and Religion, a post that links two very different academic disciplines.

A literature review displays comprehensive research and opinions that support many theological, historical and sociological viewpoints. The titles of the books themselves illustrate the extent of the question, for example contemporary scholarship includes *The Post Darwinian Controversies* (Moore, 1979), *Darwinism and Divinity* (Durant, 1985), and *Science and Religion: Some Historical Perspectives* (Brooke, 1991). However, Darwin's *Origin* was not the only influential material that contributed to the shift in knowledge and ideas of human evolution (see below).

Much of the academic research on the effect of evolutionary thought on religious beliefs in the nineteenth century focused primarily on the challenges faced by the Anglican Church (Chadwick, 1970). In this examination of the growth of the study of prehistory, consideration of this aspect might at first appear irrelevant, but during the nineteenth century the Church formed the moral, spiritual and religious power base of Britain and was central to many intellectual, social and cultural relations.

Because of the omnipresent power of the Church, it could be argued that the epistemological divisions between various scientific and religious interpretations of the Darwinian hypothesis that occurred during the 1860s and 1870s were not so much a threat to an individual's religious faith, but a threat to the political, intellectual and social standing of many of the clergy. This aspect is examined in Chapter 3 and the specific case of Oxford in Chapter 4.

It is likely that the debate on the 'Darwinian revolution,' resulting in a shift from one consensus to another will continue to be the subject of different interpretation and controversy. One factor that is clear, however, is that the public debates that took place in Oxford following the publication of *The Origin* in 1859 appeared to act as a catalyst that polarised various opinions and theories about human evolution. Eventually, by 1870, the implicit and explicit implications of Darwin's ideas were generally accepted, and by the end of the century very few had serious disagreements with his position (Poulton, 1937, Hodge 1988).

In Britain over the past 150 years, as a result of the 'Darwinian Heritage' (Beer 1983), a slow evolution of philosophical and intellectual concepts of time transformed religious and scientific understanding of the human race. In the history of archaeological thought, descriptions of this complex period of growth have been well scripted by Daniel (1975), Trigger (1989), Grayson (1983) and Van Riper, (1993), and in discussions of theoretical interpretation of archaeology by Gosden (1994), Thomas (1996) and Corbey, and Roebroeks (2001), in the humanities Beer (1983), Young (1985) and in the sciences by Hodge (1988, 24-26). The following section discusses the foundations of prehistory as it emerged from its roots in the natural sciences and natural theology.

Religion, archaeology and anthropology

An important consequence of the acceptance of the implication of the evolutionary hypothesis was the rise of scientific anthropology. As soon as it could be proved that humanity had a prehistory before the Biblical account in Genesis, it became necessary to find causal explanations for the growing evidence for a long human existence.

The study of early humans first began through the study of living 'primitive' tribes and it was often assumed that these societies displayed the characteristics of earlier humans (Kuklick 1991; Hoppen, 1998, 479). In their interpretation of evolutionary theory, early anthropologists such as Tylor and Lubbock worked on ideas from written accounts that could not be tested or verified (but, see Wilson, in Chapter 1). The contemporary belief was that all societies developed through parallel stages and that this development would be for the better.

According to Chadwick (1970, 33), anthropologists from the 1860s replaced the doctrine of original sin, which referred to an assumed event in the Biblical narrative, with the doctrine of heredity and environment. Tylor's theories that religious beliefs originated in primitive animism therefore posed no threat to the Victorian church, as his views suggested 'man's gradual move towards the 'grandeur of God' (Chadwick, 1970, 38).

In the nineteenth century, the Anglican Church was as powerful in its secular role of influencing the political and cultural world as it was in upholding the nation's religious faith. It is important, therefore, to consider the part the hegemony of the Church played in the transformation of the academic milieu of the nineteenth century.

Until 1870, entry into Oxford or Cambridge was open only to those from Anglican backgrounds (Brock and Curthoys, 1997, 1-3) and, as a result, a large number of people were excluded from this particular intellectual aristocracy, Jews, non-Conformists, Roman Catholics and Quakers.

The majority of lecturers and professors at Oxford and Cambridge were required also to have trained in holy orders or classics before beginning to specialise in the newly developing scientific disciplines. For example, of those mentioned in this thesis, Buckland and Baden Powell graduated in theology, and George Rolleston in classics (see Chapter 5).

In the first half of the nineteenth century, natural history was an integral part of existence and God's work was manifested in the works of nature (Knight and Eddy 2005). The physical, spiritual and emotional world was understood through Natural

Theology, an intellectual discipline that had originated during the Enlightenment. The work of Paley (1809) had influenced a generation of scientists from Buckland to Darwin (Corsi, 1988). Studying science, as Natural Theology, integrated scientific knowledge and religious values into a coherent and intrinsically religious world-view. This compatibility of science and religion was implicitly expressed in Darwin's early research and in his eventual publication in 1859 of *The Origin* (Beer, 1983; Young, 1985). Despite increasing evidence to the contrary, the implications of natural philosophy continued to be reaffirmed by many Anglican clergymen and laypeople until the end of the nineteenth century, (Armstrong 2000; and see Underhill in Chapter 7 and popular archaeological publications, Chapter 8). In the decades before the publication of The Origin, the dominant tone of scientific literature appeared to be one of religion in science, expressed through Natural Theology, rather than one that placed religion against science (Durant 1985, 14). These epistemological differences formed a crucial part of the later assessments of the relationship between Darwinism and religious belief (see above).

In Britain, many of the issues of University reform in the nineteenth century at national level concerned the changing roles of science and religion and their status in the curriculum. By the 1850s the debate between scientific and religious values had already become a critical issue within Anglican circles because it was closely related to the larger question of the role of the universities, the dons and of their educational priorities in contemporary society (Engel, 1983a, 1983b). At Oxford, Divinity and Classics (Literae Humaniores) were very much the distinguishing feature of Anglican higher education. To many dons, the academic pursuit of science was at a lower intellectual level entirely (Halsey, 1992; Cooter and Pumphrey, 1994).

Various factions that dominated University policy expressed strong reactions to governmental proposals for institutional change (Roach, 1959). Many intellectual and social debates involved the relationship between science and religion (Bowler, 1987; Brooke, 1991; James 2005). Those who were against curriculum reform felt that the duty of the Anglican-dominated Universities, Oxford and Cambridge, was to uphold the gentlemanly role of liberal studies and theology against the spirit of commercial gain implied by science, that would inevitably lead to the cultivation of knowledge for material wealth (Corsi, 1988, 125). These debates on the purpose of a University education were not limited to the nineteenth century and still continue today.

Significant publications

This study of the growth of academic and scientific approaches to the study of prehistory in the latter part of the nineteenth century illustrates the intellectual shift that took place from investigations of the 'Gentleman Antiquarian' (Levine 1986) to the professional 'man of science' (White, 2003, 1). The research stresses the importance of the social and cultural contexts within which these major intellectual changes took place. The following section discusses three contemporary publications that had emerged by the 1860s which questioned both the origin and nature of humanity and also the reliability of the accepted Biblical doctrine that explained them. The significance of two of these publications: *Vestiges of the Natural History of Creation* and *The Origin of Species* is discussed below. The third, *Essays and Reviews* is discussed briefly here.

In February 1860, many Oxford-based liberal theologians, including Baden Powell (Shea and Whitla, 2000 and see Chapters 5 and 6), entered the philosophical discussions about the nature of religious belief. They produced a manifesto entitled Essays and Reviews which implied that many Biblical accounts including 'miracles' were unproven. This caused consternation among many traditional Anglican clerics, particularly Samuel Wilberforce, Bishop of Oxford, who had already attacked Darwin's publication in the Quarterly Review (Wilberforce 1860, 261).

Essays and Reviews sold 22,000 copies in 2 years, more than *The Origin* would sell in 20 years (Shea and Whitla, 2000), and the debate became increasingly polarized within the established Church as members contested or defended the issues it contained. However, another publication already questioning the Mosaic chronology had appeared fifteen years before.

Reception of *Vestiges*

In October 1844, a book that was published anonymously paved the way for many of Darwin's ideas. *Vestiges of the Natural History of Creation* offered the first presentation of evolutionary theory in England (Freeman, 2004, 80). According to Secord (2000), it was not the work of an academic mind, but of the publisher of popular knowledge, Robert Chambers. The author attempted to integrate detailed intellectual readings with larger questions of social structure, from the macro to the

micro. His work fused theological and scientific doctrines and was intellectually rooted in Lamarck (1744–1829), who by the 1800s had proposed a theory of biologically inherited acquired characteristics. The significance of *Vestiges* is that, in Britain, it acted as a forerunner for Darwin's evolutionary view of life.

It is notable that *Vestiges* was published anonymously, and that its author chose to remain anonymous for the next 40 years. In this way, no particular political or religious doctrine could claim responsibility. The book argued the case for a natural law of development that governed the history of life and embraced the physical, mental and moral qualities of mankind. Though written very largely from the perspective of natural theology, *Vestiges* marked a critical point in Victorian debates about science and belief. The writer's ideas of a natural evolutionary law of animal and human development, although formed within natural theology, opened up questions as to motives of the 'Divine Hand' and His role in The Creation. What is more, it was written in a language that the public could understand, for example,

> *The creator, then is seen to have formed our earth and effected upon it a long and complicated series of changes, in the same manner in which we find that he conducts the affairs of nature before our living eyes: that is in the manner of natural law. He saw within the formation of the globe itself …the coming into existence, namely of a long suite of living things, vegetable and animal, terminating in the families which we still see occupying the surface, ……the possibility of plants and animals having likewise been produced in a natural way but one character for everything.*
>
> (Anon, [Chambers] 1844, 112-113)

The theories of evolution and organic typology in *Vestiges* supported the idea of a 'ladder of progression' whereas Darwin later identified adaptation and change as essential traits in the process of natural selection. Even so, according to John Brooke, Professor of Science and Religion at Oxford, 'the author of *Vestiges* had sold the pass to the new scientific world' (personal communication, 2001). Fifteen years later, in 1859, both Darwin and Wallace published their conclusions with a similar, though not identical, hypothesis.

Various important factors concerning the publication of *Vestiges* should be included in a contextual analysis of science and religion in nineteenth century. The first is that it was a popular book often read aloud at meetings for working class improvement (Secord, 2000, and see Chapters 4 and 8). The second was that it questioned the

concepts of practitioners from both science and religion, and projected their problems of belief in a Divine Creator into public view. Thirdly, in the context of this thesis, it becomes evident that *Vestiges* had been read by many whose works are discussed in later chapters; particularly Rolleston and Rowell in Chapter 5, and Underhill in Chapter 7. They engaged a similar style of language; the fusion of romantic poetry, classical epithets and natural theology to convey scientific facts was a common feature of nineteenth century writing (Beer, 1983). This aspect is discussed in Chapters 7 and 8.

By 1853, *Vestiges* had become a best seller in Britain and 10 editions were printed; 25,000 copies had been sold even before Darwin's work was known. Although according to Newsome it lacked the weight of convincing research (1997, 205), it was a contributory factor in the growth of public scientific knowledge and apparently had met with acceptance or relative acquiescence before the more publicised evolutionary debates in 1860 (see Chapter 4). As Secord (2000) points out, in comparison with the popularity of *Vestiges*, *The Origin of Species,* published in 1859, only sold 6000 copies.

In 1884, Robert Chambers, the Edinburgh publisher and amateur scientist, finally revealed himself as the author of *Vestiges*. His publications were aimed at the general reading public, rather than at academics. He published *Chamber's Encyclopaedia*, a general work valued by Rowell (see Chapter 5). In June 1860, Chambers played a minor role in the dissemination of nineteenth century knowledge when he persuaded Thomas Huxley (James, 2005, 177) to remain in Oxford in order to attend the final meeting of the British Association for the Advancement of Science (henceforth B.A.A.S., see below). If he had not, Huxley would not have been present for the legendary debate with Wilberforce over the contents of Darwin's *The Origin* (see below).

The publication of *The Origin*

When, in 1859, Darwin finally published *The Origin* after many years of personal and scientific doubts about his discoveries, its style and content, like *Vestiges*, both came under the auspices of natural theology, though as Freeman (2005, 83) points out, *The Origin* represented a more secularising trend. Darwin's life-long conviction that 'the

whole universe is full of adaptations' could also describe the gradual adaptation and change in his personal beliefs, although it was never his purpose to deny the position of religious faith *(*Durant, 1985*).* In the last paragraph of *The Origin,* he re-echoed the doctrine of natural theology and the romantic philosophy of Wordsworth (Beer, 1983, 49-50):

> *There is a grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one*
>
> Darwin (1859).

In *The Origin,* Darwin did not claim a theory of organic progression, although it was frequently apparent in his writing. The key to his ideas was that he offered a new explanation of biological genealogy. This notion of human progress was added later by Herbert Spencer (1820-1903) who believed that the entire universe was ascending towards ultimate perfection through inexorable natural laws. Much of the assimilation of Darwin's ideas by late Victorian theologians is often the triumphal Darwinism of Spencer. Darwin's notion of the 'mercy of time and chance' was not as comforting for the morally righteous as Spencer's 'survival of the fittest,' a notion that in the nineteenth century lent itself very readily to reinterpretation, not only in theological, but also in social and political terms (Burrow, 1966; Bowler, 1987; Glick, 1988; Bowler, 1993).

The publication and reception of *The Origin* in 1859 has been seen as the influential pivot of all progress in the natural sciences (Lucas, 1979; Brooke, 1991; Young, 1985; Turner, 1993; Dennett, 1995). The growth of anthropology and prehistoric archaeology should be considered as integral to this progress as, from the beginning, the two were closely connected (Stocking, 1987; Corbey and Roebroeks, 2001; Sillitoe, 2005; and see Rolleston Chapter 5)

The appearance of *The Origin* provided both a summary of emerging scientific ideas and an axis for the theological debate on the 'crisis of faith' in the mid-nineteenth century. It dealt a blow to what Sigmund Freud once identified as 'the universal narcissism of men, their self love'. He maintained that 'three severe blows from the researches of science' had been administered to human beliefs. The first, by Copernicus, revealed that the earth was not the centre of the Universe, the second, by Darwin, revealed that man was neither different nor superior to the animals, and

finally according to Freud his idea that 'the ego is not master in his own house' (Durant, 1985, 9).

Today it would appear that only Darwinian science continues to provoke controversial debates (see works by Dawkins, 1988, Dennett, 1995, and Rowan Williams' role in various Anglican initiatives). Whilst the questions of evolution and evolutionism constitute vital clues to human origins, their nature and ultimate potential, evolutionary theory cannot be used as a mirror to reveal all the answers about the past, present and future.

Today in Oxford the University Professor of Science and Religion, John Brooke, has a joint appointment with the departments of Theology and the History of Science. It might appear that 150 years after their division, academically at least, these two philosophies are again becoming reunited.

Science as culture

One important aspect of the social and intellectual changes in Britain is the philosophical issue of the growth of knowledge. By this I mean the manner in which scientific knowledge was disseminated to an increasingly literate public. In the following section, the rise of other popular scientific publications in the mid nineteenth century is discussed**.** As argued in Chapter 1, the study of British prehistory emerged from a fusion of geology, the human sciences and natural history. This argument is expanded here to illustrate the way in which prehistory was included in the popular literature in science.

In 1994, a valuable piece of research examined the position of popular science in the social history of the nineteenth century. Cooter and Pumphrey (1994, 237-267) argued that, at the beginning of the nineteenth century, all science was 'popular,' but, by the end of the century, it had become privatised. During its early years it was an intellectual pursuit 'open to talent' and contributions to 'the march of scientific intellect' could be made by anyone, regardless of their station in life, and, according to Sam Smiles the Victorian reformer (Cooter and Pumphrey, 1994, 251), those from humble origins could be viewed in favourable contrast to the elitist tendencies and upper class control of other forms of culture. Cooter and Pumphrey's examination of popular science suggests a model for future research into the popular archaeology of the nineteenth century (see Chapters 7and 8).

One problem of the idea of popular culture today is that 'popular' is often associated with the 'folk culture' of invented traditions such as Mummers and Morris Dancing (Shiach 1989). Cooter and Pumphrey (1994, 245) noted that 'the aspirations and pursuits of the subordinate classes' have not been examined in the sociology or philosophy of knowledge; even today much of the work in British folklore is relegated to a 'manners and customs' approach (for example in the Journal *Folklore*).
Concepts of culture, high, learned or popular, can only be identified at particular moments by examining their historical contexts. In the nineteenth century, science was part of the general dissemination of liberal ideas, educational opportunities and was intrinsic to the common culture (Lightman, 1997, preface). The crucial aspect of local access is an important issue in this thesis and is discussed in Chapters 4–6.
In earlier centuries, science, in the form of natural philosophy or folklore, was still part of the common social and religious culture, and, like religion, was not separated from every day life. In the nineteenth century, the increase of a knowledgeable middle class and a more educated lower middle class created new markets for non-specialised, but intellectualised scientific knowledge. This was not only demonstrated in the growth of scientific societies (see Chapter 6) but also in popular publications.

By the 1840s, the pursuit of natural history was encouraged and developed by the growth of popular journals and local societies. The evidence for this popularisation, 'the politics of the popular' is now becoming a well-researched area of the history of science (Cooter and Pumphrey, 1994, 247). However, the popularisation of archaeology, and in particular the study of British prehistory, has not received the same attention. This may be because archaeology in all its branches is still a relatively new discipline and, compared to the discipline and history of science, contemporary archaeology could be considered to be at an earlier evolutionary stage. The history of science now incorporates the philosophy and sociology of its origins and, at present, it is necessary to refer to research models from the human and natural sciences to examine popular archaeology in the nineteenth century.
Historians of science, Alberti, (2003a, 2003b); Allen, (1994) and Secord (1994, 2002), recently examined the social and cultural aspects of popular science and its influence on amateurs from outside the ruling classes. Similar research is now needed as part of the social history of archaeology.

The organisation of leisure activity in the nineteenth century was part of the opportunity and encouragement for self-improvement. Charles Kingsley (1810–1875), the social reformer, encouraged the study of science in Chester and formed a Working Men's Institute there in 1871 (Armstrong, 2000, 171; and see Himmelfarb 1987 in Chapter 1). The opportunity to study natural history at first hand was probably more achievable than archaeology, because of the easy access to specimens in the immediate environment (for example, see Underhill's notebooks Chapter 7). According to Secord (1994, 269), for those from 'humble walks of life' the greatest problem was to find financial or practical means for leisure activity after the working week. The working class had little access to any form of public transport and it would prove difficult to travel further afield to visit recent discoveries. For those a little higher up the social scale than the artisans, the *petit bourgeoisie* who feature in this thesis (see Chapters 3–7), the opportunity to participate in studying natural history, archaeology and botany at first hand carried social, cultural and intellectual rewards (See Chapters 6 and 7).

This emulation or imitation of 'higher culture' was evident in all aspects of the new intellectual societies established in the latter half of the nineteenth century. Many county and civic societies were modelled on the B.A.A.S. founded in 1831 which openly encouraged their formation (see Chapter 6).

The replication of the practices of the intellectual aristocracy was in many ways beneficial to both sides; the cultural capital was shared by individuals from wider social backgrounds (Himmelfarb, 1987), and the new participators were eager to share their own knowledge with the 'experts' (see Rowell and Bellamy, Chapters 5 and 6 and Underhill, Chapter 7). This intellectual symbiosis was particularly evident between 1870 and 1900 in the Oxfordshire Natural History Society, where expertise was shared between the town and gown (see Chapters 5–7).

Beer (1983) argues that science formed a fundamental and integral part of the cultural economy of nineteenth century Britain. Gates (1997, 181-182) similarly points out that contemporary popular scientific publications offer an insight into the multifaceted nature of Victorian science. Less attention has been paid to the way in which archaeological knowledge was transmitted to the general public (see Chapters 7 and 8). The following section discusses the issues of popular science.

To understand the impact that science had in the nineteenth century, it is important to investigate the institutions that existed outside academic communities that helped to transform Victorian science and society. Kuklick (1991, 5) observed that the growth of the study of British anthropology and prehistory was due to a particular set of dominant social, cultural and intellectual networks that were, for the most part, outside the academic structures of the universities. The cultural discourses which emerged, therefore, were either from the upper class members of the intellectual aristocracy (Annan, 1955) or from individuals in the socio-economic classes that had benefited from the liberalizing effects of industrial growth (see for example John Evans, and Edward Tylor, above).

Scientific material produced for a general audience has received little research. Many of the mediators of this knowledge are now unfamiliar or forgotten, because the purveyors of popular scientific culture have often, like the people for whom they wrote, been ignored or overlooked (though, see Huxley, 1868, Lubbock 1865). Yet, then, as today, the popularisers of science often had a greater influence on their culture than did the scientific professional (Gates, 1997, 182). The popularity of Robert Chambers' *Vestiges* 1844, in comparison with that of Darwin's *The Origin* shows that it reached a far wider public (Secord, 2000; Cooter and Pumphrey 1994, and see Rowell on Chambers, chapter 5).

As religious beliefs were increasingly called into question in the latter part of the nineteenth century, the popularisers of science began to fill the void by providing an alternative voice, a different way of speaking about nature or early human history. The contributions by clergymen (Armstrong, 2000) were possibly more palatable than the complex scientific theories of natural selection and competition (and see Underhill on 'Spiders' Chapter 7, and Chapter 8 on popular prehistory).

This popular culture of science was also demonstrated by 'ordinary Victorians who were smitten with new worlds of natural science' (Gates, 1997, 181), a phrase that describes the popular science of those in the Oxford locale. Bellamy and Underhill for example, were amateurs who presented material to the general public (Bellamy 1908). Similarly, in the early twentieth century Harry Paintin (Chapter 5) wrote for local publications and their readers (for example, Paintin, 1911).

According to Gates (1997, 181) it may be that while the 'real' interpreters of science were 'theorising and arguing about the merits of species competition and sexual selection, assessing collections, producing learned books and papers, out in the field were the largely overlooked amateurs avidly collecting and recording'. An appropriate illustration is that of H.M.J. Underhill, with his sketchbook, bicycle and notebook, at the Rollright Stones (Fig 2.1) preparing lecture slides for the Oxfordshire Natural History Society (see Underhill in Chapters 6–8).

Fig 2.1 The Rollright Stones: lanternslide by H.M.J. Underhill 1895

During the mid- to late nineteenth century, the boundaries dividing amateur from professional scientist were still fluid (Cooter and Pumphrey 1994, 248-249). Many writers of popular science stood 'positioned between the secular implications of scientific naturalism and the theological underpinnings of the culture' (Gates, 1997, 182). They helped to initiate the acceptance and understanding of new scientific ideas by reconfiguring its message. To Shapin (1994) 'the historical submergence of lay beliefs about nature,' the neglect of our own 'ethnoscience,' is reflected in the overlooked work of amateur contribution to the natural sciences (see also Allen, 1994). This statement is equally true for the neglect of many anonymous ancestors involved in the study of British prehistory (see Underhill, Chapters 7 and 8).

The hegemony of the scientific periodical

Cooter and Pumphrey (1994, 250) stress that not only may the public have been enlightened by this genre of writing, they may also have been controlled by the views of the authors. Until the end of the nineteenth century many amateur writers of natural science retained the qualities of natural theology (see Lysons, 1865 and Hutchinson, 1896, Chapter 8). In 1949 Antonio Gramsci (1891-1937) identified this as the hegemony of knowledge. He believed that the ruling classes could impose their world

view through the control of education and popular knowledge. Joll (1997) and Daunton (2005, 15) maintain that this control was an important aspect in the growth of public education in the nineteenth century and that it applied equally to all interpretations of political and religious beliefs. A vast amount of literature is yet to be examined concerning the way in which nineteenth century publications presented prehistory and its material culture to the public (see Chapter 8).

Recent research on the reading patterns during the Victorian period shows that, outside the elite intellectual community, readers depended largely on magazines, periodicals and newspapers for information on contemporary issues (Vann and VanArsdel, 1994). Before the rigid specialization of society publications (for example proceedings of learned societies), these publications not only provided information about science and related areas of cultural debate, but also played a major role in shaping popular attitudes towards these subjects (Daunton, 2005, 15–18).

Scientists, literary and popular writers in the late nineteenth century used journals and books to disseminate their knowledge to the public and this knowledge had to be accessible to a general readership (Beer 1983, 6-7). The tone of these periodicals also provides insights into the development of disciplines and the gradual professional distancing of the scientific community from other intellectual groups (Vann, and VanArsdel, 1994. 82)

Popular journals

The popular science journals available in the late nineteenth century, have, like their readers, received little academic consideration. Commercial journals show that well-informed science was integral to popular culture, rather than a diffused down version (Cooter and Pumphrey, 1994, 251). They appeared regularly, rather than intermittently, unlike 'Proceedings' from academic societies, which were published quarterly or annually and were only available to members. More importantly, popular journals accepted the minor, sometimes trivial, possibly unorthodox, and individual research for publication that might not be accepted by committees or referees of scientific societies.

The work of Henry Underhill and his cousin, Frank Allen (Chapter 7), is a significant example here; neither were members of prestigious national societies, and therefore

were unable to publish in their journals. The *Anthropological Review*, the *Journal of the Anthropological Institute*, the *Archaeological Journal*, and *Journal of the British Archaeological Association* were publications where members of the intellectual aristocracy such as John Lubbock or John Evans were influential in editorial decisions (see also popular writing on prehistory, Stonehenge: Chapter 8).

The access to scientific journals, therefore, often depended on the reader's class, gender, education and religious background (see Chapter 3). An example of the interface between science, class and culture is literally illustrated in the style of Henry Underhill and the journals to which he subscribed and contributed. Two such popular scientific journals, now overlooked, are *Knowledge* (1881-1900) and *Hardwicke's Science Gossip* 1881-1900 (Chapter 7).

Even more overlooked today are the popular archaeology journals of the late nineteenth century such as the *Reliquary* and *Illustrated Archaeologist* (later amalgamated). These publications were available commercially, often at railway station bookstalls, without the need for subscription to an exclusive society. Reading while travelling was an exclusively bourgeois occupation, and metropolitan stations carried 'respectable non-fiction, fiction and travel guides' (Schivelbusch, 1986, 66-69). In the latter part of the nineteenth century these popular journals continued to cater for popular amateur market for science during the rigours of academic specialization (Vann and VanArsdel, 1994, 84).

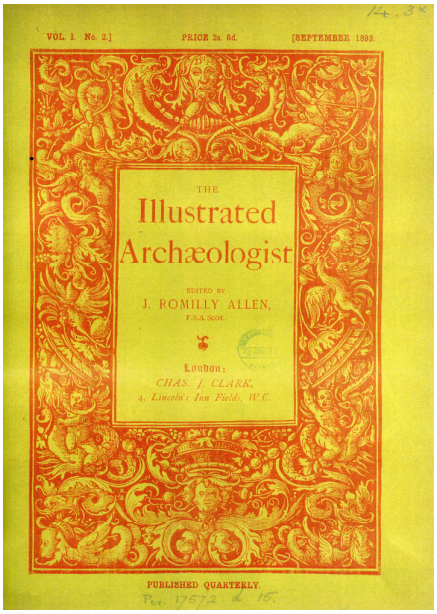
Amateur scientific journals

This research shows that many popular scientific journals published from the 1870s to the end of the nineteenth century included archaeology even though their titles proclaimed them to contain 'natural history'. An example here is the journal of the *Associated Natural History Philosophical and Archaeological Societies and Field Clubs of the Midland Counties*, the '*Midland Naturalist'* founded in 1878. The members of the Oxfordshire Natural History Society (Chapter 6) were involved with this publication and Henry Underhill was a regular contributor until publication ceased in 1892 (Underhill 1892; Bellamy, 1908 394).

As archaeology was still closely linked to the natural sciences, it was one of the many subjects featured in the '*Midland Naturalist*.' One edition (1878, Volume 1, no. 5), for example, contained a review of Greenwell and Rolleston's *British Barrows* (1877). The reviewer felt that this book was 'an important and accurate contribution to Archaeology [sic], avoiding the fanciful allusions to Druids as it discussed for example burial and deposition customs and the veneration for flint'.

Archaeological journals

Henry Underhill, and others like him, may have subscribed to the *Reliquary and Illustrated Archaeologist*, a popular quarterly journal, first published in 1860. It survived until the late 1890s, after undergoing various amalgamations with other popular journals (see Fig 2.3)



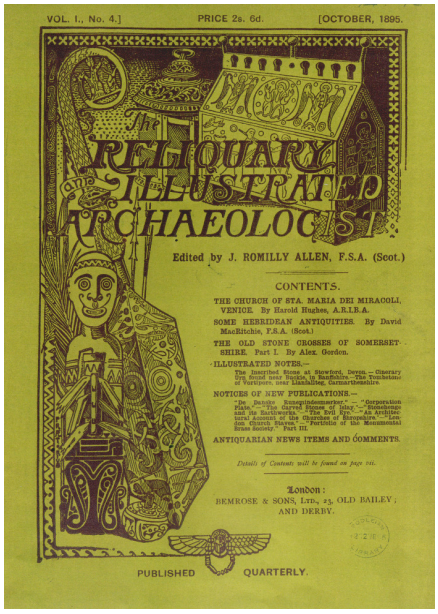


Fig 2.3 Archaeological Journals

A leaflet inserted in the first of one of these amalgamations (volume 1, number 1 January 1895), stated that the journal was intended

> *To keep a fully illustrated quarterly record of archaeological progress at home and abroad, couched in language sufficiently divested of technical jargon to be both intelligible and interesting to the general reader, yet scientifically accurate as regards the facts stated.*

The aim of the journal stated specifically that it would 'avoid the dry-as-dust style of papers intended for a learned society, but not sacrificing anything to mere popularity of treatment as in an ordinary newspaper article' (1895, Preface Volume 1). Its focus was to extend the work of antiquarian and archaeological societies, and to 'enable readers, unable to consult libraries to keep abreast of the most recent developments of archaeological science' (ibid).

An analysis of contributors to this journal reveals that they were often members of county archaeological societies and mainly clergymen, rather than nationally known figures. None of those from the academic elite, for example, Pitt Rivers, Lubbock, Tylor or John Evans, whose roles in archaeology are discussed in this thesis, appears to have contributed to the journal. This suggests that the *Reliquary and Illustrated Archaeologist* represented an archaeological form of *Notes and Queries*, even though the promotional leaflet stressed that it would avoid 'mere antiquarianism' and pay more attention to the artistic and ethnological side of archaeology.

Further research into this type of archaeological journal might reveal the impact it had on the British public and offer a comparison to the rather academic perceptions currently presented in histories of British archaeology. At present the official accounts, the proceedings and papers of more elite societies for example, offer only one aspect of the formative years of archaeology as an academic discipline.

By the end of the nineteenth century, the professionalisation of specialist knowledge (see chapter 3) had signalled the separation of scientific and general publications; according to the Bodleian Library records, the *Reliquary*, for example, appears to have ceased publication in 1895. Often those excluded from the formalised knowledge of the new professionals were clergymen, women, artisans, and non-professionals, though they were still evident in amateur circles (see social identity, Chapter 3). To some extent this separation offered 'an open invitation to amateurs to become producers and not just consumers of knowledge (Lightman, 1997, 203, and Chapter 8).

Reception of popular science

In many studies on the philosophy of knowledge, popularisation has been accorded a low status. However, the view that popularisers produced a simplified account to a passive readership has recently been questioned (Daunton, 2005). The former approach excluded the involvement and interactions between authors and their reading public from the process of sharing knowledge. As Cooter and Pumphrey (1994, 251) and Lightman (1997, 189) point out, this methodology surrenders all ownership and control of knowledge to the scientific elite without there being any possibility of mutual synthesis and sharing of expertise.

The view that certain classes of society were excluded from scientific knowledge, withholding from them what Bourdieu (1993) termed the 'cultural capital', is not the full picture, as the case study of Henry Underhill and the Oxfordshire Natural History Society will indicate (Chapters 6 and 7). The suggestion of the 'popularisation' of science also reinforces the notion of two separate cultures, that of the expert and the public, the professional and the amateur, a concept that may bear socio-evolutionary or social-Darwinian implications (see Chapter 3).

As Lightman (1997) noted, there has been a lack of studies of Victorian popularisers of science, and, it must be added, even fewer that focus on early British archaeology

for the general reader (but, see Moser, 1998 for ‘ancestral images’, and Chapter 8 which discusses popular interpretations of the prehistoric landscape).

Now further investigation is needed into the scope and variety of scientific information available to an increasingly literate public during the latter part of the nineteenth century. There are many examples of the scientific and cultural interface between amateurs and academics and it is important to assess the extent of these interactions upon today’s disciplines. Lightman (1997, 189) paraphrased Theseus’ query, at the end of the ‘rude mechanicals’ performance to the elite court in *Midsummer Night’s Dream,* when he enquired, ‘who was left to interpret science to the layman and to discuss the large issues raised by science once scientists had withdrawn from the common intellectual culture?’ His answer was that ‘professional’ popularisers ‘Huxley, Wallace, Lubbock and Tyndall remained to bury the dead’.

Until the mid-nineteenth century, the idea that ‘man was the measure of all things’ formed a common link between science and culture and between science and public discourse. To some extent, that link was dismantled by the ideas of Darwin and other scientists. The consequences of this secularisation of ‘natural’ knowledge and the ensuing relationships between science and the public have not yet been systematically studied.

One result was a 'fragmentation' of a previously 'common cultural context' linking scientists, clerics and laypersons, the amateurs. The perceptions of nature and natural processes by amateurs became submerged and, ultimately, invisible, as professionals acquired the authority to govern scientific knowledge. By the end of the nineteenth century, the increase of professionalisation in academic circles meant that only the forms of scientific knowledge that could be assessed and measured were taught in schools and universities (Daunton, 2005, 6). This became prescribed and professionalized, but no longer popular, scientific knowledge (see Chapters 3 and 8)

The final section of this chapter focuses on a national scientific society, the B.A.A.S., which from the middle of the nineteenth century had a strong influence on science in Britain. It made science more widely accessible to the general public and its scientific spectrum included the study of prehistory.

Nineteenth century national Scientific Societies

Learned societies specifically devoted to archaeological and anthropological research were founded in the 1840s. Current scholarship has covered the social connections of their members and their influence and control of knowledge, including the internal political disputes over governance (Stocking, 1971; Chapman, 1989; Christensen, 1989; Vyner, 1994; and Wetherall 1994).

These national associations, *The British Association for the Advancement of Science*, *The British Archaeological Association*, the *Society of Antiquaries* and the *Royal Archaeological Institute*, were particularly influential in creating the discipline of prehistory. Chapman (1989) discussed some of the research issues involved in studying a community of scholars. Using these societies he argued that by looking at the institutional frameworks and influential members within it was possible to gain a clearer understanding of the way in which the discipline of British prehistory was created (see Appendix 5).

The institutional power and social networks of these nationally established institutions were beyond the reach of lower middle class amateurs. They were, however influenced indirectly by their examples of organisation and governance. The society that had most academic and social connection with Oxford in the nineteenth century was the B.A.A.S, founded in 1831.

History of The British Association for the Advancement of Science

The B.A.A.S. was formed in 1831 to raise the status of science and of scientists through membership of a professional organization; the founders aimed to create a professional society which would avoid the 'amateur dilettantism of the Royal Society' founded in 1660 (Morrell and Thackray, 1981, 33). Within this professionalization of science, the metamorphosis of the study of prehistory from a gentlemanly antiquarian pursuit to an academic discipline took place. The growing difference in interpretation of the terms amateur and professional are discussed in Chapter 3.

The ethos of the B.A.A.S. was democratic, rather than elitist, conceived for 'men of science' rather than 'scientific gentlemen' (see Morrell and Thackray, 1981). It aimed to support professionalisation in all areas of science and, in addition, to address the

growing concerns about British economic and industrial performance compared to that of Europe (see Huxley above).

The B.A.A.S. was structured as a national, itinerant organization and annual meetings were held in different towns and cities in Britain (see below). To cover the various disciplinary interests of its members, it was composed of several 'Sections' where specialists could meet and discuss technical matters over a week of papers and social gatherings (Morrell and Thackray, 1981). Lay people, non-scientists, and ladies were welcome to attend all public meetings and the Opening Address given by the President of the Association.

The B.A.A.S. laid down a pattern for the structure of many future amateur societies, for example, the Oxfordshire Natural History Society *and Field Club*, the *Chester Natural History Society and Field Club*, and the *Somerset Archaeological and Natural History Society* (see Chapter 6*)*. Nevertheless, in the early decades of the nineteenth century, meetings were often the object of ridicule by newspapers, including *The Times*, and by literary figures. Charles Dickens (1880), for example, wrote a satirical piece on *The Mudfog Association for the Advancement of Everything.*

Amateur and professional links at the British Association

The general national growth in scientific interests throughout the wider reading public corresponds with the increase in the foundation of local societies (Chapter 6). Evidence shows a significant increase in the formation of local societies; according to *Nature*, 24 November 1873, between 1851 and 1870, twenty new societies were created.

There does appear to be a correlation between new scientific societies and the B.A.A.S. For example, an existing local scientific society in a city was certainly an advantage to a successful meeting of the British Association; alternatively, within a year or two of a meeting, a new scientific society was often formed in the city, (Howarth, 1931, 95, and see below)

British Association Meeting	**Formation of New Society**
1832 Oxford	1828 Ashmolean Society
	1839 Oxford Architectural and Historical Society
1834, Edinburgh	1834 Edinburgh Geological Society

1847 Oxford	Ashmolean Society, Oxford Architectural and Historical Society
1855 Glasgow	1858 Glasgow Geographical Society
1860 Oxford	1870 Oxfordshire Natural History Society
1865 Birmingham	1867 South Staffordshire and Warwickshire Natural History society
1868 Norwich	1869 Norwich and Norfolk Naturalists
1875Bradford	1875 Bradford Natural History and Microscopic Society
1882 Southampton	1885 Hampshire Archaeological Society
1885 Aberdeen	1887 Buchan Field Club
1894 Oxford	with assistance from *Oxford Junior Scientific Club*

(Information from Howarth, 1931, and Chapter 6)

In its early years the majority of members of the B.A.A.S. were clergymen (Morrell and Thackray 1981; Armstrong 2000) because the study of geology, botany and physiology were still regarded as being within the domain of natural theology. The transition from Charles Kingsley's view of science in partnership with religion to Huxley's view that science was the supreme source of knowledge (Armstrong, 2000, 139) received its first public attention at the 1860 Oxford debate (see Chapter 4 and Appendix).

Much of the evidence for human antiquity during the nineteenth century was discovered as a result of geological excavations. In 1859 Sir Charles Lyell had announced to section C. Geology his belief that, according to the evidence from flint deposits, early man was contemporary with extinct animals. This paper was followed by a report on the exploration of Torquay caves by William Pengelly, who was a regular speaker at the Association's meetings (Van Riper, 1993, 77–79).

The papers and discussions in Section C. were those most likely to influence local scientific societies as, at these meetings, information about new local discoveries was conveyed to the professionals by amateurs who shared their interests (see Harrison 1928; and George Rowell and Baden Powell in Chapter 5).

Amateurs were also able to participate in the annual meetings and join field trips to areas of geological and scientific interest (Howarth 1931). In 1887 the British Association met in Liverpool and on the 10th September over 200 members travelled to the 16th Annual Conversazione of the Chester Archaeological and Natural History Society by special excursion train (Robinson, 1971, 5). This event illustrates the

fluidity of intellectual relationships shared by many amateur scientists before the advent of professionalization.

The B.A.A.S. gave financial support to the exploration of research into new archaeological discoveries. These included the excavation of a Bronze Age site at Sigwells in Somerset by Rolleston and Pitt Rivers in 1877 (Rolleston, 1878). By then the study of British prehistory was included in section D, with Anthropology, which had itself become a separate section in 1866 as a branch of Biology and Physiology. In 1884, Anthropology was given its own identity as Section H in Montreal where Edward Tylor was President (Address to the B.A.A.S., 1894, W. H. Flower). These disciplinary mutations offer a vital clue to the direction that the study of prehistory and anthropology were taking at the end of the century.

In the growing field of research into British prehistory, between 1889 and 1921 representatives of the B.A.A.S. carried out investigations into the age of stone circles (Howarth, 1931, 199). It is quite possible that Henry Underhill was inspired to become involved with this research and his hand-painted lanternslides of British stone circles created in 1894-1895 support this hypothesis, especially as he was giving lectures on them to the ONHS in 1895 and 1897 (Chapter 7 and Bellamy 1908,183).

Some of the earliest reports of investigations of Roman sites in Britain were read at the B.A.A.S. For example, in 1860, Thomas Wright gave a paper on Uriconium (Wroxeter) (*Jackson's Oxford Journal,* July 1860) and the Association later supported excavations at Silchester between 1897 and 1901. These excavations at Silchester correspond with the dates of Underhill's lanternslides lectures on '*Roman Cities'* given to the Oxfordshire Natural History Society in 1897 (Chapter 7 and Bellamy, 1908, 184).

The relationship between the British Association and Oxford

Before the 1850s, the Universities of Oxford and Cambridge paid little attention to science and academic teaching focused on theology, classical literature and languages. Rothblatt (1968) suggests that eventually each University approached science through a different lens. From the 1850s, the British government began a programme of University reforms to address the deficiencies in scientific subjects. Much of the animosity that was held against science was from the 'establishment' of clerics and dons (Rothblatt, 1968).

B.A.A.S. Meetings in Oxford

Date	Focus
1832	natural theology supported the Antediluvian theory
1847	pre-Darwinian science
1860	debates concerning scientific and religious certainty
1894	evolutionary ideas mainstream; town and gown mutually represented

The first meeting of the British Association held in Oxford was in June 1832. It was organised by the association President, William Buckland (1784-1856), and committee members of the Ashmolean Society (see chapter 6). The delegates were, for the most part, clerics and 'gentlemen of science' (Morrell and Thackray, 1981) and were described by John Keble, a churchman, as a 'hodge-podge of philosophers' (see below). Buckland concluded the proceedings of this meeting by giving a lecture on the evidence for the Megatherium, an extinct giant sloth, whose 'grand design,' he believed, proved the case for natural theology (Rupke, 1983, 192, 267).

In 1894 at the fourth Oxford meeting of the B.A.A.S a valuable comment was made on the intellectual divisions that had permeated the University in the middle of the century. The President, in his opening address, interpreted Keble's attitude in 1832 as 'a representation of the deep-seated feeling of disagreement over the nature and teaching of science at the University; the growing disagreement between the traditional medieval methods of science of reflection and of the new science of observation' (*Oxford Chronicle*, 11 August 1894).

However, to return to 1832; many members of Oxford University appear to have ignored the visit of the B.A.A.S. According to Lyell (1797-1875), 'out of twenty-four heads of houses, only four at Oxford to receive the Association! But it will go off the better by the absence of the lukewarm or the hostile' (Morell and Thackray, 1981, 68).

The next Oxford meeting of the B.A.A.S was fifteen years later in 1847, again at the invitation of the Ashmolean Society where the committee's proposals led by Acland (see appendix) for a new scientific museum in Oxford were accepted.

By 1860, the increasing discord between various practitioners of science at Oxford became public. Many became involved in the public exchanges between Huxley and Wilberforce into the nature of organic and human development. This brief debate not only became a 'conflict' between religion and science, but also served to publicise the

resentment of the supporters of the older learning at the appearance and claims of its younger rival.

The meeting of the British Association in 1860 was held in Oxford at the end of June. The University was still full of undergraduates who had not yet 'gone down' and the City was filling with holiday visitors taking the opportunity to 'mingle with the University element' (*Guardian*, July 4th, 1860, 589).

The British Association in Oxford 1860

On Saturday June 30th 1860, at the newly opened University Museum, Darwin's ideas on natural selection in *The Origin of the Species* (1859) were given a wide public hearing at the annual meeting. Many of those who feature in the social and intellectual history of the study of British prehistory in Oxford were either present or later influenced by the circumstances.

At this meeting, Samuel Wilberforce is reported to have asked Thomas Huxley 'whether it was through his grandfather or his grandmother that he claimed his descent from a monkey'. Huxley is alleged to have replied that 'he was not ashamed to have a monkey for an ancestor, but that he would be ashamed to be connected with a man who used great gifts to obscure the truth' (Lucas 1979, 314).

More important than what was actually said by whom at the debate, were the reactions from within the quarters of Oxford society, although by 1860 many scientific and archaeological practitioners were reconsidering the evidence for human origins.

It is an ironic chance of fate that the discussion between Thomas Huxley and Samuel Wilberforce at Section D over the Darwinian theory occurred at all as it had not been arranged as a session for public debate and the event resulted almost by accident, after readings of papers that were not of special distinction. What becomes clear from the reminiscences of the occasion (for example, Tuckwell,1907; Stephen, 1901), is that the encounter between Wilberforce and Huxley presented a confrontation of ideologies and of personal and professional identity and status (see Chapter 3). The moral and intellectual effect was not only felt by those in attendance but also, according to many, contributed to a paradigm shift in contemporary approaches to science. (see Kuhn, 1970; Ellegård, 1990; Brooke, 2001; James, 2005).

The exchange called into question the authority and control of the Anglican Church and its relationship with practitioners of contemporary science. Its relevance to the intellectual climate of mid-nineteenth century Oxford can be traced through the subsequent reactions of individuals from within and on the edge of the academic world. It was to influence the growth of disciplines and professional careers in the human Sciences, those for example of George Rolleston, Edward Tylor and Edward Poulton (see Chapter 5).

James (2005) confirms opinions already formed during this research that the public debate between two well-known figures was a highly significant incident in the intellectual history of knowledge, both at Oxford and within the general scientific milieu (James 2005, 171). It still epitomises the separation of scientific knowledge and religious belief which are today a characteristic feature of significant parts of contemporary British science and society. This dichotomy continues in contemporary scholarship on the nature of science and religion (Beer, 1996; Bowler 2001; Brooke, 2001; Knight and Eddy 2005).

Science in Oxford

One consequence of the eventual acceptance of the evolutionary hypothesis was the rise of scientific anthropology and within it the growth of the study of British prehistory. As soon as it was accepted that humanity had a history before the Biblical narrative in Genesis, a new discipline, the study of primitive man, began through the study of living primitive tribes, with the primary belief that this evidence would reveal our own beginnings (see Chapter 8).

Until the 1860s, the major part of archaeological research was still viewed through an antiquarian lens by amateur investigators, applying eclectic methodologies (See Chapters 5–7). By the end of the 1860s, the study of natural and physical science had been established as academic subjects in Oxford (see Rolleston, Chapter 5). A growing interest in the ancient British past was also permeating local scientific societies such as the Ashmolean Society and the Oxfordshire Natural History Society (Chapter 6).

The debate that took place in the new University Museum has since been explicitly and implicitly interwoven into its foundational memory and cosmology (for example, see the University Museum website and publications). To Acland and Ruskin, the

Museum was a proclamation of science within a spiritual and architectural framework of natural philosophy. The stone carvings and wrought ironwork in this 'Cathedral of Science' represented the pre-evolutionary beliefs in the Divine Creator (Sheets-Pyenson, 1, 1988). Today, however, the displays inside the University Museum confirm Darwin's theory of natural selection, and its website recounts the drama, rather than the contested philosophies of the Wilberforce–Huxley debate.

The British Association at Oxford 1894

A comment in *Natural Science* in 1894 noted the eclectic and socially inclusive nature of the B.A.A.S. and its support in the popularisation of science, when Goodrich described the forthcoming meeting in Oxford.

> *One of its chief aims [was] to introduce the facts and principles of Science to those who would otherwise pass them by as belonging to a sphere other than their own. The popular lectures, the social gatherings and even the picnics …play their part in the production of a better understanding between the usually indifferent public and those whom they welcome as dreary pedants, but part from as good fellows like themselves.* (Goodrich, 1894, 128).

The author reminded the organisers that as well as the academics present 'there is a large body of members who expect entertainment, other than the customary highly complicated paper dealing with minute details in an obscure corner of scientific work' (Vol V, 1894, 128). This recommendation was certainly borne out in the accounts of the meeting. This was the sixty-fourth meeting of the B.A.A.S., and the fourth to be held in Oxford. On this occasion, the rooms of the new Examination Schools were used, as well as the Sheldonian Theatre and the University Museum. Among the academics present were Henry Acland, Thomas Huxley, John Lubbock, John Evans, who had been present at the previous meeting in 1860, and the 'younger generation' of scientists and academics, Arthur Evans, Max Müller, Edward Tylor, and Edward Poulton, all of whom gave papers (see Appendices 2, 3, 5 and 8).

It is interesting to observe that in contrast to the meetings held in 1847 and 1860, by 1894 there was also a large representation from the City of Oxford, the Mayor and the Councillors. The local organising committee for this meeting consisted of individuals who represented both town and gown, for example, and George Druce and Henry

Underhill who had civic status and those who had University appointments, Edward Poulton and Edward Tylor.

The President, the Marquis of Salisbury, reflected on the previous meeting in 1860, which had resulted in a 'mutual distance, which required the lapse of a generation to draw a curtain of oblivion over those animated scenes' (Poulton 1937, 205) and emphasised the present relations of 'sympathy and good will' between the Association and the University.

The President's summary of the 1860 meeting provides valuable primary evidence for the changes in the nature of scientific knowledge that had occurred in that thirty-four year interval. He observed that 'it would be wrong to assume that it was the deep divergences upon questions of religion that were the motives behind the controversies' and suggested that the intellectual dichotomy was more between issues of scientific methods: from the practice of reflection and speculation to the practice of observation and interpretation, and the reluctance of the 'older learning to accept the claims of its younger rivals' (Poulton 1937, 206).

Sir William Flower as President of the Anthropology Section at the 1894 meeting of the B.A.A.S. also signalled the collaboration of knowledge towards the end of the century. His observation that 'as a separate branch of science, anthropology is so new, and on many of its sides is so largely aided and furthered by the amateur' (Poulton, 1937) supports the evidence in this thesis of the valuable contributions made by amateurs. Flower emphasised 'the multidisciplinary nature of current anthropological investigations, which required the sciences of zoology, comparative anatomy, physiology and geology in contributing towards the study of the works of our earliest known forefathers-'prehistoric archaeology', as it is commonly called is now almost a science in itself' (Poulton 1937, 216).

Flower's address indicated a significant paradigm shift away from the assumptions of the scientists and theologians who had been present at the previous Oxford meeting in 1860 (See Chapter 4). Within thirty years of that meeting, the revolutionary ideas suggested by Darwin's theories had been broadly accepted, and, with a few individual reservations, by the scientific world (Poulton 1896, 1937). By 1894, for example, a joint meeting to discuss the flint implements of North Kent, of anthropologists and geologists, led to a 'thoroughly scientific and calm review of the whole question' (*Natural Science*, Vol V 1894, 217).

At the 1894 meeting, Arthur Evans 'the youthful keeper of the Ashmolean Museum' gave a paper on 'a new system of hieroglyphs and a pre-Phoenician script from Crete and the Peloponnese' and in the Anthropology section, Edward Tylor spoke on 'Distribution of Mythical beliefs as Evidence in the History of Culture' (*Oxford Chronicle*, August 18, 1894, 7). These contemporary reports illustrate the philosophical, intellectual and geographical distances through which scientific and sociological knowledge had travelled during the latter part of the century.

Before presenting an examination of the cosmology of nineteenth century Oxford and its citizens, the next chapter focuses on the question of social cultural and intellectual identity and the manner in which these affected the discovery and dissemination of scientific knowledge.

Chapter 3 Social and Intellectual Identity

The rich man in his castle,
The poor man at his gate,
He made them, high or lowly,
And ordered their estate.
Cecil Frances Alexander *Hymns for Little Children*, 1848.

This thesis focuses on various individuals who were involved in the study of British prehistory in Oxford between 1850 and 1900. Prehistoric archaeology was one of the 'proto-disciplines' that developed during the latter half of the nineteenth century as part of the transformation of the natural and human sciences, and consequently many of the people featured in this thesis can therefore be described as 'pre-professional'. There appears to have been a correlation during that period between the growing social, cultural and intellectual involvement of the 'new' middle classes (Chapter 2) and the increase of the pursuit and dissemination of scientific knowledge.
This chapter addresses the question of social and intellectual status in late nineteenth century Oxford. Following a broad review of the various social classes involved, the terms intellectual, amateur, professional, 'man of letters', 'gentlemen of science', 'scientific men', and specialist will then be defined according to the usage of the time.

Social identity

Modern attempts to categorise various social positions of people in the past have often relied on concepts taken from later sociological theory. Thompson, for example, drew attention to 'the enormous condescension of posterity' (1968, 13). It is clear however that, by the mid-nineteenth century, the social classes in Britain consisted of the 'upper, middle and working classes' (Thompson, 1968). Nineteenth century Oxford was certainly composed of these distinct social and cultural classes and therefore a broad identification of the *dramatis personae* is needed.

Those featuring were mainly from the upper and middle classes, though within these broad bands there was a wide range of social sub-groups (see Appendix 3). Chapters 5 and 7 present case studies of people from various social classes who can generally be described as 'gentlemen' or 'players'. The 'players', Oxford citizens like Rowell,

Robinson, Druce, Paintin, Underhill and Bellamy who operated outside the academic boundaries of the University, could also qualify for the term 'bourgeoisie,' although as Crossick points out, such analytical terms (1977, 17) are anachronistic and have been appropriated by twentieth century sociologists (Himmelfarb, 1987, 6).

The concepts of a 'gentleman' and gentlemanly conduct are important factors to consider in any analysis of Victorian social and intellectual relationships. Being a gentleman was not merely a social or class designation, there was an implicit moral component inherent in the term and it was a requirement for both social and intellectual acceptance (Reader, 1966; Roach, 1959; Secord, 1994; Hoppen 1998). By the latter part of the century, it was almost universally accepted that the recipient of a traditional liberal education based largely on Latin at one of the élite public schools, Eton, Harrow, Rugby, and so on, would be recognized as a gentleman (Rothblatt, 1968; Engel, 1983a; Stray 1998). This ethos permeated the whole of society, and as will be seen, it was assimilated by both the gentlemen and players in Chapter 5.

Social and intellectual class: The élites

By the middle of the nineteenth century, there was a growing homogeneity of the intellectual élites in Britain. This self-selecting group consisted of members of *The Society of Antiquaries*, founded in 1717, the B.A.A.S. (Chapter 2) founded in 1831 and national societies specifically devoted to archaeology and anthropology. These included the *British Archaeological Association* founded in 1843, the *Archaeological Institute* founded in 1845, becoming the *Royal Archaeological Institute* in 1866, the *Anthropological Society of London*, (1863) and the *Anthropological Institute* (1871) and, in its early days, the *Folklore Society* (1878).

It is evident that these societies consisted of multi-faceted individuals with multiple connections and overlapping intellectual networks as Appendix 3 shows. In the middle and latter part of the century, the scientist George Rolleston's intellectual sphere encompassed not only his immediate colleagues in Oxford, the scientists Henry Acland, Poulton, but also prominent national figures like Darwin, (John) Evans, Huxley, Lubbock, Pitt Rivers and Tylor. Evans (2006, 4 forthcoming) has also identified similar evidence of Pitt Rivers' networks.

The Universities of Oxford and Cambridge were exclusively Anglican, a factor that, until the start of the reforms in the 1860s, reinforced traditional upper-class norms (Engel, 1983a; 1983b; Brock and Curthoys 1997; Stone, 1974). This was particularly an important feature of the intellectual world of much scientific knowledge in the late nineteenth century, although there was no necessary connection between university training and scientific eminence (Kuklick, 1991, 45). Much of the groundwork for the future disciplines of anthropology and prehistory was created outside the university by financially independent nonconformists or dissenters who had been barred from assimilation into this ruling élite until Gladstone repealed the Test Act in 1871 (Brock and Curthoys, 1997).

In discussing the contributions to scientific knowledge made by the members of Oxford's 'intellectual aristocracy' (Annan, 1955, 250), it is better simply to emphasise the individuality and the distinctiveness of their research, rather than ascribe to them a rigid social classification.

An analysis of the social position of the many well-read and well-informed people discussed in this thesis, whether they were members of the intellectual or aristocratic élite, or from the lower middle class, would, on its own be a superfluous exercise. It is more valuable to discuss the eclectic nature of their contributions to the social and intellectual knowledge of their day, and where their intellectual interests and roles overlapped (see Chapters 5–7).

The people whose social roles and cultural contributions are discussed had parallel public and private lives (Appendix 3). They were amateurs, academics, intellectuals, professionals, college professors, landowners, gentlemen, industrialists, shopkeepers, authors or general clerks and, frequently, their lives incorporated many of these categories. The common thread between many of these individuals, regardless of their social, cultural or financial status, was their fervour for knowledge and discovery about the ancient past.

The most influential creators and founders of scientific knowledge in the mid-nineteenth century were the intellectual aristocracy, rather than the academic institutions (Annan, 1955). Their role was crucial in setting the boundaries of many of today's disciplines. There has already been a great deal of research on these influential individuals and of their intellectual networks. Their contributions and influence on knowledge during the late nineteenth century was crucial however, the

main focus of this thesis is on those whose roles have not yet received as much attention.

Very little work has been carried out on the social and cultural history of the lower middle classes in nineteenth century Britain. Investigations into the social and cultural access to knowledge have placed more emphasis on the extremes of societies; the élites, whose records and achievements are often part of a national history and heritage (Annan, 1955; Rothblatt, 1968; Rubinstein, 1987), or the working classes, whose social and moral circumstances attracted various political and religious interests (see Secord 1994, and Alberti, 2003a, for intellectual improvement, and Harrison, 1971; Shiman, 1988; and Sephton, 2001, on the Temperance question).

Until recently, the tacit acceptance of the natural order of social exclusion has been unquestioned in many historical accounts of the growth of intellectual thought during the nineteenth century (though see, Daunton, 2005). Issues concerning the diversity of intellectual and social identity particular individuals are addressed in Chapters 5–7 of this thesis.

Non élites

The social identity of the neglected individuals who contributed to scientific knowledge is not easily classifiable (see Chapter 5) though they can generally assumed to be lower middle class. The citizens of Oxford featured in this thesis had 'occupations.' In the 1900 census, for example, the type of work carried out by Underhill, Druce and Bellamy is described as an 'Occupation,' rather than a 'Profession.' In contrast, members of the University had 'professions' and were often upper class 'gentlemen', who inherited property or business concerns.

Nevertheless Thompson maintained that there can be no single category of the middle class, and according to Crossick (1977, 12), the social groups of the lower middle class contained 'the classic petty bourgeoisie of shopkeepers and small business men, the white collar salaried occupations, clerks, managers, schoolteachers, shop assistants, and probably also minor professional people'. It is from within the cosmology of these people that the effects of new scientific knowledge in the latter half of the nineteenth century is examined (see Chapters 5–7).

Thompson (1968) examined the position of the English working classes at the latter end of the eighteenth century. To him, class was a relationship, not a thing, a body of

people who shared the same interests, experiences, traditions and value systems, against others whose interests were different from theirs. Class, therefore, is a social and cultural concept, formed in terms of an individual's relationship with other groups of people. Class structures concern the manner in which individuals became defined in their social role and how a particular social organisation, with its property rights and structure of authority, came into existence. Within these patterns of relationships, ideas and institutions, class is defined by men [and women] as they lived out their own history.

These social groups have also been described as their 'habitus'. Thompson's concept was, to some extent, later echoed by post-modern sociologists for whom 'being in the world' was part of the human condition. Bourdieu took a similar position, as Gunn (2005, 61) recognized in a recent examination of the position of the English middle classes through Bourdieu's sociological theory. Bourdieu, like Thompson, believed that class was a matter of 'classification', as much as of objective structures or forces.

The middle classes of the nineteenth century can therefore be understood as a pre-eminently social and cultural concept, the result of categorising accumulated groups of 'middles' neither aristocracy, nor working class. The growing numbers of lower middle class individuals, the 'petty bourgeoisie' who, because of the gradually increasing opportunities for social mobility, were able to emulate those from higher social positions, (see Himmelfarb, 1987) in this thesis are rescued from the condescension of posterity (Thompson 1968).

This study of nineteenth century Oxford offers various examples of these autocthonic class groups; the 'town' consisting of the traders, the bourgeoisie, members of Oxford society who were outside the parameters of the University and the ' gown', the Dons, the undergraduates, the Museum Keepers, but not their 'servants', (see section on Robinson and Tylor Chapter 5).

Within these social groups, discrete cultural categories formed a coded way of communicating. The term 'gentlemen' implied conformity to certain social norms, or cultural capital. To Bourdieu, this cultural capital was transmitted through systems of inheritance, intergenerational transmission and embodiment. These implicit codes were critical to notions of a middle class gentlemanly status in the late nineteenth century. Without these codes of gentility, many lower middle class individuals from Oxford would have been unable to participate in the social and intellectual world of science. Many examples of this phenomenon in Oxford are discussed in Chapter 6 of

this thesis. The roles played by town and gown and in Oxford societies highlight the importance of widening the horizons of a social and cultural history of archaeology to include the historically 'neglected'.

Gender

Another example of neglected individuals in nineteenth century British archaeology that requires further research is the issue of gender. In modern archaeological thought, gender has now received recognition in archaeological theory as a social category (Gilchrist, 1999). Throughout the issues investigated for this thesis, the general absence of women in accounts of the growth of British archaeology has been noted. Rather than isolate gender, however, this thesis focuses on the relationships between social and cultural identity and all categories of the overlooked in the dissemination of scientific knowledge (see Shteir, 1997, for gender in nineteenth century science).

The conventional terminology used to describe social and biological identity in contemporary nineteenth century literature is often easy to identify as biased towards male assumptions, alongside those of race and class. In many archaeological and anthropological accounts, the term 'man' was probably intended to be inclusive of all human society. During the nineteenth century, archaeology was a male-dominated profession (Gamble 1998, xix-xxi), this thesis thus employs the term 'man' in this context when used in contemporary literature.

Most evidence for women's involvement in nineteenth century science shows that their contributions appeared in the amateur spheres of natural history and botany, rather than in the world of the professional and academic (see Allen, 1994; Shteir, 1997). This was probably due to the political, cultural and social norms of the nineteenth century. In pursuing natural history, amateurs were perhaps more accustomed to accepting the gendered division of flora and fauna. This is an area for further research.

Research into the amateur societies of nineteenth century Oxford show the presence of both women and children in these intellectual circles, particularly in the Oxfordshire Natural History Society. Henry Underhill, for example, in his multifaceted role as secretary and president included contributions from women and

children as participators of knowledge at Field Trips and as specimen collectors (Bellamy, 1908).

A valuable contemporary social indicator is Frank Bellamy's suggestion that the ONHS required

> *Ladies being willing to catalogue the Society's books, reports and papers. I suggest it as a pleasant and useful recreation for one or two ladies of the society; this would be both a benefit [to those searching] and to the compiler, for they must learn something of natural history when searching through the volumes* (Bellamy 1908, 417).

This may appear to be a typical male Victorian approach, although Bellamy points out that where lady members are concerned

> *In view of the fact that in many similar (scientific) societies the rules unwisely forbid or discourage the election of ladies, that the total 889 members is composed of 483 gentlemen and 406 ladies. In recent years the accession of members from ladies' colleges also added to the number* (Bellamy, 1908, 488).

Similarly, in 1870 at a lecture to the Oxford Architectural and Historical Society (see Chapter 6), J. H. Parker, then Keeper of the Ashmolean Museum, said:

> *When archaeology is made part of the system of Education in Oxford, as I trust it will be, with the help of this Museum, any educated man will feel it a disgrace to be ignorant of it. The ladies are already taking the lead in this matter. Archaeology is now part of the course of study in the education of young ladies, and I have frequently observed in society that to find out whether a young lady knows anything of archaeology or not, is a test whether she has been highly educated or not.*
>
> (Parker, 1870, 277)

Local orientation

When attempting to classify social groups there are further factors to be considered. Local and regional experiences act as agencies of cultural dissemination. The particular community and cosmology of the individual will have direct bearing on their experiences. Studies of the intellectual experiences of Northern working class

communities have shown the thriving societies that were formed and supported by the working and lower middle classes (Secord 1994; Alberti, 2003a). Similar research into nineteenth century social class investigated the conditions of East London shopkeepers, where members of these close-knit social groups lived and operated within communities (Winstanley, 1993; Whittaker, 1973).

Whilst offering valuable cultural and social analysis, for this thesis the degree of relevance to the social position of the shopkeepers Druce (Chapter 6) and Underhill in Oxford (Chapter 7) is limited. The City and University of nineteenth century Oxford encompassed a far broader spectrum of social groups and academic foundations (see Chapter 4).

The complex social stratification of Oxford, ranging from the upper middle class to the poorer working class, provides a microcosm of social and cultural examples for this research. Residents were variously Dons, tradesmen, churchgoers, scientists, members of various societies, married or single, servants or 'gentry', a social feature that agrees with Gunn (2005, 54) who suggested that 'there are no classes but simply a multitude of individuals with a multitude of experiences'.

In much nineteenth century literature, the archetypal lower middle classes were obsessed with what was proper and respectable (Brock and Curthoys, 1997, 470). The general respectability and stability of the non-manual lower middle classes was maintained through their social affiliations. In Oxford, these lower middle class networks formed a collective social stratification as powerful as those formed by the upper and middle classes and members of the University. At the same time however, the Oxford shopkeepers and clerks were, by becoming members of the scientific societies, gradually able to penetrate the middle class milieu.These were described by George Gissing as

> *That vaguely outlined middle section of society which in the matter of physical comfort, approximates to the caste above it, and in its lack of the delicate requirements of life has something in common with the caste below it, but which is, nevertheless, so recognizably different from both that [any form] of classification is impossible*
>
> (Coustillas and Partridge 1972, 238)

His description is particularly appropriate to individuals like Henry Underhill who was similarly described in the Scott diaries (1887-1924, see Chapter 7). Individual social and cultural aspirations can often be deduced from their style of writing and social behaviour. The work of Frank Bellamy (1864–1938) and Harry Paintin (1860-

1930) often reflects their awareness of their marginalization from the academic world of Oxford and a desire to become part of it (See Chapter 5).

A person's social status in the arbitrary categories of 'town and gown' can been inferred from the evidence of their networks of relationships, rather than from discrete categories. The tradesmen and clerks definitely saw themselves as above the working classes, as Underhill's philanthropic work with the Band of Hope demonstrates (Paintin, 1911). On the other hand, as Crossick (1977, 13) suggests, they were often marginal to the more-established bourgeoisie of nineteenth century Oxford, who definitely saw themselves as middle class (Brock and Curthoys, 1997, 470).

The lower middle classes in Oxford played a prominent role in this national process of the expansion of British society. They may have been physically marginal to the élite cultures, the Church, the University, and the Aristocracy, but they were gaining a proximity to their worlds through new societies and social events (see Chapter 6).

During the 1880s, tradesmen such as Henry Underhill and George Claridge Druce (Chapters 5 –7) relied on the traditional ideology of the property-owning capitalist economy and their association with the 'gentlemen of the University' (1885, Brochure John Johnson Collection, Bodleian Library) for both their livelihood and intellectual stimulation. Their economic and intellectual involvement was multifaceted; they were suppliers of goods, services or technical support to the town and gown on one hand, and respected members of scientific societies on the other.

There were also those in Oxford who did succeed in improving their own financial and social status. Henry Underhill's brother, Edward, for example, became a Classics Don at Magdalen College, George Druce became City Mayor and was awarded an honorary M.A. in 1899. In contrast, in 1895 Henry Taunt, a successful photographer, local mayor and City philanthropist, became too ambitious, and, like Icarus, flew too near the sun, his business 'melted' and he became bankrupt (Jackson's Oxford Journal, 26 January 1895,p5).

As the Oxford philosopher Theodore Zeldin said,

> *The aspirations of the lower middle classes, or petty bourgeois, need to be dealt with through a different approach, which involves studying not institutions or catastrophes, but largely silent ambitions which take one out of the realm of economics or politics, beyond quantity and conflict in its simplest forms, to the search for satisfactions which were seldom clearly formulated.*
>
> (Zeldin, 1976)

The current silence over their ambitions and achievements needs to be addressed. Henry Underhill (Chapter 7) is probably representative of many autodidacts of his kind in late Victorian Britain and although a certain amount of research into nineteenth century knowledge and perceptions of the past has recently taken place at University level, (Archives of European Archaeology. 2004; Sebire, 2006b),. very little has reached the publication stage.

The following sections explain the various terms used to describe intellectual status and identity in relation to the social dissemination of knowledge.

Intellectual Identity

In this thesis the term 'intellectual' is used to refer to the methodological enquiries and interpretation of the emerging strands of evidence for the age of the earth. In the late nineteenth century, therefore an intellectual could be an amateur, an academic or a professional. Increasingly by the late nineteenth century, the paradigm shift between amateur and professional status was often directly related to the distinction between those in University posts and those who were not.

According to Collini (2006, 11), the question of the professional position of an intellectual only emerged as an explicit problem after 1900, a suggestion that has been borne out by this piece of research. Rather than being a finite adjective, the term intellectual must be understood as contextual and multi-dimensionary. During the nineteenth century the word 'intellectual' as an adjective gradually increased in meaning, and became used to describe a role. For example as an adjective 'intellectual studies' describes particular faculties of mind, as a noun it is ascribed to the individual whose performance in a role, or in a structure of relations involves scholarly activity (Collini, 2006, 52).

Some of these intellectual gentlemen in Oxford, and they were mainly gentlemen (see section on gender), may in the mid-Victorian period have been termed 'Men of Letters,' a term that embraced 'thinkers, men of ideas, amateurs, scholars, scientists and writers, with little professional or disciplinary distinction' (Collini, 2006). In this thesis, such people would be the proto-archaeologists John Evans and Pitt Rivers who were active outside University circles, but who directly influenced future policies and teaching within it.

The question whether there can be a separate class of intellectuals is problematic. Collini (2006, 59) argues that in Marxian or Weberian terms, although intellectuals may not constitute a discrete sociological class, they probably all belonged to the same cultural and economic class. This observation conforms to Coleridge's idea in the nineteenth century of a Clerisy (Knights, 1978): a body of Christian (Anglican) university teachers and clergy who would form the conscious mind and the conscience of the nation, a role that would have been performed within a set of historically specific cultural and social relations.

In Oxford, the more liberal minded members of the University supported the foundation of the new and inclusive Oxfordshire Natural History Society, (Chapter 6). Through this 'organised consent' (Joll, 1997, 57), to their leadership or hegemony by members of the University, those outside gained both intellectually and socially from the partnership.

In Oxford, the effects of the University professors leading the petit bourgeoisie, allowed an emulation of the social behaviour and educational aspirations of the owners of the cultural capital beyond the enclosed environment of the University. Whether this can be described as 'accepting a position of subordination' (Shiach, 1989, 17), or an opportunity for self-improvement (Himmelfarb, 1987), must be weighed against the obvious gains achieved by particular individuals in Oxford (Underhill, Bellamy Druce, and the ONHS, Chapter 6).

Amateur science

As a descriptive term, 'amateur' evolved in the nineteenth century and is linked to the French word *amateur*, from the Latin to love (*Oxford English Dictionary* Oxford: Oxford University Press, 1989). By 1803, the expression was in frequent use in England to describe a person who pursued any interest as a pastime in the arts, literature and science, in contrast to those who pursued an area for reasons of a salary or a career. As the century progressed, however, the term became an adjective to describe an inept or superficial student.

The shift in meaning of amateur status in the nineteenth century was gradual, there is no definitive moment to show when or how the image of the amateur changed and it is far easier to explain the semantics of the term than its philosophical transformation. At the beginning of the nineteenth century, for example, the educated gentleman

savant was respected and his collections of antiquities and knowledge sought after by interested, like-minded colleagues. In 1840s, the term 'professional' was pejoratively applied by J.H. Parker (see Appendices 6 and 8), the President of the Oxford Architectural and Historical Society (Chapter 5), during an address to the General Meeting of the British Archaeological Association in Canterbury. He saw 'two classes of persons; gentlemen amateurs and professional archaeologists;' those who depended on a salaried position were almost 'in trade' (Wetherall, 1994, 8-21). By the end of the century, the intellectual value of amateur research was often dismissed as antiquarian, inaccurate, or both (see Fergusson Chapter 8).

Historians of science have aimed to identify the distinction between unpaid gentlemen and paid players, though, so far, their focus has mainly been on late eighteenth and early nineteenth century individuals, for example, the work of Rupke (1983), on Buckland (1784–1856), Corsi (1988) on Baden Powell and Shapin (1994) on eighteenth century science. Morrell's recent biography (2005) of John Phillips (Appendices 2, 5 and 8) addresses the growth of the profession of museum keeper in the later nineteenth century.

The cosmology of earlier scientists was distinctly different from the scientific specialists in the late nineteenth century and, as Morrell (1990, 980–988) observed, we must not impose unqualified modern notions of professionalisation on the institutions and individuals of the past. It would be an intellectual anachronism to compare the work of amateur natural theologians during the first half of the nineteenth century with the later scientific evidence emerging from geology and natural history. The transformation of scientific thought at that time was result of the accumulation of evidence pursued by amateur devotees, some of whom gradually became professionals. In the sphere of British prehistory, for example, members of the intellectual aristocracy were socially well-connected amateurs like John Evans, Pitt-Rivers or Greenwell. These individuals retained their intellectual credibility as some of their peers were being recognized as professionals. Some, like Tylor, were appointed as Keepers of Museums, others like Boyd Dawkins and Huxley became professional academics, gaining lectureships at University (for a full analysis of these issues, see Chapman, 1989).

The non-élite amateur scientist

An unforeseen effect of the discoveries of human antiquity was that the enthusiastic eclecticism and interdisciplinary nature of nineteenth century scholarship, and within it the role of amateur, gradually became distanced from the accepted dissemination of this knowledge. In Oxford, by the latter part of the nineteenth century, the control of previously shared knowledge about the British past became absorbed into the academic networks of the University. This was a result of professional appointments and responsibilities (see for example the division of Rolleston's single role into three professorships after his death).

Gradually, those from outside these professional networks found themselves increasingly marginalized. By 1900, for example, both Underhill and Bellamy were aware of the changing nature of the ONHS caused by its amalgamation with the Ashmolean Society (see Chapter 6). Underhill had already resigned from the ONHS (Bellamy 1908, 116) and became a member of the Oxford City Camera Club.

During the second part of the nineteenth century, all branches of science were gradually being streamlined and professionalized. In Oxford, this can be observed by the steady move towards the disciplinization of knowledge by the University (Brock and Curthoys 1997). By the end of the nineteenth century there were two parallel forms of intellectual interests, the scientific 'way of knowing' that was associated with a specially trained core group, such as the University lecturers and museum keepers, and the periphery of popular science writers (Cooter and. Pumphrey 1994) and enthusiasts at local amateur societies (Allen, 1994).

Kohlstedt (1976, 173) applied the term 'avocational' in order to describe nineteenth century amateur science enthusiasts. These individuals were 'never fully defined by contemporaries and loosely grouped together, the amateurs held a vague position somewhere between the general public, and the regularly practising researchers' (Kohlstedt, ibid).

Those who were employed by academic institutions, but not part of the academic élite whose positions carried University qualifications and status, often had the supporting roles of Museum, and laboratory or technical assistants. The contributions made by three of these individuals, Rowell, Robinson and Bellamy are discussed in Chapter 5.

Amateurs differed from the general public by their active interest in science as informed observers, collectors, and skilful data gatherers. However, as science became professionalised and classified into particular disciplines, individuals like

Underhill, Bellamy and later Paintin (see Chapter 5) gradually became estranged from full-time researchers and their work was often described negatively (see criticism of Bellamy 1908 and Paintin, Chapter 5).

In the case of Robinson and Rowell (Chapter 5) the drawbacks associated with their lack of specialist training or of a University degree, were becoming more apparent towards the end of the nineteenth century. Having no network of like-minded contacts, or in the academic world, this resulted in their fixed subservience to the growing body of professional museum staff (see Tylor on 'museum servants', Chapter 5).

Academic publications were among the required criteria for the establishment of professional standards and status; these publications were peer-reviewed and often exclusive to particular intellectual networks. Amateurs like Underhill and Paintin were able to produce little in the way of publications in recognized academic journals although their contributions were included in the more popular journals of the time (see Chapters 5–8). As Tylor's assistant at the University Museum, Robinson contributed many illustrations of objects from the Pitt Rivers collection for academic journals, but few of these were credited with his name (see Chapter 5).

By the end of the century, there was a growing gulf or separation between full-time professionals. 'A-vocational scientific studies' (Kohlstedt, 1976, 173) began to imply that there were higher and lower orders of knowledge and as the public became aware of major figures in science it became less impressed by its local 'experts'. By the end of the nineteenth century, this shift left many Oxford amateurs uncomfortably in the middle, and, as Kohlstedt (1976, 173) noted, 'not fully understood by either end of the continuum'.

Few amateurs are mentioned by historians of science, except perhaps as subordinates (see Morrell, 2005, 309-310, on Rowell), and, apart from Levine (1986), little has been done to investigate the nature of the amateur tradition in British prehistory. The focus has mainly been on 'great discoveries' or to determine when and how a change occurred that established modern, professional standards (for example, Clark, 1989).

Seventeenth and eighteenth-century researchers such as Stukeley and Aubrey were described by historians of archaeology as 'amateur' or antiquarian in terms of their training and expertise but this did not bear the negative implications which arose in the later nineteenth century. By the end of the nineteenth century, with the increase in

opportunities for training and practice, in certain areas of archaeology at least, the term ‘amateur’ designated a more negative class of individuals. In Oxford this became evident in the gradual absence of University members in amateur societies.

For the non-élite amateur, membership of new scientific societies was often the means of entry into a higher intellectual class and its benefits. In Oxford, people like Druce, Bellamy and Underhill, who were active members of the ONHS, were able to gain free access to the University libraries, The Bodleian, and the Radcliffe Science Library. Books were expensive and still few in number, and the limited number of scientific journals were often only available to subscribing members (see Chapters 5 to 7).

The valuable contributions made by amateurs to the growth of prehistory needs to be acknowledged in social histories of archaeology as well as in the more established histories of science. As a general category, Henry Underhill and other amateurs mirrored nineteenth century public attitudes to science. Through their personal dedication they were in close touch with contemporary conceptions of science as consumers or producers (see Chapters 5 and 6). The amateur perspective on science was unique, they were more interested in scientific investigation than the general public, but they had a less narrow vision of new research than did many researchers or professionals in the twenty-first century. Individuals like Henry Underhill did not have the administrative tasks of University Museum Keepers such as Arthur Evans at Ashmolean Museum and Edward Tylor at the University Museum nor the obligations of their Assistant Keepers, Rowell or Robinson. Consequently, they were able to pursue their amateur interests, free from academic and disciplinary restraints.

On the other hand, there was also an element of exclusion. The intermediate position they occupied, between the public and the scientific community, was occasionally ambiguous. The scientific establishment found them to be an important liaison, and capitalized maybe even exploited, their interest (Kohlstedt 1976, 175). Underhill, for example, often assisted Poulton as a lantern demonstrator and illustrator (Gunther, 1937, 321).

It is possible that as the discipline of prehistoric archaeology became more formalized certain amateur contributions were found to be wanting and anachronistic. It is not known, for example, the substance of the ‘interesting discussions [that] took place’ after Underhill’s illustrated talk on ‘Great Stone Circles’ in 1896 (*Oxford Chronicle*

12 February 1896), and it may be that the accuracy of some of his theories or interpretations were questioned by Arthur Evans (see Chapter 7).

Professionals in science

An important difference in the status of amateurs and professionals was the necessity for an individual to find the means to support a livelihood based on what may previously have been a vocation. As Thomas Huxley remarked, ‘science does everything but pay’ (Olby 1990, 982). In order to identify what becoming a professional entails, therefore, it is necessary to rely on individual case studies from particular disciplines.

By the late nineteenth century, the degree of scientific knowledge about human antiquity had expanded exponentially, as individual scholars and scientists discovered more and more evidence about evolutionary processes. It was obvious that some form of 'specialization' was crucial. The now-familiar dichotomy between the 'specialists' who devoted themselves to particular branches of knowledge and the 'non-specialist' public, many of whom displayed eclectic knowledge, began to emerge by the 1870s (Collini, 2006).

In part, this specialization was also a response to the closely related notion of 'professionalization'. In Oxford, by the 1880s, career patterns were being established (see the three posts created from Rolleston’s one, and the appointments of Arthur Evans and Tylor as Museum Keepers, in Chapter 5). One issue that affected both amateur and professional members of local Oxford societies by the end of the century was the eventual formation of discipline-specific societies by the University and the membership restrictions attached to them (*Oxford Junior Scientific Club*, Chapter 6).

A deliberate form of resistance to the perceived operation of specialization was displayed by the ‘man of letters.’ This self-conscious cultivation, from the late-nineteenth century onwards, was itself a form of amateurism. Andrew Lang (see Appendix 5), a friend of many Oxford people in this thesis, was once described as a ‘divine amateur,’ one who loves what he does (Green, 1946, 53).

The distinction between unpaid gentlemen, and paid players, often occurs in literature in the history of science. Attached to this distinction are all the social and cultural implications. In the eighteenth century, however, the word 'profession' provided no problems for Samuel Johnson, it simple meant a calling, a vocation (Morrell, 1990, 980). The meaning of 'professional' has gradually changed over time, and according to the particular perception of the individual. It was, and still is, subject to both sociological and semantic constraints.

The present term 'professional' refers to a vocation or known employment, carrying with it the presumption of status and respectability. By the nineteenth century three learned professions were recognized, the Church, the Law, and Medicine. Later the higher echelons of the armed forces were included (for example, General Pitt Rivers). Notably missing from these concepts of professions were any references to science or education.

The basic concept of professional status was addressed over fifty years ago in the 'Carr-Saunders, Wilson approach' (Carr-Saunders and Wilson, 1933). They identified an evolutionary development towards professional recognition from the mid-nineteenth century within the three learned professions. This included the desire for higher status and both financial and honorary recognition, an attitude that conforms to the demands being made by 'men of science' in the latter half of the nineteenth century as they pressed for recognition of their new sciences (Morrell, 1990, 987).

In sociology, many attempts have been made to define 'the professional'. Morell, referring to the Carr-Saunders/Wilson approach (1990, 981), identified the essential characteristics necessary to display a corporate and exclusive identity; these are, skills based on knowledge and special training, a self regulating and testing mechanism, specialist publications and a form or means of service to clients or society (Morell, 1990). A profession was therefore recognised if it fulfilled the required criteria.
The founding of the University Museum and the re-organisation of the Ashmolean Museum enabled individuals like Phillips (Morell, 2005, Chapter 11) to obtain a significant professional role. However the exercise of patronage, social connections and the promulgation of ideologies were equally influential. Often, in Oxford, new professional roles were created by outside influence; Tylor was made Keeper of the University Museum in 1883 as part of the Pitt Rivers gift and was awarded the status

of Professor in 1896 (Chapman 1989). Equally, the position of Museum Keeper, offered to Arthur Evans in 1884 at the age of thirty-two, might not have happened without the influential connections of his father John Evans or of his father-in-law the historian Edward Freeman (Ovenell, 1986, Chapter 15).

It is important, however, not to impose modern notions of professionalization on the institutions and individuals of the past (Morrell, 1990, 988). These developments did not, suddenly or simultaneously occur, the process was gradual and different branches of science achieved professional status before others. Although the end of the century marked the metamorphosis of the scientific knowledge of prehistory from a pastime to a profession, in Oxford there were no appointments in non-classical archaeology.

Professionalisation at Oxford

Most people involved in the pursuit of British prehistory in the nineteenth century were technically amateurs with the time and the means to pursue their interests. Some, including Lubbock and Evans, were wealthy businessmen. Others, like Pitt Rivers, a military officer who became a member of the landed gentry through a fortunate inheritance (Bowden, 1991). William Greenwell (1820–1918) who worked with both Rolleston and Pitt Rivers (Greenwell and Rolleston 1877), was a country clergymen as well as an amateur archaeologist (see Armstrong, 2000).

An examination of the move towards professionalisation in Oxford suggests that it occurred through a series of unplanned events and uncoordinated decisions. For example, the early death of George Rolleston in 1881 not only created three subsequent positions from his original role as Professor of Anatomy (Chapter 5) but it also influenced Pitt Rivers' decision in 1883 to give his collection to Oxford University (Chapman 1989) to form a museum which would provide the nucleus for teaching anthropology and prehistory.

British archaeology at Oxford

At Oxford, as at Cambridge, prehistoric archaeology was closely associated with the teaching of anthropology (Clark, 1989, 1). In the late nineteenth century British

prehistory was still enmeshed with the ideas of evolutionary development (Gosden, 1999, 32). Lacking texts and 'art,' prehistory was very much the 'other' and academically overlooked until the middle of the twentieth century.Although in 1887, Percy Gardner was appointed Lincoln Professor of Classical Archaeology and Art (Stray, 1998, 131), this appointment had little effect on investigations into British archaeology.

The status of British prehistory as a separate discipline was not fully accepted until Oxford established a Chair of European Archaeology in 1946. Christopher Hawkes was appointed and his teaching was intended to 'throw light on the barbarian antecedents, post-Roman as well as pre-Roman, (Hawkes, 1951, 1). Sixty years on, it is now vital to research the foundation and development of British archaeology at Oxford drawing together the various archives discussed in Chapter 1.

British and European Archaeology at the University of Oxford

1883 The University appoints professors of physical anthropology, archaeology and social anthropology as part of the move towards scientific teaching
1887 Percy Gardner appointed Lincoln Professor of Classical Archaeology and Art.
1946 Professor Christopher Hawkes appointed Chair of European Archaeology
1972 Professor Barry Cunliffe becomes Chair of European Archaeology at Oxford
2006 Professor Chris Gosden succeeds Professor Barry Cunliffe

Conclusions

This chapter examined the complex social, cultural and intellectual identities of a wide range of individuals who became involved with the discoveries of British prehistory in late Victorian Oxford as it gradually evolved from a pastime to a profession. During that time, evidence shows that intellectual relationships were formed between people from different social classes of town and gown. Some were able to make archaeology their career, the personal circumstances of others required them to earn a living and pursue their intellectual and scientific interests in a subordinate or amateur capacity.
Chapter 4 examines the geographical and educational landscape of nineteenth century Oxford and provides a contextual background for the case studies of the gentlemen

and players and their intellectual pursuit and dissemination of scientific knowledge about the past.

Chapter 4 Oxford: Town and Gown, 1850-1900

At this point it would be helpful to refer the map of nineteenth century Oxford in Appendix 1 which indicates the position of various University buildings and the residential and occupational locations of people discussed in this thesis. The *dramatis personae* appear in Appendix 2 and a table of their interests in Appendix 3. Appendix 5 shows a timeline of significant social and cultural events that happened in Oxford.

In many historical and literary accounts 'Oxford' has become both a geographical and intellectual concept. In the nineteenth century it was, for example, both a growing residential (Victoria County Histories, IV, 1979) and an academic community (Brock and Curthoys, 1997) with a population composed of a number of specific social and cultural groups.

Over the centuries, these groups have been perceived as being discrete categories of 'town and gown' and 'amateur and academic'. However, such conventionally accepted binary oppositions are not subtle enough to describe these arbitrary divisions. It has become evident during this research that the boundaries between town and gown were often both fluid and socially and culturally subjective (see Chapter 3 for discussions of social and cultural identity and Chapters 5 and 6 for Oxford case studies).

The distinctive social, cultural and geographical characteristics of nineteenth century Oxford today provide unique material for the series of case studies that follow. These studies illustrate many of the social transformations that took place nationally from 1850. They offer a unique insight into the various urban tensions experienced by people living in a rapidly expanding market town, that, at the same time, was incubating an expanding national University. The inevitable differences between classes and individuals were expressed, not through political behaviour of individuals, but by the physical experience of belonging to one of two very different institutions, as a member of the University, or as a citizen.

It may have been equally possible to carry out similar enquiries into relationships between town and gown in Cambridge (for example Smith, pers.comm. 2006), but the inter-contextual dynamics of Oxford, its centrality in the intellectual debates on the nature of scientific knowledge as well as its parallel economic growth in the nineteenth century offer more opportunities for research.

Oxford University: the 'Gown'

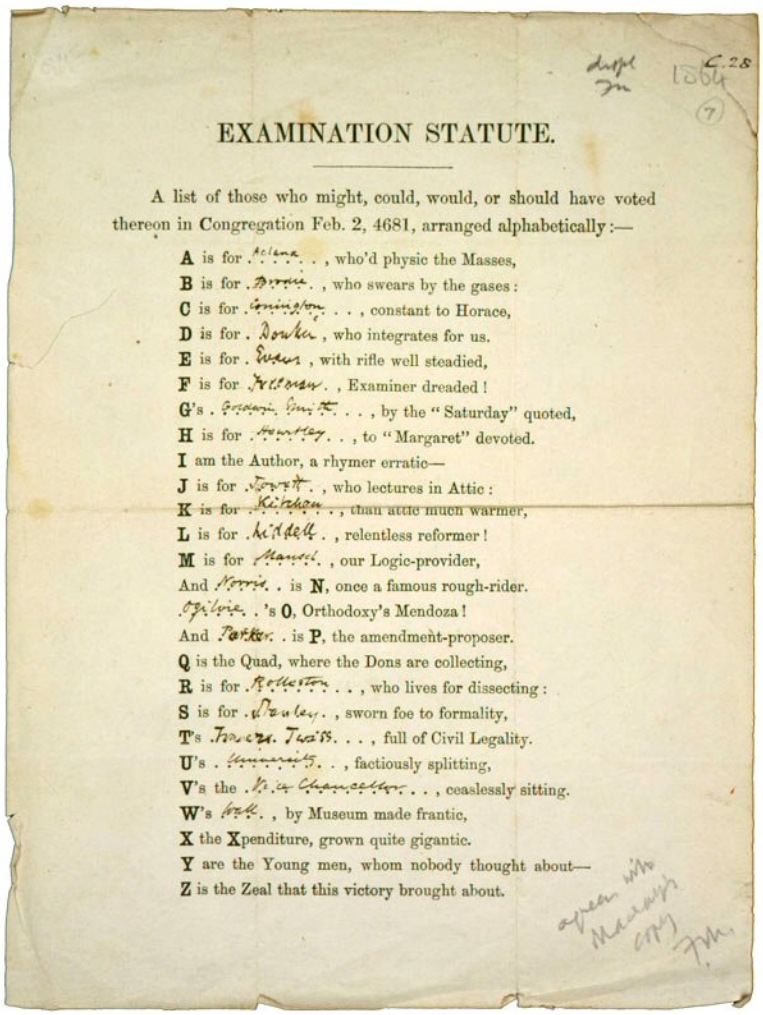
I speak not of this college or of that, but of the University as a whole; and, gentlemen, what a whole *Oxford is!* *Lord Coleridge (1820-1894)*

Current scholarship on the history of Oxford University itself is presented in the form of a grand narrative. Much of this work covers politics, governance and the growth of various institutions and disciplines (for example, Stone, 1974; Brock and Curthoys, 1997, 2000; Stray, 1998). These accounts provide a valuable framework for the physical and political landscape of an institution. They do not, however, examine in any detail the social, cultural, or anthropological issues, which inevitably arose from those living in an intricately bounded and stratified society. This thesis focuses therefore on the social actors of nineteenth century Oxford and their individual accomplishments, rather than their political organisations and achievements.

By the 1850s, the state of the academic teaching at Oxford University was in decline, and the number of undergraduate student admissions had remained static, at around 400 (Brock and Curthoys, 1, 1997). Various reasons accounted for this stagnation; the restricted nature of the curriculum, the reputation of inadequate tuition and the extravagance and dissipation of the undergraduates (Stone, 1974, 60). The University was also aristocratically and socially exclusive and its mediaeval regulations excluded whole sections of society.

From the middle of the nineteenth century there was a gradual change in the intellectual, political and social images of both the aristocracy and the clergy (see Chapter 2), and this affected the accepted ideas of the purpose of a university. The academic reforms of Oxford University were introduced from 1850. These details have been fully covered by Roach (1959); Rothblatt (1968); Soffer (1994); Stray (1998) and Brock and Curthoys, (1997, 2000). Principally, the reforms concerned admissions, tutoring arrangements, and a gradual inclusion of a new curriculum, which began to include science, law and history (Engel, 1983a, 305). From 1860, Oxford University was obliged to adapt to the 'aspirations of the bourgeoisie' with the increase of the new middle class demanding a relevant academic education (see chapter 2).

Before the reforms, Oxford had been the traditional base for the sons of landed gentry and the education it provided created the traditional professional elites of the law, the church and the army. From the 1860s, the University was obliged to offer a curriculum, which embraced both professional training and higher learning. This re-definition of the University's social role coincided with the new 'research ideal' (Anderson 1992; Rothblatt 1968).



EXAMINATION STATUTE.

A list of those who might, could, would, or should have voted thereon in Congregation Feb. 2, 4681, arranged alphabetically:—

A is for . . . . . , who'd physic the Masses,
B is for . . . . . , who swears by the gases:
C is for . . . . . , constant to Horace,
D is for . Dowker , who integrates for us.
E is for . Evans , with rifle well steadied,
F is for . . . . . , Examiner dreaded!
G's . . . . . , by the "Saturday" quoted,
H is for . . . . . , to "Margaret" devoted.
I am the Author, a rhymer erratic—
J is for . . . . . , who lectures in Attic:
K is for . . . . . , than attic much warmer,
L is for . . . . . , relentless reformer!
M is for . . . . . , our Logic-provider,
And . . . . . is **N**, once a famous rough-rider.
. . . . . 's **O**, Orthodoxy's Mendoza!
And . . . . . is **P**, the amendment-proposer.
Q is the Quad, where the Dons are collecting,
R is for . . . . . , who lives for dissecting:
S is for . . . . . , sworn foe to formality,
T's . . . . . , full of Civil Legality.
U's . . . . . , factiously splitting,
V's the . . . . . , ceaselessly sitting.
W's . . . . . , by Museum made frantic,
X the **X**penditure, grown quite gigantic.
Y are the Young men, whom nobody thought about—
Z is the Zeal that this victory brought about.

Fig 4.1 Satirical verse composed by Charles Dodgson, in 1864.

The verse, (Fig 4.1) was composed by Charles Dodgson in 1864 and features many of the individuals included in this thesis, Acland, Freeman, Rolleston, and Wilberforce [as Wilb].

In 1870 the University began to keep more efficient statistical records of undergraduates. These included details of the father's occupation and indicated a growing clientele of middle class students from professional, commercial and industrial occupations (Stone, 1974). Those attending Oxford Colleges after that period who were able to benefit from an Oxford education or appointment, although, because of personal circumstances, their fathers had not, included Arthur Evans, (1851-1941) an undergraduate at Brasenose College in 1870 (Evans, 1943, 147) and Edward Poulton (1856-1943), who was at Jesus College in 1873 (Poulton 1893).

Although the University reforms in the 1860s brought some changes, it is obvious that the middle and upper class elites were still very much in control. The cultural capital of the University meant that the colleges were still able to influence what, and who, were accepted into the corpus of knowledge (Anderson, 1992, 61).

To summarise, from the 1850s the impacts of the University reform were felt in many ways; the size and composition of the student body increased and the town began to expand to fulfil their needs. More accommodation was required during University terms and also tradesmen to supply their provisions. For example in the 1880s, the Underhill family enlarged their premises in the High Street, and, their shop front and delivery cart described them as 'Purveyors to the Gentlemen of the University' (John Johnson Collection, Bodleian Library, 1971).

As well as the strictly historical and factual accounts of the developments of the Oxford curriculum, from the late nineteenth century a growing mythology of the collegiate, academic life at Oxford appeared in personal biographies. Former students wrote of their social and cultural ' Alma Mater' (Oman, 1941 Tuckwell 1907, Godley, (1910). These accounts are often nostalgic and eulogistic memories of a '*temps perdu,'* offering experiences of a privileged University life at Oxford from within. They provide a segment of the picture of nineteenth century Oxford, but do not take into account the 'Judes' of the period (Hardy, 1896), the outsiders, or the anonymous autodidacts, such as Underhill, Rowell and Bellamy who, although resident in the City, were on the edge of academia.

Oxford City: 'the Town'

Very nice sort of place, Oxford, I should think, for people that like that sort of place.

(George Bernard Shaw 1890)

Most historical accounts of Oxford have tended to focus on its mediaeval conditions, or on its political involvement in the Civil War, its culture and its gothic architecture (Victoria County Histories; Day, 1997, Chapter 13). However, during the nineteenth century, Oxford became transformed from a rural market town to an urbanised economy. Most of these political and economic changes took place after the 1850s. In 1889, it became a county borough 'out of compliment to its dignity and antiquity rather than its size' (Butler 1912, 153) and all administration was amalgamated under one authority; the University began to contribute a fifth part of the city council.

In 1801 there were 1827 houses and 11,694 inhabitants (Butler, 1912, 10.) By 1901 there were 10,484 houses and 49,336 inhabitants according to a census taken in the summer vacation (Butler 1912, 38). During term there were also 5000 undergraduates and tutors.

Butler (1884-1982) was an Oxford citizen by birth and in 1912 as part of a teaching diploma at London University she produced this unique account of the city gathered from primary sources (Obituary, *The* Times, 26 May, 1982). *Social Conditions in Oxford* presented an account of the life and work in the 'town of Oxford, and those who come into contact with the University' (Butler, 1912, 2–3). The book dealt with near-contemporary issues of Oxford arising from her own research rather than presenting the history of an elite University past and is one of the few contemporary accounts that described the economic and social conditions of late nineteenth century Oxford.

Investigations into the intellectual, social and historical aspects of nineteenth century Oxford reveal a contrast in the amounts of information available. For the University, 'the gown', there is an abundant collection of official histories about the nineteenth century alone (for example Brock and Curthoys, *History of Oxford University*, *The Victoria County Histories*, College Histories, copious biographies and auto biographies, histories of buildings, departments or disciplines–but not yet of archaeology).

To use Butler's model and obtain an idea of the history of social lives in Oxford a wider archaeology of texts is required. For information on events of local societies and local individuals, the records of the local press from the 1840s, *Jackson's Oxford Journal* and *The Oxford Chronicle*, are vital indicators of contemporary life (see Chapter 6 for intellectual societies).

Town and gown interaction: health, education and knowledge

Employment

In 1901, the Oxford Food trade employed 236 men who worked in the 'superior shops' such as *H. Underhill and Sons*, as clerks or salesmen at 25 to 50 shillings a week (Butler, 1912, 43). This was the period when, as Oxford expanded, Henry Underhill found his High Street grocery business suffering from competition from national companies such as the Co-op (Scott Diaries, 1904, Vol. XXVI).

By the late nineteenth century the Colleges and University were employing about 600 people, porters and 'scouts'[servants] who formed a caste by themselves. There was open competition for entry into a job which could provide a lifetime's employment and people were prepared to take very low initial wages in return for security and advancement (Butler, 1912, 45). Among these would have been the parents of Alfred Robinson, who were gardeners at Wadham College (Census 1881), Robinson himself who was employed at the University Museum and the parents of Frank Bellamy who were College servants, and Bellamy (see Chapter 5).

There were, however, social problems caused by this employment. The city was affected by the University terms and during the long vacations some individuals were obliged to enter the workhouse (Sephton, 2001) or find new work outside Oxford for this period (Butler 1912, 81–93). The problem was not as great in 1901 as it had been in 1850, but the precariousness of a regular wage was still an issue in the City.

To some extent the exodus during the University long vacation was compensated by the influx of sightseers later in the century. Enterprising business owners like Henry Taunt of Broad Street were able to provide services, guidebooks, postcards and organise tours of Oxford and its surrounding countryside for tourists (Bodleian Library, John Johnson Collection; Taunt Archives, Centre for Oxfordshire Studies).

Education

Children's education

Butler investigated the educational provision within the city between 1870 and 1902 besides that provided by the University, which in fact was mainly for wealthy outsiders. Here, the University's impact on education in the city appears to have been less pervasive than might be expected. There were schools attached to New College, Magdalen, and Christ Church where Underhill received his education. The University established and maintained the Greycoats Boys' Charity School in Jericho from 1708, until its closure in 1865 (Victoria County History of Oxford, IV, 86). However, it becomes apparent from this research that until the 1870s the University appeared to have remained largely aloof from the provision of public education in Oxford itself.

From the 1870s, when college statutes changed and University dons were allowed to marry (Brock and Curthoys 1997), many men migrated from the traditional bachelor life of the colleges to create a new section of society, often in 'North Oxford'. This migration affected all areas of the social and intellectual life in Oxford outside the University. Some University dons became members of newly formed civic and intellectual societies and, according to the historian T. H. Green (1836–1882), this was an arena in which 'townsmen and gownsmen' could unite in the pursuit of a higher goal (Brock and Curthoys, 1997).

The younger dons often had liberal political and social leanings. Some helped to found and support local day schools for their own children and those of local Oxford people and the University gradually began to offer financial support both at official and at individual level. The Boys' High School, opened in 1881, was supported by University members T. H. Green, Jowett and Rolleston and the Liberal alderman James Hughes from the city (Brock and Curthoys, 1997, 94). The High School aimed to provide a grammar school education which would enable Oxford boys to take advantage of the University's new openness, particularly the relaxation of the rules governing residence.

Another initiative was the foundation of Oxford Girls High School in St Giles in 1875, supported by, among others, Henry Underhill's father, Alderman Henry Scrivener Underhill, Max Müller and John Rhys of Jesus College. Henry Underhill's

sister Maud was one of the first girls to be registered (Paintin, 1920). A daughter of Colonel Lane Fox (later Pitt Rivers), Geraldine Lane Fox (1863–1926), was a boarder at this school until 19 December 1879 (Schneller, (2004).

Religion

It is evident that the Anglican Church had the greatest representation of church attendance in Oxford, and new Churches were being built in the expanding suburbs (Butler 1912). Among the Oxford dons who attended these churches in North Oxford were Edward Poulton at St Philip and St James on Woodstock Road and Edward Underhill at St Andrew's, Linton Rd. Many would also have attended their own college chapels or the University Church on the High Street. By 1901 there were 15 civil and 22 ecclesiastical parishes and three public cemeteries (Appendix 1, map).
The non-conformist chapels derived most of their support from the shopkeepers and artisan classes, but it is impossible to attempt to draw any social conclusions between the members of different denominations. All his life, Henry Underhill (Chapter 7) was a regular attendant and teacher at George Street Congregational Church where he taught at the Sunday School and the Band of Hope (Scott Diaries 1904 Vol. XXVI; Paintin, 1920).

In the late nineteenth century most children attended Sunday school regularly. It offered opportunities for a different form of education, giving rewards, prizes and periodical treats. Half of the eligible children in Oxford were enrolled members of the Band of Hope (Butler, 169-172; Burns, 1897). This temperance organisation had been supported by George Rolleston until his death in 1881 (Chapter 5), and until 1905, Underhill wrote and produced plays for Oxford children of George Street Congregational Church branch (Scott Diaries Vol. XXVI).

Apart from the many charitable concerns in Oxford, often supported by the wives and families of University staff (Butler 1912), there were also movements to widen educational opportunities for young children and adult education.

Adult education

During the 1840s and 1850s Mechanics Institutes were formed in many towns and cities to educate the 'labouring classes'. In Oxford there has recently been a growth of amateur interest in this issue (see Sephton 2001). Further research into the provision of adult education would provide a vital contribution to the history of knowledge, as it highlights many of the overlooked issues that were connected to new scientific disciplines in the nineteenth century. Goldman (1995) recently examined the work of the Oxford Extension Scheme that was aimed at widening the access to Oxford from the 1880s.

In Oxford the Working Men's Educational Institution was established at the end of 1855, following the efforts of J. J. Faulkner (Sephton, 2001). In 1848, a series of public lectures 'for the labouring classes' took place in the Town Hall on 'scientific and literary subjects only'. It would have been at one of these lectures that George Rowell (Chapter 5) would have encountered the Savilian Professor of Geometry, Baden Powell, when he lectured on 'The Properties of Light'. Baden Powell later took a personal interest in Rowell's scientific theories and nominated him as a member of the University Ashmolean Society (see Chapter 6) and in 1846 paid his fee of five guineas (Ashmolean Society Papers, 1834–83, Dep.e.308 Bodleian Library)

Evidence shows that events like these were beginning to happen nationally from the mid-nineteenth century, as the growth of knowledge and philanthropy developed side by side. At present, the research has been focused on northern industrial regions (Alberti, 2003a and Secord, 2002), but the relationships between town and gown in Oxford offer further scope for research.

One piece of evidence helps to illustrate the educational initiatives of liberal-minded academics and dons. In May 1851, *Jackson's Oxford Journal* reported a visit by special excursion train to the *Great Exhibition* by members of the University (see Map of Oxford Appendix 1). Before the visit, several professors including Acland, Daubeny, Walker and Storey Maskelyne had given preparatory lectures to the party.

Following the visit, these professors formed a Local Committee in 'Aid of the Great Exhibition' with the support of the Vice-Chancellor of the University, Frederick Charles Plumptre, and the Mayor, William Ward (Hibbert, 1988, 512–514). They proposed to raise funds 'to assist mechanics and labourers of the city to visit the Great

Exhibition' by repeating their lectures at the Town Hall, 'where a capacity of 300 people could be expected' (*Jackson's Oxford Journal,* June 7, June 21, 1851).

The first lecture, on 'The properties of metals and their adaption to the requirements of machinery and manufactures', was to take place on 17 June. Unfortunately, owing to lack of support the lecture took place with 'only 20 or 30 or so persons present' *(Jackson's Oxford Journal*, 21 June, 1851) and there was no further mention of this venture.

The narrow and didactic choice of lecture material for the Oxford mechanics and labourers might have had something to do with the lack of support. They included, *On the Manufacture of Glass and Porcelain* by the botanist Dr Daubeny, *On the Principal contrivances in Machinery for modifying and converting motion* by the Rev Walker and *On the work of the Animal Kingdom for the art and Manufactures of Man,* by Dr Acland (*Jackson's Oxford Journal,* 7 June, 1851).

The Great Western Railway continued to organise 'pleasure' excursions from Oxford until the Great Exhibition closed on 11th September 1851. According to contemporary accounts, the exhibits at the Crystal Palace appeared to have been varied and stimulating and attracted over six million visitors (Gibbs-Smith 1981).

Later in the century, the university again participated in an adult educational programme largely supported by A. H. D. Acland, Secretary of the University's Delegacy of Local Examinations. He foresaw an opportunity to involve the University in a national scheme of working-class education in association with the Cooperative movement (Brock and Curthoys, 1997 457; Goldman 1996). By the end of the century, many liberal Oxford intellectuals such as Arthur Evans and Edward Poulton were committing time to adult education (Goldman, 1995). Henry Underhill's brother, Edward, was also a supporter of this movement, teaching classics at Magdalen College during the summer vacation (Scott Diaries 1887-1924).

Economy

Chapters 2 and 3 referred to the newly emerging categories of social class that were emerging in Britain, from the mid nineteenth century. In Oxford, the gradual changes in University regulations concerning the status of dons and students began to create a new social class of academic aristocracy. As Professors married and often set up house in the newly developing suburb of North Oxford (Victoria County Histories,

IV, 1979, 198), this created a need for a subordinate and reliable support network from other classes. The tradesman, the builder, the clerk and domestic servant often became upwardly mobile themselves, as their services were at a premium.

From the 1850s many Oxford traders and businessmen expanded their custom to the newly created suburbs of North Oxford and Park Town. Local builders were able to profit from the growing demand for homes (Victoria County Histories, IV, 1979, 198). Traders were able to supply the increasing number of residents with goods and services. Flourishing businesses in printing, publishing and bookbinding developed, for example the Clarendon and Oxford University Press created new communities, providing housing and employment for their employees in Jericho (Hibbert, 1998, 197). Other major employers were Salter's Boat building Yard at Grandpont, Lucy's Metalwork Foundry in Jericho, and the makers of Cooper's Marmalade in the High Street (Victoria County Histories, IV, 1979 214).

In time, the proprietors of these businesses became active in the civic and intellectual life of the city. Many of the interests promoted by the purveyors of the 'new sciences' were followed by Oxford citizens, tradesmen, clerks and assistants (for example Underhill, Bellamy and Druce). By the 1870s they were free from many of the retail restrictions imposed by the University earlier in the century, when the city was still reliant on the University's custom, and the seasonal demands of the student population (Sephton, 2001).

The Railway and Oxford

In the 1830s the Great Western Railway ran from London, Paddington, via Reading and Didcot to Swindon. In 1837 it was proposed to construct a branch line that would connect Didcot to Oxford (Hibbert, 1988, 354–355) and the House of Commons finally passed the parliamentary Bill to allow this railway to be built in 1843. It had been opposed originally by the House of Lords on three separate occasions at the wishes of the University authorities who felt that a railway would both spoil the character of Oxford and distract the undergraduates from their studies (Brock and Curthoys, 1997, 459). The first railway station opened near Grandpont in 1844 and in 1852 the station moved to its present site (see Appendix 1). In 1865 a proposal by the city council to allow a railway carriage works to be built in Oxford was put forward but again members of the University, including George Rolleston, opposed this

because they did not want ‘mechanics flooding into the town’ (Victoria County Histories, IV 1979, 215). The University evidently still held power and control within Oxford.

However, the arrival of the railway in Oxford eventually benefited both the local tradesmen and the national intellectual academic networks. Henry Underhill, for example, was able to obtain regular deliveries of fresh goods from London and supply daily orders to outlying villages near a railway line (John Johnson Collection Bodleian Library; and Appendix 1 and 4).

More significant for the growing networks of knowledge, from the 1860s, the railway provided easier means of travel to and from Oxford for those attending intellectual meetings in London and the provinces. In 1860 for example, a railway timetable was provided in the programme for the delegates of the annual meeting of the B.A.A.S. being held in Oxford (Bodleian Library B.A.A.S. archives). Thomas Huxley, Richard Owen and other prominent delegates were able to make the journey without difficulty from London.

Oxford from the outside

This thesis has been assembled using primary sources of information wherever possible. Often, personal eye-witness accounts can offer insights that add substance to well-known events or periods. For example, in his autobiography, Max Müller (1823–1900) observed that ‘Seldom has a University passed through such a complete change as Oxford since the year 1854. Though never violent, the University was rejuvenated and invigorated, even though it had a ‘Non-Placet Club’ [opposition to reform] ready to oppose any reform’ (Max Müller, 1901, 235).

Max Müller was a friend and colleague of many people discussed in this thesis, Acland, Pitt Rivers, Rolleston and Tylor for example. As a German academic, he was already familiar with the ‘higher German scholarship’ that had influenced the philosophical and theological questions during the 1860s on the nature of scientific knowledge in Oxford (see Chapter 2). He was already an ‘enlightened’ Christian, grounded in a liberal Lutheranism, and he had no empathy for the theological and ecclesiastical struggles of contemporary Oxford, which he regarded with detached amusement (DNB 2004).

When he moved to Oxford in 1851, Max Müller enjoyed great social acclaim, although he kept aloof from the arenas of academic contention at Oxford (Müller and Müller 1901). In this way, his impressions offer an impartial view of the University transformations from the 1860s. At that time, he noted that the City society was completely separated from the University society, and that 'even rich bankers and other gentlemen would never have ventured to ask members of the University to dine' (1901, 238).

The foundations for the next four chapters have now been laid. Nineteenth century Oxford has been described in social, intellectual and geographical terms and the questions of scientific discoveries about the past have been described. The *dramatis personae* now make their entrance.

Chapter 5 Gentlemen and Players[2]

The previous chapters in this thesis have outlined the social, cultural and intellectual status of scientific knowledge in nineteenth century Britain. The focus has particularly been on the impact of the emerging evidence of physical remains and material culture for the antiquity of the human race. By the mid-nineteenth century, that remote period was termed 'prehistory' (see Wilson, 1851, and Tylor's Presidential Address to the Anthropological Institute 1893, 383) and created a new and challenging area of scientific study.

In Oxford, information from geology, ethnology, anatomy, history and often the classics became synthesised in order to examine the truth of early humans and their interactions with their environment. This chapter will examine the roles of particular individuals who became involved with these new explorations. They have been selected because they represent various intellectual and social positions that were discussed in chapter 3 (Social and cultural identity). They are:

University Men

George Rolleston 1829–1881: Linacre Professor of Anatomy and Physiology
E.B. Poulton 1856–1943: Hope Professor of Zoology

Museum and University Employees

George Rowell 1804–1892: Assistant Keeper Ashmolean Museum and University Museum, serving under Museum Keepers John Phillips (1800–1874) and J. H. Parker (1806–1884)

Alfred Robinson 1862–1938: Assistant Keeper at the Ashmolean Museum and University Museum, under E.B.Tylor and Arthur Evans
Frank Bellamy 1864–1936: Observatory Technician

Citizens and Amateurs

George Claridge Druce 1850–1932: Chemist
Harry Paintin 1860–1930: Journalist

[2] The term 'Gentlemen and Players' ascribed to these individuals relates to a match played at Lord's Cricket Ground annually from 1806 to 1962. It is an apposite metaphor to describe the variety of social and intellectual positions in nineteenth century Oxford.

The ‘gentlemen’ whose activities have received particular attention in this thesis are the University academics, Rolleston, Poulton and Arthur Evans. In juxtaposition to their roles are those who were in a subordinate position, the University museum assistants, George Rowell, Alfred Robinson and University Observatory Assistant Frank Bellamy. Outside the academic or museum milieu, the roles of Druce and Paintin from Oxford’s burgeoning lower middle class will be examined.

It might be argued that the social divisions above between town and gown are somewhat subjective and it is important to stress that there is evidence that these groups frequently interacted through their mutual interests in the natural and human sciences. The vehicles for this interaction in Oxford were often the intellectual societies (see Chapter 6) and their connection with the University and its members.

The first case study in this chapter discusses one of the most prominent advocates for intellectual and social change in mid-nineteenth century Oxford. George Rolleston was a pioneer of health and educational improvements in the City as well as having a strong influence on anthropology, prehistory and University progress in the 1860s and 1870s.

George Rolleston (1829–1881) and Oxford

Fig 5.1 George Rolleston, by William Edwards Miller, 1877 National Portrait Gallery

George Rolleston was a Victorian polymath and, although he later concentrated on the human sciences, he remained engaged with all branches of academic learning. He was fluent in Latin and Greek and read and spoke French and German.

Rolleston was the son of a clergyman, born and educated in Yorkshire. In 1850 after being awarded a First in Classics, Pembroke College Oxford gave him a Fellowship to study medicine in London. In 1855 he worked at the British Civil Hospital at Smyrna, then returned to work at the Hospital for Sick Children in London. In 1857 he returned to Oxford as Lee's Reader in Anatomy, and in 1860 became Linacre Professor of Anatomy and Physiology. This appointment was part of the programme of expansion in the Sciences at Oxford, and his teaching departments were based at the new University Museum completed in 1860 (Brock and Curthoys, 1997, 574).

From 1860 Rolleston became immersed in the teaching of human science and the development of the study of prehistory. His role in the history of science is highly significant, as, through his research interests, he linked physical anthropology and prehistoric archaeology with the evolutionary theories that were emerging throughout the 1860s and 1870s.

During that time he took part in many archaeological excavations where his knowledge of anatomy could be applied to ancient human remains (see Rolleston, 1870; 1878, and Greenwell and Rolleston 1877). Research for this thesis has revealed that Rolleston established close social and intellectual connections at various intellectual societies with Pitt Rivers, Tylor and Greenwell. Rolleston and Tylor often exchanged hospitality (Western MSS. 6119/99 Welcome Library, London; Manuscript Collections, Pitt Rivers Museum, Tylor Papers, Box 3, Diary of Anna Tylor)**.** Chapman (1981, 192–194) suggested that Rolleston's friendship with Pitt Rivers probably influenced the general's decision to donate his ethnographical collection to Oxford to form a teaching museum for anthropology and world archaeology. Their personal correspondence certainly suggests that they were both colleagues and travelling companions in Europe (Western MSS. 6119, Welcome Library)

Rolleston was a committed member of many national intellectual societies, the Society of Antiquaries, Royal Society and The Athenaeum. He later became

influential in new mid-nineteenth century intellectual societies that focused particular attention on anthropology and prehistory (see Appendix 5).

In 1858, he was elected a member of the Ashmolean Society (Chapter 6) and was twice President, in 1862 and 1874. At that time most of Oxford's intellectual aristocracy, Henry Acland, Samuel Buckland, Charles Dodgson, John Phillips and J.O. Westwood, were members (Chapter 6). In 1859 the President of Ashmolean Society, Henry Acland and his committee, which included Rolleston, invited the B.A.A.S. to Oxford for its annual summer meeting (Ashmolean Society Papers G.A.Oxon 4o 164/1 Bodleian Library). It was at that meeting that the exchange of views between Thomas Huxley and Samuel Wilberforce heralded, to some extent, a new outlook for science (see Chapter 2).

Rolleston was certainly present at this debate as he was a member of the local organising committee of section D, which at the time included Zoology, Botany and Physiology (*Jackson's Oxford Journal* 2 July 1860; *The Guardian*, July 4 and 11 1860). There is no evidence that he spoke at this legendary debate (see Chapter 2), but early in August he wrote to Henry Acland about a certain meeting they had both recently attended,

> *My Dear Acland,*
>
> *You will be surprised to hear that I am receiving letters from men thanking me for my great courtesy!! [Underlining by Rolleston] from persons to whom I gave no ponderable attention, i.e. nothing to eat or drink. So I think some dynamical good must have been done.*
>
> *The Guardian has asked me for an account of the meeting and I sent them one, which I hope you will like and consider it a set off against sundry blasphemies lettered against the meeting.* (M.S. Acland d 65 27, Bodleian Library).

In the 1860s 'The Guardian' was a weekly publication that represented high Anglican opinions and not the later national newspaper, the 'Manchester Guardian'.

For *The Guardian,* Rolleston wrote,

When Professors lose their tempers and solemnly avow they would rather be descended from apes than Bishops and when pretentious sciolists[3] *seriously enunciate follies and platitudes of the most wonderful absurdity, and draw upon their heads crushing refutations from the truly learned, there is mingled with our more serious feelings a sensation of amusement, which despite the proprieties, is apt to break out into a very decided cachinnation, if not into an absolute guffaw!*

(*The Guardian* 4 July 1860).

Acland later wrote that these issues raised at the B.A.A.S. meeting affected Rolleston deeply (Obituary, *Illustrated London News*, July 2 1881).

Rolleston and Oxford University

Fig 5.2 Anatomy class –photograph by Charles Dodgson around 1859

Rolleston was known for being a charismatic and enthusiastic teacher and his lectures were frequently embellished with references from classical authors. According to Edward Tylor (1932-1917), who in 1884 with William Turner edited Rolleston's posthumous *Scientific Papers and Addresses*, this often resulted in them being 'diffuse and fragmentary.' A lecture that began with 'Ancient Skulls' might, towards the end, become a discussion of the merits of the ancient historian Diodorus Siculus (Rolleston, 1884, 888–891).

Rolleston and archaeology

[3] Having pretensions to knowledge.

Rolleston was possibly one of the first people in Oxford to examine local archaeological remains scientifically. From 1867 he continued the work of the antiquary J.Y. Akerman at an ancient cemetery at Frilford, Berkshire discovered during quarrying (Rolleston, 1870). He was particularly interested in the human remains contained in the cemetery rather than in the burial goods. During his excavations he identified four types of interment, cremation, urn burial, non-orientated inhumation and, finally, burial with an east - west orientation and suggested that the cemetery had been in use throughout the Romano-British and Saxon periods.

Rolleston's address as President of the Anthropology section at the 1875 meeting of the B.A.A.S. in Bristol illustrated his wide knowledge in history, anthropology and prehistory. He summarized evidence from prehistoric remains in Somerset, the scholarship of Edward Freeman (1823–1892), a member of the intellectual network, the recent British acquisition of Fiji, the decrease of the Polynesian populations, and his own particular subjects, craniology and craniography. Here he believed that with enough material to examine in relation between skull size and brain size, it would be possible to create some kind of standard or norm for certain 'non-mixed' societies (Rolleston, 1884, 888-891).

Theories like these were prevalent in the 1860s and 70s and must be considered as part of the search for scientific typologies, information that would later be considered through genetic and cultural variations. Rolleston was in contact with a vast network of scholarship in Britain, for example Thurnam in Wiltshire, and Greenwell with whom he collaborated in 1877 to write *British Barrows.*

In his 1875 address to the B.A.A.S., Rolleston commented on the progress made in Britain in prehistoric archaeology; 'but a short time back [archaeology] was studied in a way which admirably qualified its devotees for being called 'connoisseurs', but which scarcely qualified them for being called men of Science'. The vital element in the development of the study of prehistory was 'its alliance with Natural History and its adoption of Natural History methods, its availing itself of the light afforded by the great Natural History principles, has entered a new career' (Rolleston, 1884, 903). Rolleston was only fifty-one when he died from kidney failure on June 16th 1881. His death took place during the University Commemoration Celebrations, and, as a result, many of his colleagues followed his funeral cortege.

Edward Poulton (following section), who became Hope Professor of Zoology in 1893, was a former pupil and friend of Rolleston between 1873 and 1881 and was present at his funeral at Holywell Church on 20 June 1881. Poulton was appointed as one of the secretaries of the Rolleston Memorial Scholarship and later devoted a chapter in his book of Oxford memories to the life and work of Rolleston 'as he knew him during the last eight years of his academic and local political and social life' (Poulton, 1911 Chapter VIII).

Poulton recorded that 'Among the mourners were the Vice Chancellor and Proctors, a hundred and fifty heads of Colleges and professors wearing academic dress, including Acland, former pupils, and many medical and scientific friends. The procession started from the University Museum to Holywell Cemetery (Appendix 1), the chief mourners were Rolleston's five elder children, but not his wife Grace, who had been too ill following the loss of a child to be informed of his death' (Poulton 1911, 183). Among the people who had come from a distance were Thomas Huxley, Pitt Rivers and Professor Turner of Edinburgh who later, with Tylor, collected two volumes of his work, 'Scientific Papers and Addresses (Rolleston, 1884). Immediately after his funeral, at a meeting held in the University Museum, The Rolleston Memorial Scholarship was established which still exists today.

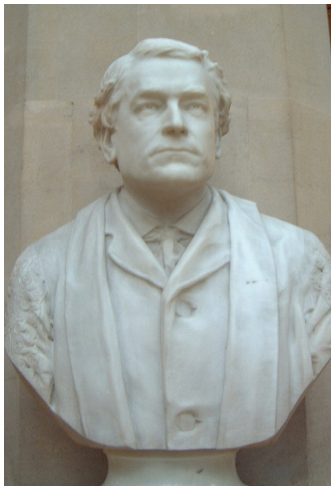


Fig 5.3 George Rolleston University Museum

Rolleston died before the institutional changes he had worked for could be established at Oxford. After his death it was decided to divide his single post into three professorships (Brock and Curthoys, 1997). In 1884 Professor Moseley was appointed Linacre Professor of Human and Comparative Anatomy, Sir John Burdon-Sanderson

became the Wayneflete Professor of Physiology and Dr Edward Tylor was appointed the Reader in Anthropology. Indirectly, the result of Rolleston's death, and his long friendship with Pitt Rivers, led to the foundation of the Pitt Rivers Museum, Edward Tylor's appointment as Keeper of the University Museum and the establishment of three Professorships in the human sciences. One of Rolleston's students at the University Museum was Edward Poulton, whose contribution to scientific knowledge will now be assessed.

Edward Bagnall Poulton 1855–1943

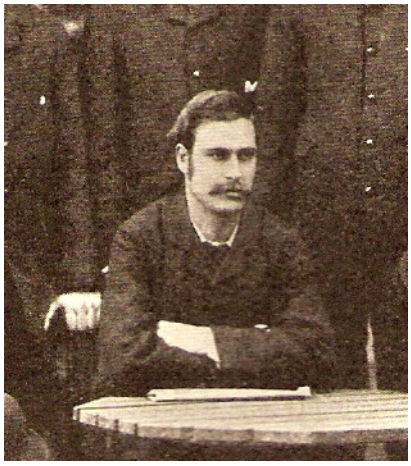


Fig 5.4 Edward Bagnall Poulton 1879 (from Poulton 1911, 175)

Poulton was a member of a growing community of scientific academics in late nineteenth century Oxford. He was a colleague and friend of Edward Tylor, George Rolleston and Henry Moseley, all of whom were connected to the University Museum. His particular connection with this research into the intellectual networks of town and gown in nineteenth century Oxford is his support of the Oxfordshire Natural History Society and of its members, Oxford citizens like Underhill, Bellamy and Druce (see Chapter 6).

Various archives indicate that Poulton was in regular contact with Rolleston and Tylor who appear to have been colleagues and friends. Tylor, for example, appears to have often dined with Poulton at Jesus College (Poulton MSS 1884–1901 University Museum) and Rolleston offered Poulton teaching opportunities at the museum and career advice (Poulton MSS Letters from Rolleston 1876–80 University Museum).

Tylor and Poulton were both members of the Ashmolean Society. In a letter (May 4, 1884, Poulton MSS, University Museum), Tylor suggested the names of various speakers to Poulton who was then President of the Society, regretting that he was 'Already too overshadowed with work to write anything for the Ashmolean' [Society].

Poulton's principal scientific interest was the theory of natural selection and he lectured on Darwinian evolution in the Hope Department of the University Museum in 1894 and 1895. As a confirmed 'evolutionist' Poulton felt that it was a mistake to emphasize too strongly the 'very natural shock received by those who read The Origin without any preparation' (Poulton 1937). This implies that, as Moore (1979) suggested, at the time many people were affected by its various implications.

In his memoirs, Poulton inevitably referred to the meeting in Oxford of the 1860 B.A.A.S. at which 'a bishop put his rude and foolish question to Huxley'. He noted that their celebrated encounter left no bitterness and, according to Poulton, Huxley wrote, 'In justice to the Bishop I am bound to say that he bore no malice, but was always courtesy itself when we occasionally met in after years. Certainly, within the next two decades evolutionary theory has been universally accepted as a matter of course' (1937, 14–15).

Poulton's breadth of interest and research was illustrated by the list of his publications. Particularly relevant to this thesis is his work on geology and archaeology at Dowker Bottom Cave in Yorkshire in 1881, which he described to the Ashmolean Society and Oxfordshire Natural History Society (Bellamy, 1908, 207; Carpenter 1944). His later interest was in the natural history of mammals and insects, and experiments with colour on insects. In September 1887 members of the B.A.A.S. had visited the Annual Conversazione of the Chester Society as part of the programme for their Liverpool meeting. It could be argued that Edward Poulton may have initiated the connections between the Oxfordshire Natural History Society and Chester Society at that time (see Chapter 6).

In 1889, Poulton lectured on 'Theories of Heredity' to the Chester Society of Natural Science, Literature and Art and spoke at the Midland Union of Natural History Societies in Oxford. The locations of these lectures are an illustration of the intellectual networks that connected members of amateur societies. In the same year Henry Underhill delivered a lecture on 'Artistic Japan' to the Annual General Meeting

of the Chester Society and G. C. Druce spoke on ‘A Journey through Spain’. These offer illustrations of the eclectic nature of subjects, before the onset of disciplinary specialisation.

In 1890 Poulton addressed the B.A.A.S. in Leeds on ‘Classification of the Colours of Animals’ in the Biology Section, explaining animal colouration in Darwinian terms and the fact that many animals possessed protective colouration proved the effectiveness of natural selection (Bowler 1992, 357). This lecture was reported by Gunther (1937, 322) as being illustrated by Henry Underhill’s lantern slides; according to their established connections through the Oxfordshire Natural History Society this is possible, but as yet no evidence supports this.

Poulton in Oxford

In April 1893, following the death of Professor Westwood, Poulton applied for the Hope Professorship of Zoology. He received support from a large number of men of science including Russel Wallace and Professor Huxley, who supported his ‘aim to use the collection for teaching and to research new questions rather that merely sort and catalogue’ and ‘the wishes of the late Professor Westwood’ (Poulton, 1911, 25).

In his application, Poulton stated that his particular research interest was that of ‘Protective and Aggressive resemblance, Warning and Signalling Characters, and Mimicry’ (Poulton, 1893, 7-8). His work on the colour of insects was already becoming known in his addresses to various intellectual societies. Henry Underhill (Chapters 6 and 7) is reputed to have illustrated some of these lectures with hand-coloured lanternslides (Gunther, 1937, 322) and there is a record of these slides having been donated to the University Museum (University Museum archives), but they have yet to be located.

Poulton proposed to arrange two new collections in the University Museum, the first to illustrate his ‘Theory of Mimicry’ using examples and evidence, the second to present the whole life history of a species, a ‘complete Natural History’ in order to further develop aspects of systematic Zoology from the current evidence (Poulton 1893, 7–8). There is a close connection here with the theories of evolution, which were already reflected in the Pitt Rivers’ collections of material culture donated to the museum in 1883. Poulton’s ambition to echo the evolutionary hypothesis maintained

by Pitt Rivers' classification of material culture offers an interesting example of the way in which theories of the evolutionary development of objects influenced the natural sciences, rather than the other way round.

Poulton's testimonial for the post of Hope Professor contained eight pages of names. Support came from both town and gown; members of the Oxfordshire Natural History Society, Underhill, Bellamy and Druce and University members, Edward Tylor, then Keeper of the University Museum, John Rhys, Professor of Celtic, and Henry Balfour, Keeper of the Pitt-Rivers Collection (Poulton, 1893, 14–22). National names included representatives from the Entomological Society, A.R. Wallace and Sir John Lubbock. Poulton was successful in his application and remained Hope Professor of Zoology until 1937.

Oxford and its Museums

From the middle of the nineteenth century, the closer connections between the scientific and archaeological communities did much to advance the idea of archaeological professionalism. In Oxford, the growth and change in focus of the University Museums helped towards the formation of professional careers by creating new positions (Chapman 1981, 1989; Van Keuren, 1984).

The initial position of Keeper of the Ashmolean Museum 'was originally bestowed upon a gentleman who supervised the cabinets of curiosity' (Ovenell, 1986, and MacGregor, 2000, provide detailed histories). Gradually, from 1860, the role of the Ashmolean Museum changed, and the University Museum in many ways emerged as its younger and more scientifically advanced descendant.

Accordingly, the role of Keeper of both the Ashmolean Museum and the University Museum became more challenging both intellectually and institutionally. The keeper became more accountable to the governing body of the museum and the University and, in the process, what had initially been an amateur gentlemanly interest was transformed into a profession (Ovenell, 1986).

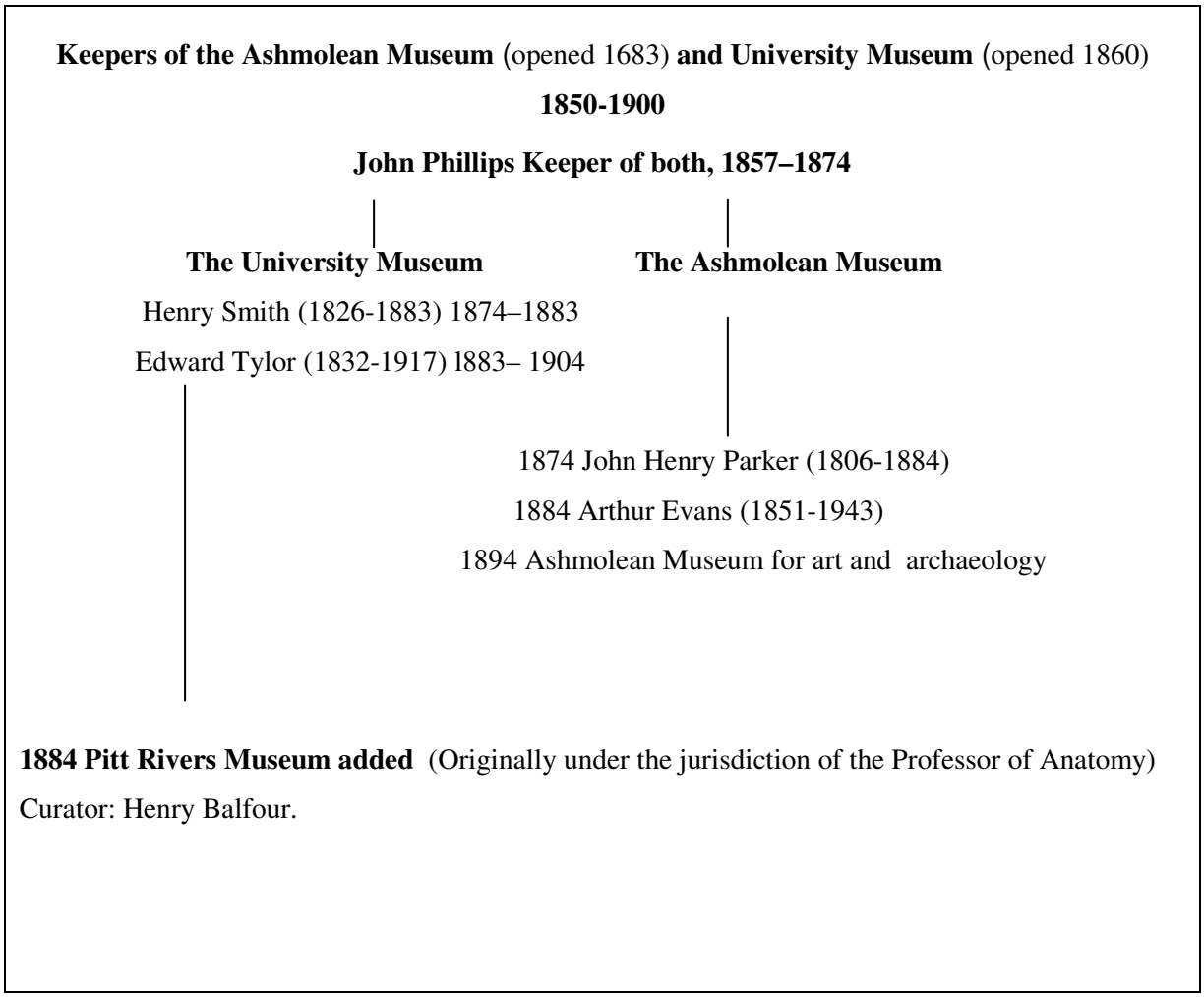


Fig 5. 5 Keepers of the University Museums, 1850-1900

Appendix 3a shows the intellectual and physical changes experienced by keepers and the museums between 1850 and 1900.

In 1883, as part of his bequest, Pitt Rivers created the position of Curator for his museum collection in Oxford (Brock and Curthoys, 1997); the post, which was offered to Tylor also entailed the position of Keeper of the University Museum (Chapman, 1981: Manuscript Collections, Pitt Rivers Museum, Tylor Papers, Box 3, Diary of Anna Tylor). Creating this position for Edward Tylor subsequently enabled Alfred Robinson, whose family were college servants at Wadham College (1881 Census) to develop his career at the University Museum as Tylor's assistant (Alfred Robinson History of the University Museum Box 1/111/3).

A further examination of the relationship between these museums and the growth of studies of prehistoric archaeology in the late nineteenth century in order to identify the

processes of professionalisation would also produce an epistemological background to the present discipline. A crucial factor for both the social and intellectual implications of the history of archaeology in Oxford is the manner in which shifts from antiquarian eclecticism to the science of archaeology occurred. The way in which archaeology was enhanced by the nineteenth century pre-professionals, support staff and amateurs from both town and gown is a vital part of this history. The two case studies that follow illustrate the contributions of two of the University support staff whose work has only been recognised in the footnotes of the history of Oxford Museums.

Museum Servants: George Rowell 1804-1892, Alfred Robinson 1863-1938

In 1894 Edward Tylor used the term 'servant,' when Keeper of the University Museum, in correspondence to the University about the role of his assistant (History of the University Museum, Box 1/i/4).). This term, though pejorative today, is both a convenient description of the role of assistant museum keepers and is a significant indication of the manner in which they were perceived.

The roles of the assistant keepers, clerks and 'other ranks' have been neglected in histories of museums and of their collections. However, these people were responsible for many important tasks, the daily administration of the museums and the handling and conservation of their displays and objects. In Oxford, their roles have received little attention in accounts of Oxford's various museums, their personnel or their collections.

The assistant keepers at both the Ashmolean Museum and the University Museum were often required to deputise in the keeper's absence. By the 1870s John Henry Parker had become an 'absentee' Keeper of the Ashmolean Museum and at the University Museum, and during his keepership from 1857 to 1870, John Phillips was preoccupied by teaching and research and as a B.A.A.S. official (Morrell, 2005, 329).

Between 1870 and 1890, in their roles as Assistant Keepers, both George Rowell and Alfred Robinson were equally involved in the daily running of both University Museums, at a time when the intellectual philosophy of each establishment and the ethos of their collections were being established. Both men were therefore responsible for the organisation of the premises and care of the exhibits and often required for the

preparation of their employers' lectures and publications (Ovenell, 1986, 231, and Alfred Robinson, History of the University Museum Box 1/ii/9).

In general, George Rowell was more involved with the Ashmolean Museum, and Alfred Robinson with the University Museum, but, as circumstances reveal, there were subsequent misunderstandings and conflicts, not only over their individual responsibilities, but also over those of their employers (see below). Both men became members of Oxford's intellectual societies that held their meetings at The Ashmolean Museum, and later at the University Museum. In 1846 George Rowell was elected as an honorary member of the Ashmolean Society (Ashmolean Society Papers 1834–1883, Dep.c.653 Bodleian Library) and, according to records, Alfred Robinson was a member of the Oxfordshire Natural History Society (Bellamy, 1908, 311)

Unpublished autobiographies

Two interesting documents written by these servants, George Rowell and Alfred Robinson, have emerged from Oxford archives. Unlike official museum histories (Ovenell, 1986; MacGregor, 2000), these primary sources reveal the personal accounts of the men who worked alongside J.H. Parker and later Evans and Tylor. The first, by George Rowell, is discussed here; the second, by Alfred Robinson, follows in the section discussing his career at the University Museum.

George Rowell's personal accounts were collected by Harry Paintin (q.v.) for the *Oxford Chronicle* in May and November 1889, for a series on local Oxford people. They begin

> *I take this opportunity of publicly expressing my gratitude to Messrs Chambers of Edinburgh for the very valuable series of publications they issued in 1843 and following years. They were of great service and help in the education of the then rising generation, which no words of mine can adequately express*
>
> (Paintin, *Oxford Chronicle*, 6 May, 1889)

Robert Chambers was responsible for the publication in 1844 of *Vestiges of the Natural History of Creation,* a book that to some extent anticipated Darwin's theories on evolution published in 1859 (Secord 2000; this thesis Chapter 2). Rowell's comments offer a valuable piece of evidence for the role of popular scientific

publications in the mid-nineteenth century, and for the interest in natural science shown by the amateur and artisan (See Allen, 1994; Secord, 1994 and Alberti (2003a). Rowell, like Underhill, Bellamy, Druce and Paintin, was an autodidact; before his tenth birthday he left school to assist his grandfather, a cabinet-maker. He followed this trade for some years, but subsequently became a paperhanger (Bailey, 2004).

His interest in natural science was stimulated by the Reverend Baden Powell (1796-1860) (see Appendices 2, 3 and 6), the Savilian Professor of Geometry, when in 1838, aged thirty, he attended Baden Powell's lecture in Oxford on 'Light.' Rowell noted that Baden Powell spoke 'on the benefits arising from mutual recreation and scientific pursuits, to persons of all ranks of society' (Paintin *Oxford Chronicle*, 6 May, 1889). Although he did not give the place of the lecture, many events like these were being organised at the Mechanics Institute (see Shapin, 1977; Sephton 2001, and Chapter 4). At the lecture Baden Powell stated that 'the observations and researches of many persons which might have led to useful results were often lost to the world, from diffidence in the individual, or the want of encouragement or advice and expressed his willingness to forward the views of any person, however humble, who was interested in scientific pursuits (Paintin, *Oxford Chronicle*, 6 May, 1889).

According to Rowell, he 'felt at the time as if personally spoken to…and determined to call upon the Reverend Professor and explain his theory and opinions on the causes of rainfall I had formed'. It was some months before Rowell 'summoned up enough courage to call' [on Baden Powell at Oriel College] but he was kindly received by the Professor and advised to 'commit his ideas to writing and submit them in that form for further consideration' (Paintin, *Oxford Chronicle*, 6 May 1889).

Eventually, Rowell completed his article and it was read by Professor John Phillips (Appendices 2, 3 and 6), at a meeting of the Ashmolean Society in 1830 and later at the B.A.A.S. in Glasgow 1840 (Paintin, *Oxford Chronicle* 6 May 1889). In 1846, Rowell was made an honorary member of the Ashmolean Society and his membership fee of five guineas donated anonymously by 'An Advocate for the Advancement of Science'. It is obvious from the minutes that Baden Powell was the benefactor (Ashmolean Society Papers, 1834–1883, Dep.c.653: 69, Bodleian Library). The following letter illustrates the impact this had on him:

From George Rowell

Alfred Street Feb 20 1846
To Professor Baden Powell,
Rev'd Sir,
From the time my first paper was read before the Ashmolean Society*, I have had a strong desire to express my gratitude for the kindness and condescension of the society in receiving communications from one in my humble station; I have made many attempts to express my thanks in a letter, but fear I cannot describe my feelings and gratitude without having the appearance of attempting to bring myself more under the notice of the society- [dash] I therefore beg the favour of your reading the enclosed as the concluding paragraph of the paper (if you see no impropriety in it). It will give a slight expression of the gratitude I feel for the kindness I have experienced.*
I remain Revd Sir your very humble servant George A. Rowell

(Source: Bodleian Library, Ashmolean Society **Papers, 1834-1883).**

This incident reflects many aspects of Victorian social and cultural life and is, in many ways, a 'Jude' episode. Fifty years later, Thomas Hardy (1896) produced his own story of the want of education and personal improvement in *Jude the Obscure*.

In 1889, Rowell himself observed that,

'Forty years since, education was in general very inferior, I had no chance for self improvement except from self-education, and even for that my resources were very limited. My books were of Nature's printing and the storm and its phenomena my field of study'.

(Paintin, *Oxford Chronicle*, 6 May, 1889)

Rowell's account illustrates the paternal interest taken by member of the gown society in a member from the town. According to Ovenell (1986, 222), 'Rowell's lack of education did not stultify his lively intellectual activity. He produced over forty-seven publications, and there was nothing he was not prepared to undertake in the field of cleaning, repair of museum objects or emptying the privy'.

George Rowell and the Ashmolean Museum

Rowell had begun his career at the Ashmolean Museum in 1823, originally employed as a handyman (Ovenell, 1986, 203). His subsequent move to 'under keeper' suggests that he advanced to more intellectual tasks, such as compiling catalogues and 'repairing' objects. Like Alfred Robinson's later role at the Pitt Rivers Museum, Rowell assisted Parker in the preparation of his lecture to the Historical society in 1870 (Ovenell, 1986, 249 and see below).

Problems of communication

A series of unfortunate events that occurred during Rowell and Parker's administration during the 1870s provide poignant examples of the manner in which an 'outsider' or individual from the non-'gentlemanly' classes was exploited.

In 1857 John Phillips was appointed as Keeper of the new University Museum and in February 1861 appointed Rowell to be Assistant Keeper with particular responsibility for the zoological specimens, on a salary of £90 per annum (Morrell, 2005, 320). In June 1861, Phillips produced a plan of his proposals for arranging the ground floor of the University Museum (Morrell, 2005, 320). Phillips' double capacity as Keeper at both the Ashmolean Museum and the University Museum was defined in the University statutes, (Brock, 1997, 606). This suggests that as Phillips' Assistant, Rowell was also fulfilling a dual role as Assistant Keeper at the Ashmolean Museum where it appears that he was given very much a free hand (Morrell, 2005, 308-9).

In 1870, Rowell compiled a list of archaeological and ethnological donations to the museum from 1836, which J.H. Parker, who as Keeper of the Ashmolean Museum (Appendix 6) presented at a meeting of the Oxford Architectural and Historical Society, on 2 November 1870 (Parker, 1870). Parker was frequently absent, spending time in Rome, owing to his health, and to complete his photographic catalogue of Roman Architecture (Harlan, unpublished, 2003). Even after his appointment as Keeper of the Ashmolean Museum in 1870, he continued to spend the winters in Rome, and his museum administration was executed by correspondence to George Rowell. In October 1870, he wrote from Hawarden Castle, Gladstone's estate in Cheshire, informing him that he wished to give a lecture on the history and prospects

of the Museum, and that Rowell was to prepare this history (Ovenell, 1986, 231). Gladstone had known Parker in Oxford when he had visited his bookshops while an undergraduate at Christ Church (Riddell, 2004).

If Ovenell's account is correct, though it is difficult to verify, as he gives no references, it could suggest that much of Parker's talk was, in fact, the work of Rowell. If this is the case, then it is possible that Rowell was able to insert his own opinions and impressions. Parker's work at the Ashmolean Museum was probably later particularly influential upon his successor, Arthur Evans (Ovenell, 1986, 249) and this might suggest that Rowell, the Assistant Keeper or 'museum servant,' was more influential in the future of the Ashmolean Museum than has The Originally been assumed.

In 1878, a controversy that caused deep and mutual misunderstandings arose over the museum catalogues that Rowell had prepared for Parker. These had been proof read by Franks and Lubbock (Bodleian Library G.A.Oxon 8 221, 7) but Parker, as a professional printer was obliged to point out to Rowell, a self-taught man, the differences between a manuscript and a printed catalogue.

There were also disagreements also about the entries in the catalogue. Rowell stated that in his opinion 'separating [implements] from the articles connected with them, and the accounts of their discovery in the Standlake British village takes away much of the interest which attaches to them' (Ashmolean Correspondence, Bodleian Library, G.A.Oxon 8to 414). Today this contextualing approach is a vital part of archaeology.

Rowell objected also to 'crowding the catalogue with minute measurements of unimportant articles, which cannot be needed' and stressed the importance of identifying objects correctly to prevent confusion if they were removed from display. It was quite common at that time for Keepers to remove objects to illustrate their talks to intellectual societies (see Parker and the Oxford Architectural and Historical Society, Chapter 6). Rowell's solution was to sketch a collection of flints *in situ* thus avoided their subsequent wrong labelling. This is an interesting method of recording objects before the later use of photography in museums (Alfred Robinson MSS University Museum).

By May 1879 the disagreement between Parker and Rowell was resolved and Parker issued a statement pointing out the care needed in producing a published work and

that Rowell had acknowledged that he was not competent to do this (Ovenell, 1986, 233). Although as a result of this disagreement, Rowell resigned his position as museum assistant his problems with administration were not over.

In 1881 it was alleged in the press that Rowell had stored various objects from the Ashmolean Museum foundation collection 'in an outhouse at the edge of museum property'. The 'outhouse' was part of the original Ashmolean Museum construction covered by the stone steps that lead up to the door' (G.A.8to 221 5, Bodleian Library). This door, facing the Sheldonian building is no longer used (Berry, 2004, 183, and Ovenell, 1986). In response to this charge of 'neglect of duty,' a lengthy correspondence between Rowell and Parker ensued with the local and national press followed the events.

The fundamental problem was that Rowell was overworked and had overlooked this storeroom and it was subsequently opened by his successor Evans ((no relation to John or Arthur Evans) after his resignation. Evans mentioned this discovery to Professor Sayce, who wrote an article for an Oxford-base periodical, the *Academy* (Nov 20, 1881), where he intimated that the outhouse in question was 'easily accessible to passers-by in the street' (G.A.Oxon 8to 414, 3). In fact these items had been overlooked by at least three successive keepers, the Duncans, Phillips and Parker, and also by Rowell who had been fully occupied with museum duties.

In a letter to the *Oxford Times* Edward Evans, the assistant keeper gave more detail. He stated he 'accidentally' made the discoveries in an outhouse and listed about 50 objects altogether, which appeared to have remained unnoticed during the former curators' tenures, the two Mr Duncans and Professor Phillips. Among these were assorted cornelian and crystal necklaces, 5 bracelets, two silver boxes a hookah, possibly from the original Tradescant collection and the Burchell collection given in 1865 (G.A.Oxon 8 221 6, Bodleian Library).

In his defence, Rowell stated that 'not one of Parker's three predecessors took any interest in archaeology. The two Mr Duncan's were gentlemen of property living at Bath and thought it a great compliment from the University to be named as Keeper. They came to Oxford once a year to see that it was 'all right' leaving the entire management to their assistants, first Kirtland, then Rowell, who employed Evans (Bodleian Library, G.A.Oxon 8to 414). According to Parker however Rowell had sole charge of everything, but it was evident that his heart was in the Natural Science

department (Bodleian Library, G.A.8to 221 5). This statement was slightly unfair as Rowell was, like many assistants, overstretched and socially vulnerable.

Alfred Robinson (1863–1938) and the University Museum

Fig 5.6 The staff of Museum Assistants, 1884, (from Gunther, 1937, 324) Alfred Robinson 3rd from left bottom row

By 1879 George Rowell was working at the University Museum on a collection of 'bird skins and other zoological material'. He shared a room with Alfred Robinson who was appointed in January 1879 by Professor Henry J.S.Smith (1826–1883) to be Assistant Keeper at the University Museum (Alfred Robinson, History of the University Museum Box 1/iii/3). Like his senior colleague Rowell, the Assistant Keeper with whom he worked for about 12 years, Robinson performed a variety of important duties that supported the infrastructure of the University Museums. From the accounts of their responsibilities, written by both Robinson and Rowell, it seems that their employment covered duties at the Ashmolean Museum, in Broad Street, and at the University Museum in Parks Road (see Appendix 1). They may also have

become friends; following Robinson's death in 1938 he bequeathed a portrait of George Rowell to the Museum for the History of Science (Gunther, 1938, 508).

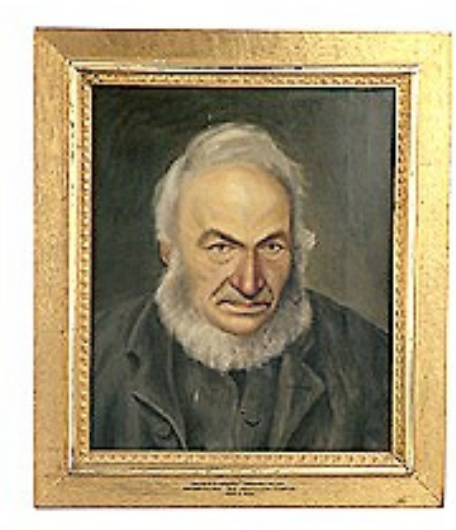


Fig 5.7 Portrait of George Rowell bequeathed to the Museum of the History of Science by Alfred Robinson, 1938

Robinson was responsible for the care and preparation of many of the collections in the University Museum and Pitt Rivers Museum (Alfred Robinson, History of the University Museum Box 1/iii/3). From 1884 he was also employed as a photographer and administrative assistant to Edward Tylor. He prepared many of the illustrations and lanternslides for lectures given by University Professors including Arthur Evans, Edward Tylor and E.B.Poulton (see below). Robinson's work has received little recognition in official histories of Oxford museums and it is only possible to trace his contributions by close examination of various academic publications.

Fig 5.8 Illustration for Two British Columbian House-Posts From Tylor (1899, 136-137)

It is possible that the above illustration may have been by Robinson as he illustrated many publications by Professor Tylor for the *Journal of the Anthropological Institute' (*Alfred Robinson MSS University Museum). He also contributed to H.Ling Roth's '*AbThe Origines of Tasmania'* and '*The Natives of Sarawak and British North Borneo'* (London, 1896). Plans of the University Museum and photographs in publications which illustrate collections, occasionally display his name. He was also the creator of the large wall charts used by Tylor to illustrate his lectures (Penniman 1954, 12–13). Like his contemporary, Underhill, he was an accomplished artist, photographer and designer (see ornamental frontispiece below).

Fig 5.9 Alfred Robinson's design for The Hope Reports (Note bottom left *A. R. delit.*) Given to the author by University Museum archivist.

In his account, Robinson wrote

> *I have had 25 years of practical experience in Museum work during the whole of which time I have been engaged as an Assistant in the University Museum. Since the receipt at the Museum in 1885 of the Pitt Rivers Anthropological Collection I have gained much valuable knowledge of cleaning and repairing and restoring of ethnological archaeological and other specimens, pottery, musical instruments, dresses, fabrics, jewellery, models of ships and boats etc*
>
> (University Museum Archives Box 1/iii/3)

It appears that it was also his duty to write many of the long descriptive labels setting forth the histories and meanings of the various series under the direction of Professor H.N. Moseley FRS and Mr H. Balfour, the Pitt Rivers Museum Curator.

It is valuable here to quote his description of his duties as Museum photographer:

> *[From 1884] the need of a photographer in the Museum was much felt, and henceforward photography has formed a large part of my work, and I have had almost unique experience of the photography of scientific objects in all departments, under the advice and suggestion of the Professors of Anthropology, Medicine, Anatomy, physiology, Physics, Geology, Mineralogy, and Zoology, either for the illustration of monographs and papers, for exhibitions with the specimens in the museum, or as lantern slides for lecture purposes. I have made a very long series of lantern slides illuminating mimicry and mimetic resemblances in insects which have been used by Professor Poulton in this country, on the Continent and in America. A large photograph by me of one of these subjects was included in the exhibit of the University of Oxford at the recent Paris International Exhibition. I have at various times gained two silver medals and two certificates of merit for scientific photographs (lantern slides) in competitions open to the world. I have also had some success in colour photography, some of my work being chosen by Sir Wm Herschel to illustrate his Presidential Address to the Photographic Convention of the United Kingdom held this year [1901] in Oxford.*
>
> *My work in the Museum also includes the making of large drawings in black and white and in colour and drawings in book illustrations. I designed the ornamental frontispieces to the 'Hope Reports' issued from the Museum by Professor Poulton and am also called upon to get out sketches for new cases and fittings as may be required. Again I have to prepare plans to scale of buildings etc for the use of Delegates of the*

Museum, the Hebdomadal Council, and Convocation, some of which have been published in the 'University Gazette

(University Museum Archives Box 1/iii/3).

Various primary sources confirm Robinson's account; Gunther noted that in 1916 Robinson photographed all the oldest zoological specimens of the Tradescant Collection existing in Oxford (Gunther 1937, 505). In 1953, during celebrations of the five-hundredth meeting of the Oxford University Anthropological Society, Penniman (1953) gave an account of anthropology in 1884 when Tylor used large wall pictures, drawn by Alfred Robinson, for his lectures on Assyrian winged figures (see below).

Fig 5.10 Alfred Robinson; Winged Figure, Pitt Rivers Museum Archives (1944.1.27, size 1.5m. x 0 .5m)

Robinson was also responsible for general museum administration under the direction of the Keeper 'receiving and paying monies and wages, keeping accounts, correspondence and duties of a secretarial character'. These account books are now in the University Museum Archives (Box 1 /ii/9).

Robinson also made large coloured charts for other academics who taught in the natural sciences and archaeology. He particularly mentioned his work for the Ashmolean Museum, executed for Arthur Evans. In his 'job description' Alfred Robinson stated 'Beyond my work in the [University] Museum I have made coloured drawings both in natural science and in archaeology, specimens of my work in the latter may be seen in the Ashmolean Museum, executed for Mr A.J. Evans, F.R.S., the

Keeper of that institution' (University Museum Archives Box 1/iii/3). About fifty of these large drawings still exist in the Pitt Rivers Museum archives[4].

Fig 5.11 Wall chart of Stonehenge 2m x 0.5m (approx); Alfred Robinson, Pitt Rivers Museum Archives

Edward Tylor had been appointed overall keeper of the University Museum in 1883 as part of the agreement made by General Pitt Rivers to donate his collection to the University (Oxford Gazette, xiii 13 March, 1883). Many of the objects in the University Museum were technically regarded as belonging to branches of biology, though the boundaries between biology, anatomy and human prehistory at that time were still fluid (see Ovenell, 1986, Chapter 16 and Evans 1884, for the organisation of various collections). The problems encountered by Tylor, who was an anthropologist, not a biologist or historian, were many, trying to unite the varied collections from biology to material technology and organise the academic staff who were teaching their subjects at the museum.

In 1894, a debate arose at the University Museum over the role and duties of Alfred Robinson. E. Ray Lankester (1847–1929), professor of comparative anatomy at the University Museum objected to Tylor using a room in the Museum and of appropriating the services of Robinson as his own secretary and artist. He had 'seized without any authority and applied to purposes remote from the collections by the Keeper'. In reply to Lankester's criticisms Tylor stated that Robinson was paid by the Keeper in Office to do his work and in his own words, Robinson was his own 'museum servant' ((Letter to Delegates, E.R.Lankester, Feb 7th 1894; letter to Vice-Chancellor and Delegates, E.B.Tylor, Feb 26th 1894, History of the University

[4] Because of extensive building work at the Pitt Rivers Museum, their present whereabouts and catalogue references are uncertain.

Museum, Box 1/i/4).

The task of Keeper was evidently proving difficult for Tylor, for by November 1885 he wrote to Poulton, explaining that he would be unable to give a talk to the Ashmolean Society, owing to increasing pressure of work (Poulton Archives University Museum). Apart from this indication of the difficulties of management and administration, the incident concerning the role of the 'museum servants' suggests that, like Figaro, they played a full part in the responsibilities and duties of their masters (Alfred Robinson, History of the University Museum Box 1/ii/9, and Rowell, above). In fact, they were often left to run the museums through correspondence with the Keepers during their long absences. Morrell (2005, 309) notes the duties carried out by Rowell for Parker and Tylor's absence is recorded in Anna Tylor's Diary (Manuscript Collections, Pitt Rivers Museum, Tylor Papers, Box 3, Diary of Anna Tylor).

Robinson's account was written no later than 1904, when he was 42 and had worked at the Museum for 25 years. Around this time Tylor resigned from his post as Keeper (Manuscript Collections, Pitt Rivers Museum, Tylor Papers, Box 3, Diary of Anna Tylor), and it may be that the work of employees was being re-organised. If that is the case, this manuscript may be part of a job application.

The contribution made by Robinson and Rowell to the growth and dissemination of knowledge at the University's Museums should not be overlooked. The personal accounts of their intellectual and occupational experiences indicate both the quality and quantity of their work and responsibilities. They illustrate the way that unpublished sources form a valuable archive that can complement the more formal accounts of the growth of academic institutions in nineteenth century Oxford. Assistant Keepers were part of the non-University network of tradesmen, clerks and artisans; petit bourgeoisie, such as Underhill, Bellamy and Taunt who were intimately involved in the intellectual life of the University.

In this study of the intellectual interactions between town and gown and amateurs and professionals, the social backgrounds of the founder of the Oxfordshire Natural History Society, Claridge Druce, and of its 'chronicler', Frank Bellamy are significant. They illustrate the manner in which, in the late nineteenth century, there was some fluidity in the boundaries between the sharing of scientific knowledge of amateurs and professionals.

Frank Bellamy 1864-1936

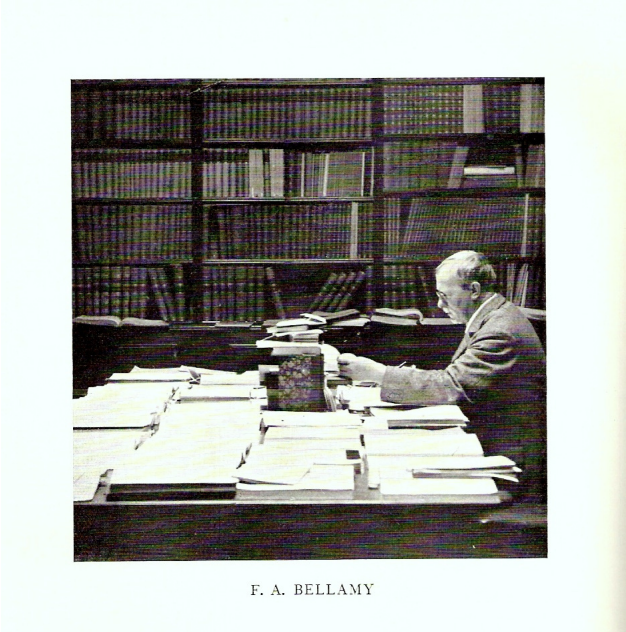


Fig 5.12 Frank Bellamy at work from Gunther, 1937 (facing page 323).

So far this chapter has examined the roles of those who were directly involved with the development of new scientific information about the past, either in an academic capacity or as administrative assistants. Frank Bellamy was also an employee of the University, based at the Radcliffe Observatory for over 46 years (*The Times*, 17 February, 1936). In this study of the intellectual interactions between town and gown and amateurs and professionals, the social backgrounds of the founder of the ONHS George Claridge Druce, and of its 'chronicler', Frank Bellamy illustrate the contemporary fluidity in the boundaries between the sharing of scientific knowledge of amateurs and particular professionals.

To some extent Bellamy, like George Rowell and Alfred Robinson, was a Janus figure, able to observe the academic and political events of the University from both inside and out. Bellamy's role in the growth of scientific knowledge in nineteenth century Oxford was inextricably involved with the ONHS, which is discussed in Chapter 6. This section focuses on Bellamy the man.

Bellamy was born in Oxford in 1863, the youngest of six children. His father Montague Bellamy was a college butler and master bookbinder and Bellamy attended Magdalen College School. Like his contemporaries, Henry Underhill and George

Druce, Bellamy had an antiquarian breadth of interests; he was an astronomer, philatelist and photographer.

Bellamy's wide interests enabled him, like other contemporaries from the ONHS to move within a wide circle of like-minded people from town and gown, amateur and academic backgrounds. On one hand, he was 'meticulous, dedicated and generous to enquirers, on the other obsessive and curmudgeonly' (personal communication. A.J. Simcock, 2003). In 1904, he was awarded an Hon. M.A. for his services to the University Observatory and his botanical studies and publications (*The Times* 3 June, 1904).

In 1889, Bellamy founded the Oxford Photographic Society and organized a collection of glass plate negatives on local history, archaeology and geology which he later donated to Oxford City Library (Hutchins, 2004). In 1892, he resigned from the society 'on a matter of principle' (ibid) and refused to join its successor, the Oxford Camera Club, members of which included Henry Underhill, E.B.Poulton and others from the ONHS.

Frank Bellamy had collected stamps, from the age of five. His first collection was a gift from the Librarian of the Bodleian Bulkeley Bandinel (1781–1861). Bellamy eventually accumulated over 200,000 items of stamps and material relating to the postal history of the world and a unique collection of Oxford and Cambridge college messenger stamps issued by some of the Oxford colleges between 1871–1886.

This collection would probably today have been of great historic interest and in 1915 he attempted to bequeath his collection to the University. The offer was rejected by the Bodleian Librarians, Cowley and Hogarth 'as it was not considered to have any textual value' (R.T.Gunther letter to *The Times* June 1926: personal communication, A.J. Simcock, Archivist, Museum of the History of Science, 2004,).

After many years of discussion, in 1926 the University Hebdomadal Council finally rejected the offer (Gunther, 1937, 323). In a letter to *The Times.* (22 February 1936) Bellamy expressed his disappointment at the procrastination and the outcome of the decision. After his death, John Johnson (1882–1956), an amateur collector, purchased most of the Bellamy Collection and it is now preserved at the Bodleian Library, (The John Johnson Collection Exhibition, Bodleian Library 1971).

Bellamy never married and throughout his life he supported his two nieces, one of whom, Ethel, worked as his assistant and cataloguer, and was herself awarded an

honorary M.A. in 1934 for services to astronomy. His Philately Collection never benefited the nieces, he subsequently offered it to Queen's College Cambridge but they, like Oxford turned it down. After his death, despite an insurance policy for £500 his estate was declared insolvent and Oxford University made a bequest of £100 to Ethel.

Bellamy's magnum opus was *A Historical Account of The Ashmolean Natural History Society of Oxfordshire, 1880–1905*, which he had privately published (see Chapter 6). It was dedicated to his 'friend in the field and herbarium, George Claridge Druce' (Bellamy 1908, Frontispiece) with whom he worked as friend and colleague in Oxford until their deaths in the 1930s.

George Claridge Druce 1850–1932

Although not specifically involved with the growth of studies of British prehistory, Druce was part of the multi-disciplinary element of field studies in late nineteenth century Oxford and was the motivating force behind the ONHS. He took a keen interest in natural history, specializing in the study of plant species (Marner, 2002, 3). His role on field trips was to identify plant specimens, while Underhill discussed the archaeology (Bellamy, 1908).

From his youth as the son of an unmarried domestic servant, Druce began to collect specimens and write about local flora. He took a principal role in the founding of Northamptonshire Natural History Society in 1876. In June 1879 he left Northampton and invested his savings of about £400 in a chemist's shop at 118 High Street in Oxford where he began to investigate the county's flora.

In Oxford he began to take part in activities similar to those he followed in Northampton. In 1880, he helped to found the Oxfordshire Natural History Society of Oxfordshire (Bellamy, 1908, 4) and was treasurer until his death. In 1887, he passed on his role as secretary to Underhill who retained this role until he became President from 1893–1894 (Chapter 7).

In 1886, Druce published the *Flora of Oxfordshire*, which established him firmly in the botanical community (Marner, 2002, 4) and in 1895 recognition came in his appointment as Fielding Curator in the Department of Botany. This appointment gave

him official access to the University and herbarium and in 1889 he was awarded the degree of honorary MA, and then full MA by decree in 1919.

Druce, like his colleagues Underhill and Bellamy, never married; he lived with his mother until her death. He ran a successful business and from 1892 became an Oxford City Councillor and Magistrate. As an Oxford citizen, he took an interest in the welfare of the City and was Chairman of the Public Health Committee for thirty years; he became Sheriff in 1897 and Mayor in 1900 (Marner, 2002,7).

Fig 5.13 Alderman Druce, in office, Council Chamber, Oxford Town Hall

Druce's office of Mayor coincided with the amalgamation of the Ashmolean Society with the Oxfordshire Natural History Society in 1901.It is probable that he was in full support of the move for personal as well as society reasons (see Chapter 6). From 1903 until his death Druce was Secretary to the British Botanical Exchange Club, which exchanged specimens collected in Great Britain. He travelled extensively and accompanied the B.A.A.S. expedition to Australia, and made independent visits to Mediterranean lands and South America, noting and collecting plants whenever and wherever possible. In 1924 Druce achieved an Oxford D.Sc. by examination and was elected Fellow of the Royal Society in 1927. He died at Oxford on 29 February 1932 and was buried in Holywell Cemetery (Appendix 1). He left his library and herbarium to the University Department of Botany, together with the residue of his estate as an endowment. His ambition to make money and a name for himself certainly succeeded. Unlike many others in this thesis, Druce started from humble beginnings, but died a rich and well respected man. He left a considerable fortune, and although his name is

recognised in the literature of British botany it is less so in the intellectual growth of scientific knowledge in nineteenth century Oxford.

Harry Paintin (1860–1930)

Harry Paintin was born in Burford and spent his adult life in Oxford as a journalist, amateur historian and archaeologist. He has become one more member of 'the anonymous' in the field of British archaeology and local history. As a journalist, he contributed regular articles about local events and places of historic or archaeological interest for the Oxford Times. In 1895 he was elected as a member of the Oxford Architectural and Historical Society and contributed accounts of their visits (for example, *Oxford Times* 8 June, 1898, Oxford Architectural and Historical Society Excursion to Cambridge).

Paintin's articles covered the lives of local Oxford worthies who had contributed to the social and cultural life of the city, for example, the Underhill family, the Coopers makers of 'Oxford Marmalade' and James Parker, the bookseller. In 1912, he researched a feature for the *Oxford Journal Illustrated* on 'the Underhills of Oxford and in 1920 he wrote Henry Underhill's obituary for the *Oxford Chronicle* (Friday 8 October, p.5)

Paintin's application for an Honorary M.A.

On October 26 1920, with letters of support from various academics, Harry Paintin applied for an honorary M.A., but his application 'was unsuccessful.' He supported his qualification for the application by the fact that he had 'written obituary notices for many of Oxford's prominent citizens' and had taken over the publications at Alden and Co, the local Oxford printers (Paintin Papers GA Oxon a 22 Bodleian Library) It is possible that he was encouraged and supported in this by Falconer Madan (1851–1935), Librarian of the Bodleian Library as when notified that his application had been refused, he sent a copy of the reply to Madan with a covering letter. The contents of his application are presented below.

The letter contained an account of his intellectual activities, his early education at Burford Grammar School and of his move to in Oxford in 1876. In Oxford Paintin stated that he was 'immediately struck by the beauty of the buildings', and in 1879, wrote a letter to the *Oxford Times* about some fine panelling that had been discovered during building alterations. In response, a local architect sent him a book on Gothic Architecture written by J. H. Parker (see above and Chapter 6).

This demonstration of interest is similar to the encouragement received by George Rowell in 1846 (this chapter). It may have prompted Paintin to continue his research in local history and archaeology and many of his articles were printed in the *Oxford Times*, the *Oxford Chronicle* and published as individual booklets. These included booklets about University Colleges; Merton, Magdalen, Wadham, All Souls, Queen's, University, Lincoln and New College.

His letter of application to the University listed these works and his studies of Burford, Oxford Castle and many Oxfordshire churches. He also included his research into such Oxford families as the Parkers, John and his son James, and the Underhills (Paintin 1911). He also reviewed books on archaeology, theology, history and biology including Butler's social history of Oxford (1912) for the local press (see Chapter 4).

In addition to his literary activities, Paintin described his contribution to 'the war effort' during the Great War. For three years he conducted wounded soldiers, – 'mostly colonials'– over the colleges of Oxford on Sunday afternoons. Many of these men were cared for in the University Schools building, which had been requisitioned as a hospital. On Thursdays, using a government lorry, he was able to take 'the shell-shocked men' to local villages (*Oxford Chronicle*, 10 August, 1917).

Paintin, like Underhill, was a keen lecturer to local societies in Oxford and the surrounding villages. The lectures on 'Cathedrals of England', 'The History of Oxford', and 'Cromwell' for Church Guilds, Literary Institutes, and Mutual Improvement Societies were, according to Paintin 'unaccompanied by any pecuniary remuneration'. He had been supported in this work by the authorities of the Bodleian Library', where he was recommended as a member during the 1880s (Paintin Papers, GA Oxon a 22 Bodleian Library).

His appeal to be granted an honorary M.A. by the University was rejected; possibly because he did not have enough influential friends at court. It is also likely that by the 1920s his work was not considered to be of a high enough intellectual calibre and was

neither academic, nor professional. Although his books were published widely in Oxford they may have been considered too parochial, too popular, and too antiquarian by the academic council of the University.

In 1922, following the death of Henry Taunt, Paintin discovered that his collection of photographic plates and negatives was being dispersed and many had been 'deposited' on Port Meadow. He took immediate action to save them and they are now a valuable national on-line archive with copies at the Centre for Oxfordshire and English Heritage Studies (Oxfordshire Photographic Archive, Centre for Oxfordshire Studies: The Henry W. Taunt Collection, English heritage)

The oldest undergraduate

In 1923, Harry Paintin became 'the oldest undergraduate at Oxford' (Paintin 1923b, 920 PAIN, Centre for Oxfordshire Studies), when he was finally accepted to study as a non-collegiate student[5], for which he had to pay a fee of £12.10s (Paintin, 1923a, 920 PAIN, Centre for Oxfordshire Studies). During his time as a student he frequently wore his scholar's gown in town and 'became something of a notability on this account.' According to his obituary, the strain of working on his thesis was apparently too heavy, and at sixty-six he reluctantly abandoned this degree course (*Oxford Times*, 7 February, 1930, p7).

An appreciation of the work of Harry Paintin appeared in the same edition. The description it gave of an amateur historian could equally apply to Henry Underhill and Frank Bellamy; 'the limelight of a wide popularity seldom falls on the antiquary. He rarely seeks and rarely receives popular applause.' The writer concluded by comparing him to another Oxford antiquarian, Anthony à Wood (*Oxford Times*, 7 February, 1930, p8)

Between 1890 and 1930, Paintin wrote over 300 articles on the architecture, topography and archaeology of Oxfordshire. He compiled commercial guidebooks on Oxford and wrote more detailed accounts of local architecture, in particular, one for the visit of the British Archaeological Association to Oxford in 1890 (*Oxford Times*, 7 February, 1930, p8)

In his will, drawn up in 1929 he described himself as 'an Oxford Gentleman' (see Chapter 3). When he died in 1930 he left the bulk of his estate to his widow but also

[5] Non-Collegiate; not attached to a college, but a member of the University

made various bequests including one to Burford Grammar School of books and papers, as well as an ‘Annual Harry Paintin Prize’ (Papers of Harry Paintin GA. Oxon. a 22 Miscellaneous Papers, Bodleian Library). Recent enquiries to the school about these bequests, indicate that both the library and the Annual Prize have been forgotten and his books have been dispersed.

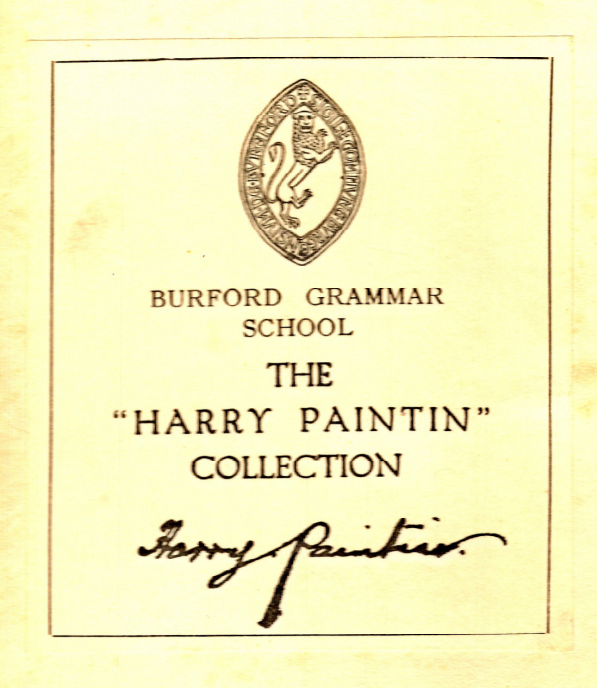


Fig 5.14 Bookplate: The “Harry Paintin” Collection (book purchased in Oxford 2005)

Conclusions

The case studies of these individuals who contributed to the history of ideas in nineteenth century Oxford show that they all shared a common interest in the discovery and dissemination of new scientific ideas. Those whose circumstances enabled them to benefit within the University network, like Rolleston and Poulton, demonstrated a wish to improve the lives of those who were outside it; Rolleston through his support of new academic initiatives and of improving social conditions in Oxford in the 1850s and Poulton by his encouragement of the Oxfordshire Natural History Society. The ‘museum servants’ George Rowell and Alfred Robinson also

demonstrated their awareness of the development of new intellectual and scientific ideas through their often-unacknowledged support of the museum keepers, Phillips, Parker and Tylor.

Druce and Bellamy, the founder and chronicler of the ONHS respectively and of its descendant the Ashmolean Natural History Society also contributed to the present disciplines of plant sciences and astronomy. Finally, Paintin, who collected information and wrote about the overlooked buildings, artefacts and people in Oxford and, as indicated wrote Henry Underhill's obituary in 1920, whose case study will be presented in Chapter 7. Before that, Chapter 6 examines four Oxford societies where the individuals in these case studies contributed to nineteenth century science and within it, the growing knowledge about the British past.

Chapter 6 Oxford: the Intellectual Societies

It is a very sad thing that nowadays there is so little useless information.

Oscar Wilde *(1854 - 1900)*

The growth of Local Scientific Societies

This chapter examines the composition and membership of four scientific societies founded in Oxford during the nineteenth century. It evaluates the intellectual networks of the societies and the degree to which various members played a part in the dissemination of knowledge to people in both 'town and gown'.

The four major scientific societies to be considered are The Ashmolean Society, A.S. (1828), The Oxford Architectural and Historical Society, OAHS (1839), Oxford University Junior Scientific Club, JSC (1882), and The Oxfordshire Natural History Society and Field Club, ONHS (1870 and 1887). The organisation of these societies provides valuable evidence of the social, cultural and intellectual positions of their members and of their relational networks.

Many prominent Oxford individuals (see below and Chapter 5) were members of more than one society (for example Parker, Evans, Tylor and Poulton). Their complex influence on these societies at the time of the growth and development of the University museums during the latter half of the nineteenth century has been largely overlooked in recent histories (for example, Brock and Curthoys, 1997, 2000; Ovenell, 1986).

Of these four societies, three were strictly University based, and, with certain exceptions, where personal merit or privilege was a factor, were composed entirely of University graduate or undergraduate members. They functioned around the University year and meetings were organised around Michaelmas, Hilary and Trinity Terms. For example Professor Rolleston spoke on Excavations at Frilford on '2nd Meeting Michaelmas Term' (Rolleston, 1867, 64-65).

The JSC was the only undergraduate society. Its formation and growth provides evidence for the gradual professionalisation of the sciences in contrast to the eclectic interests of more traditional societies (see ONHS below). In the 1890s the JSC was 'courted' by both the AS and the ONHS as a possible candidate for amalgamation

when these two societies were experiencing difficulties. This aspect will be discussed below.

The ONHS, although a 'town and gown' society, followed the model of the University societies and of the B.A.A.S. (see Chapters 2 and 4). Many of the ONHS officers were academics and because of their involvement, City members were able to become socially and culturally part of the University (see previous chapter and Chapter 7).

In order to contextualise the position of nineteenth century scientific societies in Oxford, the following section examines the general trends in the dissemination of knowledge at that time. It focuses particularly on discoveries in British prehistory, and the individuals who shared this knowledge.

In the late nineteenth century, members of national intellectual societies played an important role in the development of British prehistory. By the 1860s, well-established organisations for Anthropology and Ethnology, which then included the study of Prehistory (Chapman, 1989) had been founded with their own protocol and traditions of membership. London–based societies such as the British Archaeological Association, (Way, 1851, 1) and the Royal Archaeological Institute, (Wetherall, 1994) had a wide network of members. Chapman (1989), and Stocking (1987, 246–254), have examined their foundation and the internecine struggles for power (Stocking, 1971), whereas Barton (1998; 2003), analysed the networks of social relationships of prominent scientists in the exclusive London-based X-Club, founded in 1864 by 'Huxley Lubbock and a few others' that enabled these societies to flourish (Barton, 1998, 410).

An equally important factor in the growth of knowledge about the ancient British past was the rise of local county or civic societies which usually modelled their organisation and intellectual composition on leading national societies (see Chapter 2 for B.A.A.S.). In 1976 Piggott indicated the absence of research, into these organisations and their publications. He noted that apart from Haverfield's belief (1924, 81), that there was a strong connection between nineteenth century religious movements for social reform and the growth of new intellectual societies, the social and intellectual implications of this form of knowledge had been neglected (Piggott, 1976, 171–172).

Piggott's observations were based upon the early archaeological county societies which had been initiated by a very select group within the social structure of rural Anglican Victorian England, (see Levine 1986, below). These archaeological societies had resulted partly as a pact between geology and theology. (see Chapter 2)and were supported by Anglican clergymen, whose social networks were created at Oxbridge and within The Church (Armstrong, 2000).

In 1986, Levine considered the intellectual growth of antiquarian societies between the 1830s and 1880s. Her results showed the gradual demise of these early pioneers, as, towards the end of the century, the role of the professional began to permeate academic societies and institutions.

Levine's unique study (1986) of amateur intellectual societies has received no further attention in recent histories of archaeology. However, the research for this thesis shows that social and cultural networks that existed at local level in the propagation of knowledge were just as influential as those at national societies and to a certain extent, both the national and county intellectual networks were composed of the same individuals. A small, but influential city like nineteenth century Oxford also had its intellectual aristocracy (see Appendix 6).

The 'growing taste for science' (Levine, 1986, 172) during the 1860s had encouraged the emergence of new local scientific or learned societies that differed both intellectually and socially from the late eighteenth century 'Literary and Philosophical Societies' (Lit and Phil), already in existence. According to Alberti (2003a, 345), between 1781 and 1830 twenty-two 'Lit and Phil' societies, mainly in the North, York, Leeds, Halifax, Sheffield and Bradford had been founded by prominent industrialists. Members came from the middle and upper classes and were interested in broad intellectual topics within the social element of a 'gentlemen's club'. Later in the century these societies continued to attract some of the most famous scientific speakers of Victorian Britain; the names of Thomas Huxley, William Boyd Dawkins, E.Ray Lankester, George Rolleston, and Alfred Russell Wallace frequently appeared in their programmes (Alberti 2003a).

It is evident that many of these social and intellectual networks had been established at London-based scientific societies or formed through personal connections as the letters between William Greenwell and John Evans (Oxford University, Ashmolean Museum, Department of Antiquities, papers of John Evans) and Tylor's Correspondence (Manuscript Collections, Pitt Rivers Museum, Tylor Papers) indicate.

In her research Levine (1986) focused particularly on county societies where membership consisted of country gentlemen and those from the learned professions. This distinctly upper middle class milieu constituted powerful networks from 'the clerisy' (Coleridge, 1852). Armstrong (2000) identified the case of the 'Parson naturalist'; Oxbridge individuals who had the education, the means, and the leisure to pursue their own particular interest, in the broad field of the natural sciences. In 1851, for example, The Somerset Archaeological and Natural History Society canvassed 'clergymen and gentlemen in the county' to become members of a new society (Proceedings of the Somerset Archaeological and Natural History Society, 1851, 6).

In many early societies, members' interests were eclectic and less channelled than those of their more scientific descendants. Later in the century, as many scientific subjects were being 'professionalised,' this led to their aficionados being pejoratively described as 'antiquarians' (Levine (1986, 72). Allen (1994, 147) remarks on the difference between antiquarian-based societies, where members were more interested in *objets d'art* and genealogy, and those with the more radical inclinations of practical science. In the nineteenth century, the more scientific societies included prehistory whilst those devoted to artistic style and collecting, did not. These contrasts in taste will be demonstrated by particular examples of the programmes of the four Oxford societies discussed below.

As these socially exclusive county societies (for example, *The* Somerset Archaeological and Natural History Society) were being formed, a parallel movement was initiated that would create more socially accessible societies. In 1870, addressing the Berwickshire Field Club's fiftieth anniversary Sir Walter Elliot observed that by 1868, 'intelligent working men' were admitted to the society. The editor of *Nature* found this 'an invidious distinction' and suggested that 'science at least is a common ground on which all classes can meet without a shadow of bitter class-feeling to mar the genealogy of intercourse' (Britten, 1873, 24–36).

In 1873 *Nature* ran a series of articles on the growth of local societies in order to highlight the 'general advance of intelligence, elevation of taste, and spread of education during the present century' (Britten 1873, 24). It was felt that this was a direct result of the increase of local scientific societies from the 1840s.

A local society, in contrast to a national one consisted of 'an association of individuals in a particular locality, for the common study of one or more branches of

science, by the reading of original papers, and what is perhaps of more importance; the actual investigation of the natural history, geology, zoology, botany, meteorology and the archaeology of the district' (Britten, 1873, 24). That archaeology is included within this broad subject base is particularly significant for this research, as it suggests that by 1870s the subject had not yet become 'disciplinised' or more 'professionalised'.

Nature supported the idea that a 'working man' should be received on a common footing with other members. The two examples that follow reflect this philosophy. *The Chester Society of Natural Science, Literature and Art* was founded in 1871, by Charles Kingsley (Robinson, 1971, 1; Armstrong, 2000,143) in order that the 'common man hitherto deprived of contact with the scientific world through lack of means should be able through low cost of subscription (five shillings per annum) to join in the tide of knowledge and gain a relief from the drabness of the industrial environment and urban life' (Williams, MSS 1973) (compare George Rowell and the Ashmolean Society, previous chapter).

A similar purpose can be identified in the decision of the committee responsible for re-forming the Oxfordshire Natural History Society *and Field Club* who, in 1887, also set their subscription rate at five shillings (Bellamy, 1908, 10). The ONHS was an exceptional society within the Oxford milieu, as from the beginning, it brought together men and women from a wide variety of backgrounds and social classes, 'town and gown', amateur and academic.

According to Allen, (1994, Chapter 8) certain preconditions are required before a field of science can 'take off'. They are popularity, a common social code, standardisation of techniques and the existence of an overseeing institution. In the case of societies in Oxford, the overseeing institution was the University. Though he specifically refers to natural history societies, Allen's conditions describe the efficient mechanism of consensus in the Oxfordshire Natural History Society.

Many of these societies, though named a 'Society of Natural History', also covered archaeology. During the late nineteenth century, archaeology was still regarded as another form of field collecting and, as Allen (1994, 147) observed, to combine archaeology with natural history in a single society seemed both sensible and natural. The homogeneous social composition of the ONHS suggests that this society was

unique in blending not only town and gown, but also all aspects of growing scientific knowledge.

The social and cultural aspects of these new societies were as important as their intellectual activities and in the Victorian era, science operated in the public gaze, not only through lectures, but also by Field Trips and Conversaziones (Alberti, 2003b). There the physical and visual products of activities relating to natural knowledge were presented to and by a British public, increasingly interested in science (Gates, 1997, 181). At social events, the amateur and the emerging professional whether collector, researcher or writer was able to participate in these social events as visitor, exhibitor, and lecturer and often all three (see Bellamy 1908).

The Field Trip was an innovative feature of new scientific societies. Although these socially important occasions have been examined by historians of science (Allen, 1994, chapter 8), this phenomenon has not yet been included in studies of the history of archaeology (for example, Levine 1986). In 1873, a survey disclosed that there were at least 169 local scientific societies, of which 104 described themselves as 'field clubs' (Allen, 1994 155). Excursions to archaeological sites were included in most society calendars (see sections on OAHS, ONHS and B.A.A.S.).

In Oxford, **t**he subjects covered by the ONHS as a new scientific society were more eclectic than those of the 'gentlemen's clubs' or the OAHS visits (see below). The term 'Field-Club' was included in its title and from the beginning men and women regular attended day excursions (Bellamy, 1908).

'A model for a simple and inexpensive field-day' was given in *Nature* (Britten November 30, 1873, 26),

> *Arrangements are made with the railway company for the issue of tickets on favourable terms. The members assemble at 9.30 after which the programme of the day is explained, and any objects of interest procured since the last meeting are exhibited and described. At 11am the party proceeds on foot or by conveyance to the points indicated, breaking into sections for botanical, geological, or antiquarian research, and either meeting again at some convenient spot or returning independently to dinner at 4 o-clock. The members present rarely exceed from 30 to 50.*

In common with many county societies, a regular pattern of 'Walks and Excursions' also became extremely popular with members of the OAHS. Between 1870, and

1900, Pantin (1939), a historian from Oriel College, noted that there were in all 284. Bellamy recorded over 150 visits made by ONHS between 1880 and 1900 (1908, 310–314) and that many had been organised by Henry Underhill (see Appendix 4 and Chapter 7).

The Conversazione

Every scientific society held regular and impressive Conversaziones that were usually planned by a special committee. These programmes of events and 'exhibitions of natural and artificial wonders' (Alberti 2003b, 208) appeared to be perennial features of Victorian cultural events. They were a way of demonstrating to the public, the society's scientific prowess and its institutional pride (Alberti, 2003b, 208-230).
In Oxford, various details of Conversaziones show that during the 1880s and 1890s, University members, such as Edward Tylor, Arthur Evans (Ashmolean Society Papers 1876-1905GA Oxon b 139, Bodleian Library) and Edward Poulton played a prominent part in these events (Bellamy, 1908, 100, 256). An important factor is that at these occasions, non-University individuals were also involved. At a Conversazione organised by the ONHS in 1895 in the University Museum, (Bellamy, 1908, 337), Henry Underhill gave a lanternslide lecture, Frank Bellamy demonstrated telescopes, George Druce displayed local flora and Poulton opened the entomology collection in the Hope Department (see Appendix 6). This provides evidence for the fluidity of mutual intellectual interests before the advent of specialisation.

Intellectual reciprocity

New local scientific societies were part of an extensive network of intellectual growth during the nineteenth century. They exchanged periodicals, journals, and often, reciprocal speakers. Many annual publications of Proceedings or Transactions included a list of the corresponding societies and the number of journals exchanged show a notable increase from 1860s to the 1890s (Levine, 1986). At each meeting of the Ashmolean Society the latest journals received were read out (Proceedings, Oxon 4to 164/1Ashmolean Society Papers 1876-1905 Bodleian Library).

The network of speakers in these new scientific societies provides evidence of expanding intellectual links. During the 1880s and 90s, three members of the ONHS, Poulton, Underhill and Druce visited the Chester Archaeological and Historical Society (Bellamy, 1908; Robinson, 1971) and in the 1860s and 1870s members of the Ashmolean Society, E.A.Freeman, Arthur Evans and J.H. Parker were regular speakers at the Somerset Archaeological and Natural History Society (Proceedings of Somerset Archaeological And Natural History Society, Volume XIV 1869; Volume XVIII 1872). A member of this society who regularly gave papers was Edward Tylor who became Keeper of the Oxford University Museum in 1884 (Manuscript Collections, Pitt Rivers Museum, Tylor Papers, Box 3, Diary of Anna Tylor; Chapman 1981). In the 20th century, Henry Balfour and George St John Gray continued the link between Oxford's Pitt Rivers Museum and Somerset Archaeological and Natural History Society, each eventually becoming President.
Most of the evidence for the growth and popularity of local intellectual and scientific societies during the nineteenth century can be found in county and city archives. In Oxford, the City and University libraries each contain the annual records of transactions, proceedings and minutes of meetings of various nineteenth century societies (see Chapter 1). These archives reveal the important initiatives taken by local individuals to form new intellectual and cultural societies in other county towns such as Taunton and Chester and would benefit from further research

As the century progressed, each of these societies appeared to experience various transformations. This adaptation and change is a significant factor in the self-regeneration of local intellectual societies as it illustrates the intellectual dynamics being created by the impact of new scientific knowledge. For example, the Junior Science Club was created in 1882 at a time when the focus of the Ashmolean Society was beginning to weaken. If we were to follow Darwin's metaphor for adaptation and modification as an example, some form of evolutionary transformation seems to have occurred. The Ashmolean Society, founded by senior members of the University in 1828, was obliged to amalgamate in 1901 with the ONHS owing to falling numbers (see below). In doing so, its original University exclusivity was dissolved and the younger society with a membership that consisted of a wide social spread took over and flourished.

The following section examines these societies chronologically. The social and academic position of the members involved will become clear in the course of the chapter and the implicit social divisiveness will demonstrate to what extent membership of a society was genuinely accessible to its citizens or was exclusive to the University.

The Ashmolean Society

The Ashmolean Society was founded on December 11th 1828, at an inaugural dinner, 'instituted by some friends of science in Oxford and its vicinity, in order to promote an interchange of 'Natural History, Experimental Philosophy etc' [sic] (Bodleian Library archives). The founders included William Buckland, (1784–1856), Reader in Mineralogy from 1813, and in Geology, William Baden Powell (1796–1860) and Samuel Wilberforce (1805–1873) Bishop of Oxford from 1844 (see Chapter 2).
It was decided that membership should be limited to fifty individuals, none under the Degree of M.A. (Ashmolean Society Papers, GA Oxon 4to 164/1 1876–1905 Bodleian Library). Its parent organization, whose founding date of is unclear, was a select dining club, The Ashmolean Club (see below). The members of this club formally constituted and enlarged the society, naming it The Ashmolean Society.

It was agreed that part of the annual subscription of one guinea per head should go towards the purchase of books and periodicals of scientific interest. By the beginning of the twentieth century this collection consisted of over two thousand volumes (Bellamy, 1908).

Each term two or three meetings were held in the Old Ashmolean Museum in Broad Street, (the original Ashmolean Museum, now the Museum for the History of Science). Membership was strictly restricted by election, a person's application would be proposed at one meeting and a ballot taken at the next. All the officials and the committee were required to read papers to the society in turn. Members could introduce interested guests at meetings in order to broaden the scope of discussions. At each meeting, papers were read, new members elected and various exhibits were shown. The first talks covered scientific interests in the very widest sense; they featured experimental philosophy (the early term for physics), chemistry, the natural sciences and natural history. The study of Antiquities, art and archaeology soon

became incorporated into the society's programme. For example, in 1848 a paper on Saxon burials was read, and in March 1859 the Society voted in favour of the formation of a museum of historical antiquities in the building at present holding the Ashmolean collection (Ashmolean Society Papers 1876-1905, 164/1/79 Bodleian Library).

According to early records, the following were eligible for membership:

1830 Graduates of Cambridge

1831 Graduates of other Universities

1834 Ladies connected with members were allowed to attend an extra meeting in the Radcliffe Library (The Camera).

1839 Undergraduates recommended by their College

(Ashmolean Society Papers, Oxon 4to 164 Bodleian Library,).

The number of members, according to various accounts were,

1835 200

1840-1850 300 (Brock and Curthoys, 1997, 547-8)

1895 34 (Bellamy, 1908)

Although the membership was The Originally limited to fifty, the figure gradually increased and a 'number of non-University gentlemen' with similar backgrounds and interest were entitled to Honorary Membership. These included the local antiquarian, J.Y. Akerman (Feb 1858), Thomas Combe, of the Oxford University Press (14 November 1862), and John Henry Parker the publisher (28 November 1864), (Ashmolean Society Papers Oxon 4to 164/1 1876-1905).

At the first meeting on February 13th 1829, Professor Baden Powell presented a paper on 'Radiant Heat,' and a model of the human foot was presented to the Museum. This pattern of acquiring models, fossils, curiosities and specimens of natural history gradually increased. In this way, the Society became instrumental in enriching the Museum's collections during the period of its regeneration in the second quarter of the nineteenth century (Ovenell 1986; Parry-Jones, 1983; Simcock, 1985).

One event shows that although the society may have been generally exclusive, there was some contact with the 'lower orders'. In 1846, the Committee received a letter

from ‘An Advocate for the Advancement of Science’, enclosing a five pound note (Ashmolean Society Papers; Correspondence Dep.c.653/61 Bodleian Library). The author suggested that Mr George Rowell, the assistant keeper of the Ashmolean Museum (see Chapter 5) whose paper on ‘Electric Currents on the Earth’ was read by the society’s Treasurer on 23 November, should be made an honorary member ‘so that he might have the privilege of attending the meetings and of using the library’ (Ashmolean Society Papers, Bodleian Library).

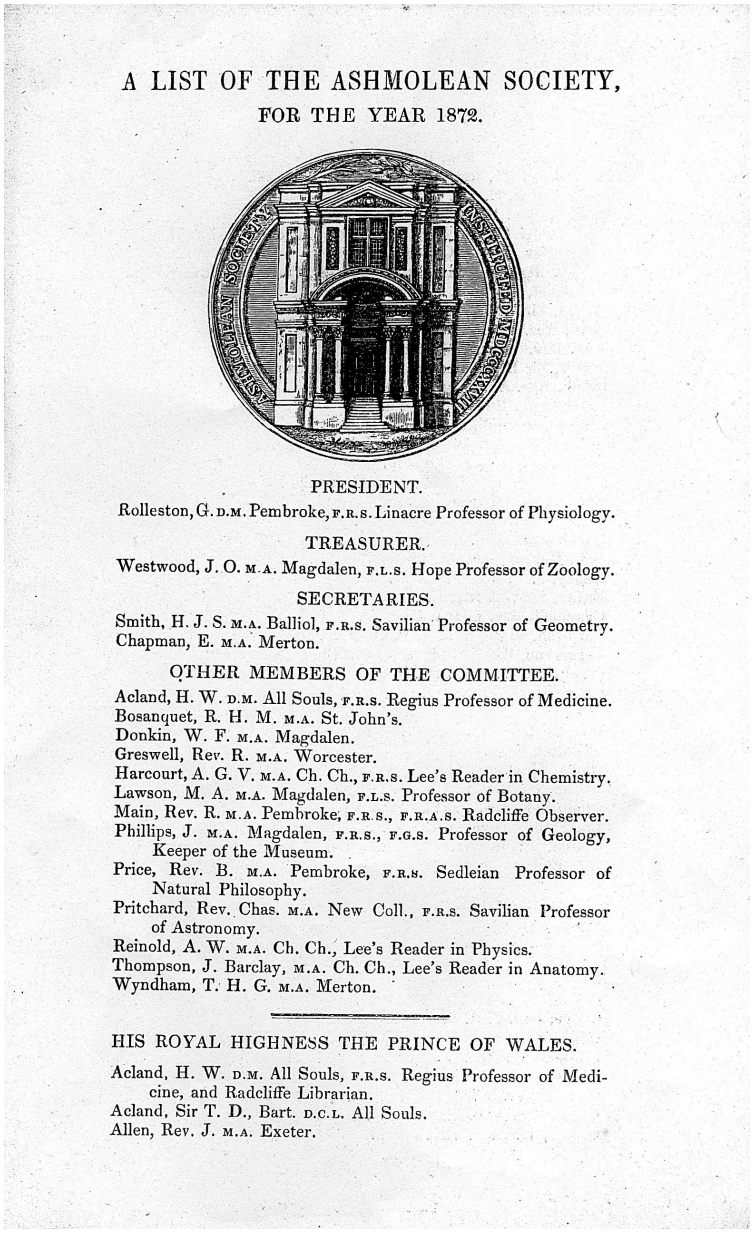
Gentlemen,

> *The interesting and ingenious paper read at the last meeting and reported in the [Oxford] Herald of today, has induced me to make some inquiries about the writer, who I find has been, in a great degree self-taught, and must have been led by strange enthusiasm to acquire the knowledge he has upon some of the most abstruse physical sciences and if I am rightly informed, this must have been a pursuit of knowledge under difficulties. There can be no doubt he has spent much valuable time in his researches and as far as I understand the subject [of] his labour has not been altogether in vain. Permit me to suggest that something might be done to enable him to continue his investigations, but such proposition would probably emanate better from the Committee of the* Ashmolean Society *than from an individual.*
>
> *Allow me to place the enclosed in your hands for the benefit of Mr George Rowell,*
> *I am Gentlemen, yr obedient humble servant,*
> *An advocate for the advancement of Science*

It is evident from this incident that Rowell was not a regular member of the Ashmolean Society, nor was he in a financial or social position to become one. The Chairman proposed that the five pounds was to be given to Rowell to cover his subscription and he was duly elected. It is very likely that the author of this letter was Professor William Baden Powell of Oriel College who had shown a personal interest in Rowell’s work and encouraged him to write his papers.

Throughout its history, the Ashmolean Society, like the OAHS (see below), suffered from a lack of fixed premises. This lack of a permanent base was probably one of the contributory factors in the Ashmolean Society’s gradual decline. Until the end of the century the society continued to meet in the Old Museum, but lack of space and cold and damp in winter were disadvantages. The building of the New Museum, now The

University Museum, between 1855 and 1860, did provide the society with a different location for a while, but by 1866 membership continued to decline as it was felt that 'particularly in winter, the isolated position in an imperfectly lighted district of the city deterred all but the brave from venturing forth' (Ovenell, 1986, 198).



A LIST OF THE ASHMOLEAN SOCIETY,
FOR THE YEAR 1872.

PRESIDENT.
Rolleston, G. D.M. Pembroke, F.R.S. Linacre Professor of Physiology.

TREASURER.
Westwood, J. O. M.A. Magdalen, F.L.S. Hope Professor of Zoology.

SECRETARIES.
Smith, H. J. S. M.A. Balliol, F.R.S. Savilian Professor of Geometry.
Chapman, E. M.A. Merton.

OTHER MEMBERS OF THE COMMITTEE.
Acland, H. W. D.M. All Souls, F.R.S. Regius Professor of Medicine.
Bosanquet, R. H. M. M.A. St. John's.
Donkin, W. F. M.A. Magdalen.
Greswell, Rev. R. M.A. Worcester.
Harcourt, A. G. V. M.A. Ch. Ch., F.R.S. Lee's Reader in Chemistry.
Lawson, M. A. M.A. Magdalen, F.L.S. Professor of Botany.
Main, Rev. R. M.A. Pembroke, F.R.S., F.R.A.S. Radcliffe Observer.
Phillips, J. M.A. Magdalen, F.R.S., F.G.S. Professor of Geology, Keeper of the Museum.
Price, Rev. B. M.A. Pembroke, F.R.S. Sedleian Professor of Natural Philosophy.
Pritchard, Rev. Chas. M.A. New Coll., F.R.S. Savilian Professor of Astronomy.
Reinold, A. W. M.A. Ch. Ch., Lee's Reader in Physics.
Thompson, J. Barclay, M.A. Ch. Ch., Lee's Reader in Anatomy.
Wyndham, T. H. G. M.A. Merton.

HIS ROYAL HIGHNESS THE PRINCE OF WALES.

Acland, H. W. D.M. All Souls, F.R.S. Regius Professor of Medicine, and Radcliffe Librarian.
Acland, Sir T. D., Bart. D.C.L. All Souls.
Allen, Rev. J. M.A. Exeter.

Fig 6.1 A programme for the Ashmolean Society 1872: President George Rolleston (OXFU 55/1 Centre for Oxfordshire Studies)

By the 1870s the Ashmolean Society was increasingly on the wane. It may be that, to use an evolutionary metaphor, it had failed to adapt to survive. Having initially encouraged and nurtured the sciences, making a bid for their recognition alongside the more ancient and acceptable disciplines, it, and the sciences it had promoted, were

outliving their usefulness. By 1895 serious concern was voiced about the viability of the Ashmolean Society, there were only 34 members and most of those were in arrears with their subscriptions (Bellamy, 1908, 45). Attempts were made initially to amalgamate the society within the University's Junior Scientific Club (see below), but this proposal was not accepted, although the Junior Science Club felt that their interests were not dissimilar, they were reluctant to admit senior members of the University to their undergraduate society (Bellamy, 1908, 45–56).

The Ashmolean Club:

This appears to have been a University Dining Club connected with the Ashmolean Society, though its origin is obscure. It is possible that the members of the Dining Club were an exclusive part of the Ashmolean Society, in very much the same way that particular members of The Royal Society and the British Association were also members of the influential X Club (Barton 1998; 2003). There is, however, no evidence that the Ashmolean Club preceded the Ashmolean Society.

The minute book of the Ashmolean Club from 1869 is headed 'Professores intra musei precinctus docentes'. It lists ten names, three of whom were particularly significant participators in the growth of the new disciplines of the human sciences: Acland, Rolleston and Westwood (Appendices 5,6 and 8)

A small 5 x 3inch notebook dated from 1869 to 1922 lists 'Members of the Ashmolean Club' and the dates they were elected. Many individuals appear whose work and activities feature in this thesis. Apart from those indicated above, they include

1887 Professor J.S. Burdon Sanderson

Professor E.B. Tylor

1891 Professor E.B. Poulton

1892 Professor H. Balfour

(Oxford University Museum Archives).

The earlier members of the Dining Club were not scientists in the meaning of today's precisely structured professional terminology, they were 'interested amateurs and antiquarians with mutual scientific pursuits, 'gentlemen of science' (Morrell and Thackray, 1981, 28). Members included Dean Liddell, the father of Charles Dodgson's 'Alice,' and Dodgson himself who, as a member of the Ashmolean

Society, attended many lectures in the original Ashmolean Museum.

The Ashmolean Club appears to have been a social and dining club, with membership by election or invitation only, for the purposes of informal discussion of science within the exclusive bounds of the University. According to the archives in the University Museum, three dinners were held each term. One page of the minute book indicates those members due to give dinners in Michaelmas Term 1869, and includes the names of Henry Acland and George Rolleston.

For many years these dinners were held in the private houses of members, there being no difficulty with domestic staff, or in Colleges where some members were Heads. Later they were held in Colleges to which the hosts were attached. This may have been because of the difficulty of distance, as dons moved out of their colleges to the suburbs (Brock and Curthoys, 1997, 431). A dinner due to be held at ‘Mr H. Balfour's house’ in March 1911, for example, was cancelled, 'The pilgrimage to Headington being apparently too inconvenient for members' (History of the University Museum Archives, Box 2/i/3).

At the back of the membership book is a 'List of Gentlemen who declined for various reasons to join the Club'. They include: 1895, Professor Vines, Biology Magdalen, 1898, Professor Elliott of Magdalen, 1908, T.H.Warren, President of Magdalen, the Vice Chancellor, and T.B. Strong, Dean of Christ Church. In 1921, Sir Arthur Evans and R.R. Marett also declined. The reasons for refusals remain tantalisingly unknown.

The members of the Ashmolean Society and its satellite, the Ashmolean Dining Club were intricately connected with both the policy-making and growth of the collections accumulated by Oxford University museums. In the 1850s the Ashmolean Society played a prominent part in persuading the University to build the new museum for natural sciences (Morrell, 2005, 318). Similarly, the decisions concerning the appointment and role of the Keepers of these museums were often made as a result of the intellectual networks of influential members (see Chapter 5).

In the 1870s and 1880s, the members of the Oxford Architectural and Historical Society attempted in a similar way to extend both the purpose and the premises of the Ashmolean Museum, but these issues are outside the subject of this thesis. In the following section, the social and intellectual role of the OAHS and the influence its members had on the growth of historical knowledge are examined.

Oxford Architectural and Historical Society

The OAHS was originally founded at Christ Church, on March 12, 1839, as the Oxford Society for the Promotion of Gothic Architecture, though the individuals responsible are unknown (Proceedings Oxford Architectural and Historical Society, 1864 to 1871, 80). The members were mainly Anglican clerics, senior members of the University, heads of houses and prominent teachers such as William Buckland. Honorary members from the British Establishment included the Archbishop of Canterbury, the Bishop of Oxford, peers and members of parliament. The Committee was composed of leading University members who were part of the growing body of professional academics. Like the Ashmolean Society, it drew its members from the higher echelons of the University and membership was not, therefore, available to many citizens of the town (Pantin, 1939, 175).

Apart from John Henry Parker (1806–1884; Appendix 6), the Oxford bookseller and antiquarian, who was awarded an honorary M.A. by the University on 27 June, 1867 (Riddell, 2004), and Thomas Combe (1796-1872), printer and patron of the arts, (Hughes, 2004), there appear to have been no 'town' members in its early years. In 1851, Parker became the Society's librarian and president in 1859 (Pantin, 1939). In 1869 Parker also became Keeper of the Ashmolean Museum, endowing the salary for the position himself (Morrell, 2005, 309).

At first, the OAHS was mainly devoted to the study of Gothic church architecture, or 'Ecclesiology' as it was called (Pantin, 1939, 174). In 1841 The 'Oxford Society for the Promoting of Gothic Architecture' merged with the 'University of Oxford Genealogical and Heraldic Society', and in 1848 the society was renamed as the 'Oxford Architectural Society' and its aims widened to support the revival of domestic vernacular architecture in the Gothic style. One of its functions was as an advisory body to church builders and restorers, who were actively promoting the use of nineteenth century versions of Gothic architecture (see for example Ruskin, 1849).

In its early days the society was a direct product of the Gothic Revival and the Oxford Movement. John Ruskin was a member and under his stimulus much of the architecture adopted during the building and rebuilding of Oxford from the mid-nineteenth century can be seen to have inherited these Gothic characteristics. Different examples of building styles from the architecture of University Museums

and Colleges to those adopted by builders for artisan and professional accommodation in the city are living evidence of Ruskin's influence (Yanni, 1999, 64).

In 1860, the society experienced difficulties in retaining membership, probably because of its limited field of interest. To encourage younger residents of the University, it was agreed to widen its remit to include history and reduce the annual subscription from one guinea to ten shillings (Pantin, 1939, 186). The society was again re-formed and re-named the Oxford Architectural and Historical Society. The frequency of these changes of identity indicates the gradual expansion of intellectual issues in the mid-nineteenth century. It also reinforces the way that the Darwinian metaphor of adaptation and survival can be applied to many national and local intellectual societies.

The increasing interest in the search for British prehistory is reflected in the intellectual expansion of the OAHS. By 1862, lectures given during Michaelmas Term included three on architecture, five on history and four on archaeology. The President, Robert Scott, Master of Balliol, noted that 'introduction of history had not been detrimental to the society' (Scott, 1862).

The following examples describe this trend.

In 1862, one of the pioneers of British prehistory, William Boyd Dawkins (1837–1929), spoke on 'Traces of Early Britons in Oxford' to the society (Boyd Dawkins, 1862, 108–116). Although the audience was composed mainly of 'traditional' clerical members, the scientist George Rolleston (see above) and J.O Westwood were also present at this lecture (P.O.A.H.S., 1862, 116). Boyd Dawkins described a geological excursion to Yarnton in Oxfordshire where the 'vestiges of antiquity' were evident from an ancient cemetery that contained skeletal remains, pottery, flints and bronzes. He concluded that the hollow animal bones had been broken, 'that marrow is extracted' during feasting at a funeral ceremony, and that these were the Bronze Age relics (Boyd Dawkins, 1862, 115)

In the same term, James Parker lectured on 'Early Flint Implements from the Valley of the Somme' and showed a collection of flints given to him by the French prehistorian, Boucher de Perthes. Parker compared these flints with 'the hundred or two hundred specimens laid out from the Ashmolean Collection' from Standlake near Oxford, and pointed out the similarity between the Somme flints and those collected at Wookey Hole by Boyd Dawkins. He observed that, although 'so purely a

geological question was not one suitable to be brought before the Society, it was one as to which there was still great perplexity even in arriving at a proximate age and that no line could be drawn between where the geologist ended his studies and the historian commenced, (Parker, 1862, 122).

By 1868 the OAHS Annual Report discussed a proposed amalgamation with the Ashmolean Society. The difference between the two societies was noted by the President, Samuel Wayte, in his annual report (Wayte, 1868, 81). He observed that the Ashmolean Society paid little or no attention to Architectural or Historical subjects, their main interest was the investigation of phenomena connected with Natural Science. By degrees, however, the two subject areas had become more closely connected and it was suggested that an amalgamation would benefit both societies. This proposal must have appeared too revolutionary for architecturally-minded members of the Oxford Architectural and Historical Society and it was it was not taken further.

The narrow or antiquarian interests of OAHS members during the late 1850s can be inferred from details of the society's Annual Excursion in June 1857 given in a report at the Annual General Meeting by the Secretary. The group, composed of 'gentlemen', travelled by carriage, 'setting off at 10 a.m. from the Holywell Music Rooms and returned at 9.30 in the evening' (Hingeston, 1857, 23). The excursion visited the villages of Eynsham, Northleigh, Standlake and Stanton Harcourt. Their attention focused exclusively on church architecture and at Northleigh they visited the church, rather than the Roman Villa that had been discovered in 1813.

Nearly twenty years later, in May 1872, the archaeological significance of North Leigh Roman villa received better attention when about fifty members, guided by James Parker, followed a similar excursion (Parker, 1872, 37–43). This time a full description of the site was included and 'Mr J.P. Earwaker provided plans and drawings of the tessellated pavement and information about its discovery in 1815 or 1816' (ibid). The Proceedings include a detailed description of the Roman villa, describing a room containing the 'finest pavement of all adding 'but the country people came over the Sunday after it was discovered and carried it away piecemeal and only the drawing remained' (Parker, 1872, 38). At that time the land was owned by the Duke of Marlborough and permission and funding for its protection was still being awaited. George Rolleston, who was then President of the society, had been a

member of the party and later wrote to the Duke about the history of the site (P.O.A.H.S 1832, 39).

Parker provided other details of local villas in the area, 'a still finer one at Stonesfield' and others at Dytchley and Fawler' (Parker, 1872, 39). This suggests that, by the 1870s, University members were becoming increasingly interested in their own British history; for example the excavations of Romano-British remains were taking place at Frilford (for example, Rolleston, 1870, 417–485).

The reports and proceedings of nineteenth century societies such as the OAHS and the Ashmolean Society may contain important, but overlooked, evidence that could provide details for current research. For example, James Parker discussed excavations of other Romano-British sites in the Frilford area 1872, which may now be lost (Parker, 1872, 6-13). Some of these details may have been used later in the 1890s by Henry Underhill (Chapter 7), for his talk on 'Buried Roman Cities,' when members of the ONHS followed the same route. However, as will be shown, their field trips had a wider sphere of interests, and members examined examples of flora, fauna, geology and archaeology (see ONHS, below).

In 1872, J.H. Parker led an OAHS visit to Uffington Castle and Wayland's Smithy. He informed the party that Uffington was one earthwork of a series and remarked that the 'rude shape and size betokened an early date,' and that the White Horse was 'of a period anterior to the Normans, but beyond that it was guesswork' (Parker, 1872, 73). The site was 'only briefly inspected' by the Society who then conducted a 'business meeting at Uffington camp.'

At Wayland's Smithy, Parker questioned 'the legends and conjecture of this site,' stressing that, as they were a Historical society, it was his responsibility 'to dispel any romantic notions. There was not one single vestige of evidence to shew [sic] that it had anything to do with Weland Smith [sic] at all, but an ordinary British cromlech that had been preserved by chance' (Parker, 1872, 77).

Today, Parker's involvement in British prehistory has been largely overlooked and he is probably better known for his interest in classical architecture and photographic collection of Rome (Harlan, unpublished mss, 2004). His wide interests emphasise the gradual increase of investigations and interpretations into the British past.

In 1886, Arthur Evans and about sixty OAHS members travelled by train to Salisbury. After a 'long visit to Salisbury Cathedral', they 'paid a brief visit to Stonehenge, where there was insufficient time to hear Mr Evans' lecture on the spot, on the various

theories of its history' (P.O.A.H.S., 1886, 47). Evans gave this lecture later, twice in Oxford, to the OAHS (Evans 1888a) and in a public lecture at the Ashmolean Museum (1888b). The handwritten transcript of this lecture is in the Evans Archive at the Ashmolean Museum (See chapter 8 for further discussion).

In 1888, Edward Tylor, Keeper of the University Museum, took the Society on a tour of the Pitt Rivers Museum. 'Dr Tylor intimated that as there was no guide, they were to take him for the handbook' (Tylor 1889, 183). He stressed to the members that the Museum 'was not a collection of curiosities, but an exhibition of the evolution of technology, and used the flint rifle as example.' In reply, Parker agreed 'that the extremely interesting lecture came within the 'historical side of their [the Architectural Society's] title' (Proceedings, 1889, Series 5, 185).

In his Inaugural Address as President in 1887, E.A. Freeman observed that the origins of the OAHS as a society for Gothic architecture had been too confined and that its early lack of a permanent base was due to the fact that 'nothing which did not represent 'ology' found any permanent home in Oxford' (Freeman, 1887, 84). This perceptive comment may be taken to refer to the contemporary growth and divisions of previously related subjects that were occurring in the academic world, not only in Oxford, but also nationally, as new scientific disciplines and careers were being established.

Between 1860 and 1894, the meetings of the OAHS were held in various places, including the recently completed Taylorian building and the original Ashmolean Museum in Broad Street. In 1894, Arthur Evans, the Keeper of the new Ashmolean Museum in Beaumont Street and a Committee member of the Oxford Architectural and Historical Society, offered the society a permanent home in its premises (Pantin, 1939, 185). It is interesting to note that the science-based University Museum building was not considered as one of the options.

By the 1890s the interests of the OAHS members had broadened. They began to focus on the local antiquities of Oxford and the surrounding district, recording buildings that were being demolished, often due to University expansion, and taking action to protect historic parts of Oxford (Pantin, 1939, 178-179). In general, however, the society became largely academic and its annual journal 'Proceedings' ceased in 1900 (Pantin 1939, 14).

By 1895, some non-University people were being admitted to the OAHS. Two mentioned in this thesis were Harry Paintin (Chapter 5) and Henry Taunt (1842-1922; see Appendices 6 and 8), the Oxford photographer and local historian who read his first paper to the society on 'Cistercian Abbeys. Taunt had described himself as 'photographer to the Oxford Architectural and Historical Society' on his business advertising (Oxford Magazine, various dates). However, these two men did not appear to receive full recognition of their services to either the OAHS or to the University.

One important contribution made to the provision for history and archaeology at Oxford by the OAHS was their proposal that the Ashmolean Museum should become a Historical and Archaeological Museum. In 1858, the Society's librarian, James Parker, the son of J.H. Parker, wrote to John Phillips, the Keeper of the Ashmolean to suggest this (Ovenell, 1986, 216–7). In March 1859, the Society addressed a similar memorial to the Vice-Chancellor and the Hebdomadal Council with the same request (Proceedings, New Series 1, 45-46).

On 23 Nov. 1861, a special meeting was held to discuss the matter. It was pointed out that as the University was committed to providing the University Museum for the study of the physical sciences under one roof, there should be an equal 'gathering together of all the local non-classical and post mediaeval antiquities scattered through Oxford. This should be a museum to house these relics and illustrate the history of Oxford and its neighbourhood' (P.O.A.H.S. New Series 1, 1859–1863, 45–46). As a special School for Modern History was being established, this was a particularly suitable time to inaugurate such a Museum and the society offered its collection of models, casts and brass-rubbings. This proposal did not have the strength of support that had been given to the proposal for a new University Museum in the 1850s (ibid 47).

Later in 1870, J.H. Parker offered to fund the costs himself for the position of Keeper of the Ashmolean Museum in Broad Street (Appendix 1, and Ovenell, 1986, 220–229). In a lecture to the OAHS in 1870, Parker pointed out that the Ashmolean still held a few local antiquities that had remained following 'the great move of many of the original collections' to the new University Museum in the 1860s (Parker, 1870, 228).

It could be argued that, to some extent, when the new Ashmolean Museum opened in Beaumont Street in 1894 under the Keepership of Arthur Evans, it fulfilled part of this demand for a museum of local antiquities, as the John Evans room of European

Prehistory includes displays from local Oxfordshire sites. But the Ashmolean Museum was not, and is not, primarily concerned with the history of Oxford. As Pantin remarked in 1939, (Paintin, 1939, 179) 'Oxford is one of the few great historic cities of the civilised world, which lacks a museum specifically devoted to its own local antiquities.'

Today, the most comprehensive information on the history of Oxford is displayed in the 'City Museum of Oxford' at St. Aldates and most of the records and archives for local history are kept by the City Council's Centre for Oxfordshire Studies. In 1972 the OAHS merged with the [North] Oxfordshire Archaeological Society and became the Oxfordshire Architectural and Historical Society. Its interests encompass all areas of archaeology and membership is open to everyone.

A University society that was considered by both the Ashmolean Society and the Oxford Architectural and Historical Society as a possible new 'graft' was the Junior Science Club. The vigour and enthusiasm of the science-based undergraduates who ran the society was evident from its programme of events and Conversaziones (see this chapter). It would be difficult to avoid a further Darwinian allusion in this case; the Junior Scientific Club displayed all the attributes of a new and thriving species.

The Oxford University Junior Scientific Club

This society was founded for the junior members of Oxford University in November 1882 'for the discussion of scientific subjects and the promotion of interest among members of the University in recent scientific discoveries' (Leaflet, n.d. Museum of the History of Science). The meetings were held once a fortnight and initially the society had about 250 members. It also issued the Journal of the Oxford University Junior Scientific Club (J.O.U.J.S.C.) two or three times a term. It differed from the Ashmolean Society, 'founded in 1828 for the senior members of the University' (Ashmolean Society Papers, GA Oxon 4to 164/1 1876–1905 Bodleian Library), where eligibility for membership was limited and exclusive. The Club represented the wider University community of students from various departments involved with science.

From its foundation in 1882 to 1899, the JSC showed a considerable dominance of biological subjects; physiology, zoology, human and comparative anatomy accounted for 42% of the papers and exhibitions. With the addition of other smaller biological

and natural history subjects, including geology, anthropology, botany, medicine and microscopy, they totalled just over 60% of contributions to the club (Rowlinson, 1983, 134). The growth of the new departments, including the foundation of the Pitt Rivers Museum in 1884, the Department of Human Anatomy and the input into Zoology from E. Ray Lankester in 1891, also encouraged fuller participation from the students.

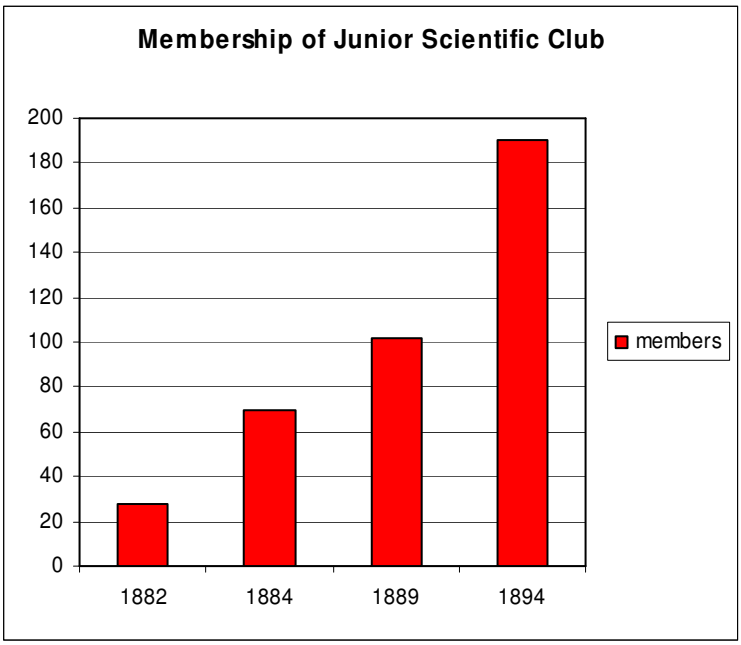


Fig 6.2 Membership of the Junior Scientific Club (from J.O.U.S.C. Trinity Term, 1895)

The meetings took place four times a term with regular Special Lectures and Conversaziones. While the society did not offer membership to those from outside the University, they were welcome to attend the annual Conversazione (See Conversaziones, this chapter). Members of the ONHS would have been particularly interested in these events.

The Conversazione, or 'exhibition meeting' as they were later called, imitated those of national intellectual societies, such as the Royal Society and the B.A.A.S. The JSC Conversaziones were very ambitious events, normally organised by the students themselves. In the early days of the society, they took over the entire University Museum. The first Conversazione was held in May 1884 at the University Museum. With the help of the University science staff, the junior members were able to acquire a large number of exhibits, specimens, scientific instruments, illustrations and working experiments, demonstrating recent research and new industrial inventions.

There were forty-four scientific exhibits, including two typewriters, which were exhibited in the Pitt Rivers Museum ((J.O.U.J.S.C., 1884, 14, 36).

The Junior Scientific Club played an active part in the B.A.A.S. 1894 in Oxford, which 'turned the schools and the Museum upside down' (J.O.U.J.S.C., 1894, 18, 245–247). Exhibits ranged from an explanation of flight and the demonstration of a flying machine to lantern slides of Central Africa. The editorial reported 'there were 2400 members, associates and ladies present, 80 distinguished foreigners, and some awarded a D.C.L. at the close of the meeting' (J.O.U.J.S.C., 1894, 18, 247). In the anthropological section, nearly 60 papers were read. The writer commented

> *'The University authorities, even the most uncompromisingly classical of them threw them selves heart and soul into a scientific meeting; and if they may have been puzzled even bored, by the proceedings of the sections, they won the gratitude of a most representative body of English and foreign savants and gave the lie direct to those who would assert that Oxford holds aloof from science.'*
>
> (J.O.U.J.S.C., 1894, 18, 247).

The wide range of interests brought by the members to this society reflected back to the cross-disciplinary aspect of the sciences of the earlier nineteenth century. In 1889, honorary members of the society included Henry Acland of Christ Church, who had been instrumental in creating the New Museum of investigative sciences; E.B.Poulton of Keble, Hope Professor of Zoology, and J. Burdon Sanderson of Magdalen were life members (J.O.U.J.S.C., 1891, Vol 4 32). Henry Balfour, from Trinity College, had joined the society in 1882 and by then was Curator of the new Pitt Rivers Museum (Chapman 1981).

These members represented the contemporary scientific scene at the University. Some, like Poulton, Burdon Sanderson and Balfour, were also members of the 'town'-based ONHS. It is not surprising that members of this active and well-supported society of junior members of the University were unwilling to agree to the proposal made to them by the Ashmolean Society in 1900 that the two scientific societies should amalgamate. In their reply they stated that they wished to retain their 'junior' autonomy (Bellamy, 1908, 45).

The founding rationale of the ONHS was to admit 'All persons interested in Natural Sciences and Natural History, (Bellamy, 1908, 1). It appears to be the only Oxford society that has been subject to a full historical account published by one if its

devotees (see Bellamy 1908, and below). The ONHS does not appear to have published proceedings or publications and, apart from Bellamy, the records of its activities appear in local newspaper reports and various Bodleian Library archives. Some of these would appear to have been catalogued by Bellamy whilst writing his account.

The Oxfordshire Natural History Society and Field Club

In 1908, Frank Bellamy (1863–1936) Hon. M.A. Oxon. compiled a historical account of the Oxford Natural History Society and Field Club (ONHS) from its formation in 1880 to 1905. Bellamy had this account privately printed and published to commemorate the first 25 years of the Society. The frontispiece contains a dedication to its founder 'To my friend in the field and herbarium, George Claridge Druce'.

The preface stated that the book was largely 'composed of facts' and that 'unstinted care was bestowed upon ensuring accuracy in dates and names, both personal and scientific' (Bellamy, 1908, xi). Bellamy's description of the philosophy and organization of the ONHS provides a personal impression and experience of the social and intellectual contacts between the 'University' and 'Town' in Oxford at the latter end of the nineteenth century. Although he claimed that his account was 'largely composed of facts', his personal recollections and polemic opinions cannot disguise certain inner tensions and prejudices which were inevitably to arise from a society consisting of members from diverse backgrounds and occupations. One account of Bellamy describes him as 'on the one hand meticulous, dedicated, and generous to enquirers, on the other obsessive and curmudgeonly' (Hutchins, (2004). What seems to unite Bellamy's diverse fields of activity was his passion for cataloguing (See for example Bellamy 1908, Chapter XI).

From Bellamy's unique account much can be learnt about the way emerging academic disciplines, such as archaeology, anthropology and the natural sciences, developed and were shaped in Oxford by the advent of professionalism (see Chapter 3). The account also highlights the role played by amateurs. Many Oxford citizens at this time, often not extensively educated, shared the same degree of knowledge on their specialist subject as their university educated counterparts. This was particularly true of the 'new' sciences such as anthropology and prehistoric archaeology, subjects that until the 1900s were studied and shared by both amateurs and emergent professionals

(Levine, 1986; Chapman 1989; Allen 1994, and Price, 2005, in press).

The ONHS consisted of people who, though resident in the University City, were for the most part excluded from much of its intellectual and social activities. Originally founded in 1870, between 1873 and 1887 the Society suffered from what Bellamy described a 'stagnant period' (Bellamy, 1908, 14). This was probably because the responsibility for the organization and administration of the society fell on Mr. G.C. Druce (1850-1932, see Chapter 5), who, at the time, was compiling his major work on *'The Flora of Oxfordshire* as well as managing his Chemist's business (Bellamy, 1908, 15).

When 'rejuvenated' in 1887, 'in connection with the first Jubilee of our revered and beloved Queen Victoria' (Bellamy, 1908, 15), the first meeting was held at Oxford Town Hall on the Queen's birthday, Thursday May 24 1887. This second phase of the society is the one in which many of the individuals who feature in this thesis make their entrance (see Appendices 1, 2, 3 and 5).

Although called the 'Oxfordshire Natural History Society,' like many new scientific societies formed in the late nineteenth century, its intellectual scope was broad (Britten, 1873, 24). The 'Gentlemen and Players' who were connected to the ONHS make an interesting team (see Chapter 5). From Bellamy's accuracy in detailing the annual programmes it becomes possible to identify contributions made by individuals from both 'town and gown', amateurs, and academics or professionals and their specific interests. For example, in 1887, the interests of the first President of the society, Edward Poulton, included geology and archaeology, and those of the secretary, Henry Underhill, embraced natural history, folklore and archaeology (See Chapters 7 and 8).

In 1887 the subject sections of the ONHS were as follows:

Section I Zoology: microscopical ornithology, entomology

Section II Botany: microscopical, phanerogams, cryptogams

Section III Geology

Section IV Photography

Bellamy (1908, 16).

In 1890 the study of anthropology was introduced (Bellamy, 1908, 180), an event that followed the example set by the BAAS under Tylor in 1884 (Sillitoe, 2005, 8)

(see influence of the B.A.A.S. on local societies in Chapter 2).

As Bellamy recorded every minute detail of the society in his account (see reference below to *Oxford Magazine*, March 11 1909), it is possible to trace the growth of specific subject areas included by the society between 1887 and 1901. This was the period just before professionalisation, where, according to this research, contacts between amateurs and professionals appeared to be the most prolific and productive. During that time, the ONHS did appear to follow its title and brief of 'Natural History', but in the late nineteenth century this broad spectrum included botany, physiology, geology and archaeology. The two latter specialisations are most relevant for this examination of the growth of the study of British prehistory, and it is upon those that this section focuses.

Geology

In the 1880s the question of the age and formation of the earth was still a relatively new topic. The discoveries of human antiquity by geologists such as Lyell, Buckland and Boyd Dawkins over the previous forty years were still being digested at both academic and popular levels. The connections between the findings of early stone tools and of prehistoric animal bones had been accepted as an indication of the long history of human existence (Van Riper, 1993). Geology had, to some extent, disproved Genesis, although it had not yet become separated from the study of humans and their habitat. For example, E.B. Poulton's talk on 'Exploration of Dowker Bottom Cave Yorkshire' in December 1881 was classified in the ONHS annual programme as geology (Bellamy, 1908, 207).

Poulton described an exploration of the caves by a party of students during the Long Vacation. The excavation methods used were not dissimilar to those of today. He stated that 'the chamber [of the cave] was divided into square yards and each area numbered and excavated; every article of interest found was immediately labelled and located. Dozens of specimens of bones and teeth were found and exhibited and also many articles of Roman times' (Bellamy, 1908, 208).

This synthesis of geology and archaeology is entirely typical of the nature of addresses made at local societies. Similar talks were being given by William Boyd Dawkins (see above, OAHS, SANHS) and Bellamy commented upon the advances made within the last twenty-five to thirty years, recording those he considered significant.

From Bellamy's observations it becomes clear that he was very much aware of the transformation of scientific beliefs that had occurred between the 1850s and the 1880s and of the continuing debates on evolution and human science. By 1887 he noted that the ONHS had benefited from a number of reports or addresses on subjects which were, 'either almost in their infancy as regards scientific investigation, or had received new light; or were the result of original investigation by members of the society' (Bellamy (1908, 218). He included abstracts of papers read by Underhill on 'Spiders', and by Poulton on the 'Colour of Insects' for protective camouflage (Bellamy 1908, 229). Poulton was a lifelong advocate of the Darwinian theory of evolution and many of his lectures in Oxford on hereditary characteristics were subsequently published.

Another key address that Bellamy included, though outside the area of this study, is one given on 'The Germ Theory of Disease' by Professor Burdon Sanderson in 1887 (Bellamy 1908, 224–225).

In this lecture Burdon Sanderson suggested that disease was carried and transmitted by microscopic bacteria. These examples illustrate the way in which those at the forefront of scientific thought were willing to share their work with an increasingly interested and educated public. As Alberti pointed out in his studies of Yorkshire societies between 1870–1890, the eagerness of the active professionals and the enthusiasm of the civic-minded middle classes combined to generate a thriving and active culture of natural history (2003a, 353).

Anthropology

In January 1890 the ONHS Committee proposed a new sub-section for Anthropology. Among the supporters for this were by now familiar and personally committed members, E.B. Poulton, G.C.Druce, and H.M.J.Underhill (Bellamy, 1908, 180). This was the first time that a subject dealing with material culture had been given a separate focus, rather than being included with natural history or geology. Balfour was elected as section President and Tyler was made an honorary member.

The range of subjects addressed by speakers to the Anthropology section of the ONHS between 1890 and 1900 and the increase in the number of members supplies valuable evidence for the interest that the subject was provoking in this decade.

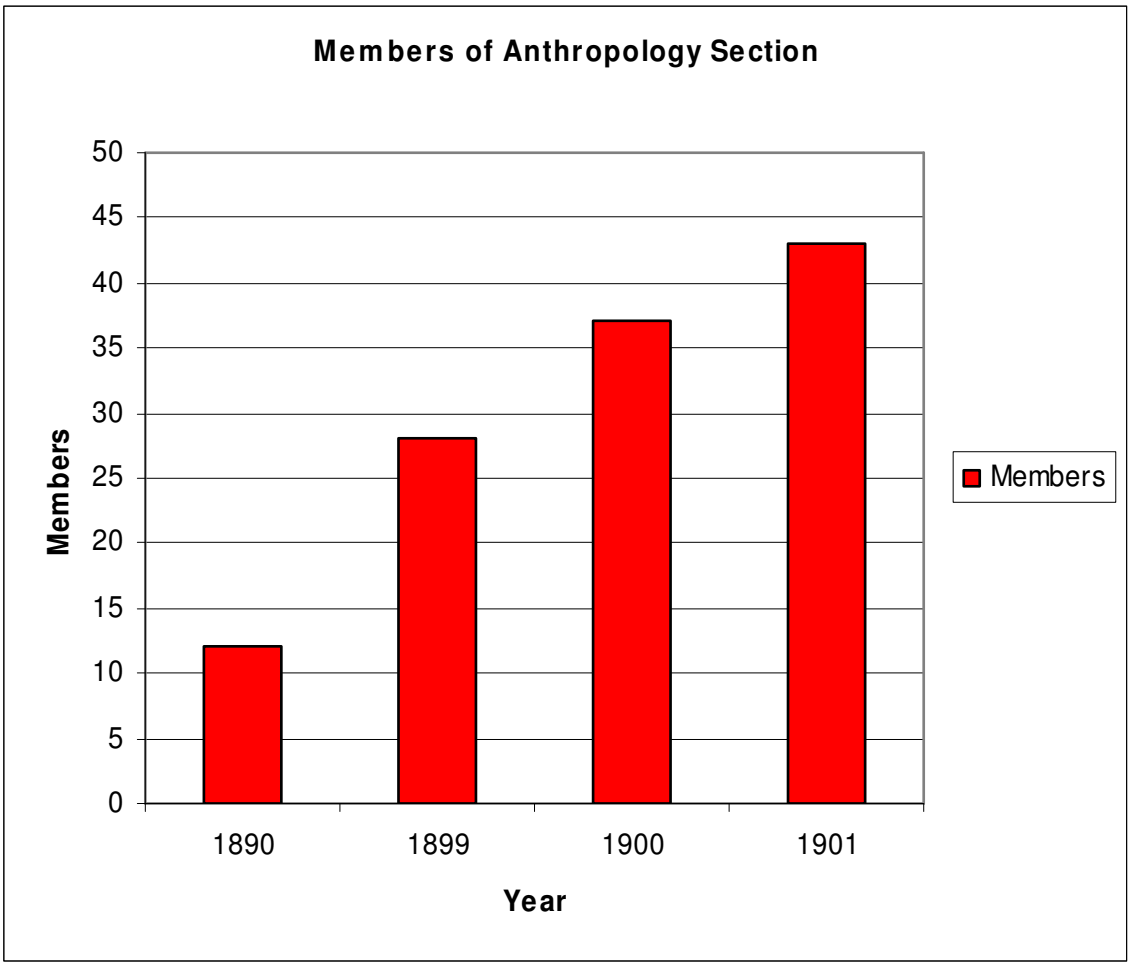


Fig 6.3 Membership growth of Anthropology section of ONHS

Information from Bellamy 1908, 182)

List of Lectures and Papers in Anthropology.

H. Balfour.	1890, Jan. 28.	Development of Ornament.*
H. Balfour.	1890, Dec. 4.	Some N. American Chipped Stones resembling Palæoliths.
H. Balfour.	1891, Dec. 4.	Natural History of Clock and Time-keepers.
G. J. Burch.	1892, May 26.	Vestiges of a prehistoric Scientific Discovery.
E. B. Tylor.	1892, June 9.	Primitive Arithmetic and Geometry.
H. M. J. Underhill.	1893, Feb. 2.	The Age and Distribution of Folk-tales.
Miss W. H. Abrahall.	1893, June 1.	Bosjemen.
H. Balfour.	1894, Nov. 21.	British Coracle; its affinities and migrations.
H. M. J. Underhill.	1896, Feb. 12.	Great Stone Circles.
H. Balfour.	1896, Dec. 9.	The use of Human Skulls as Drinking Vessels by various races.
H. M. J. Underhill.	1897, May 19.	Buried Roman Cities in England.
A. M. Bell.	1897, June 15.	Early Man in the Thames Valley.
E. B. Tylor.	1898, Nov. 2.	On Totems and the Theories relating to them.
A. M. Bell.	1889, Jan. 6.	Some old Inhabitants of Oxfordshire (C. L.).
H. Balfour.	1900, May 30.	Natural History of the Bagpipes.
A. G. Weld.	1901, June 5.	Ancient Egyptian Funeral Beliefs and Customs from B.C. 6,000—A.D. 100.
A. M. Bell.	1902, Jan. 3.	Oxfordshire, Old and New. (C.L.)
A. M. Bell.	1902, Feb. 5	Human Life in Early Oxfordshire.
H. Balfour.	1904, Nov. 16.	Notes from Lapland.
R. Shelford.	1906, Feb. 8.	On the History and Mode of Government of Sarawak.
H. Balfour.	1906, Mar. 22.	Zambesi Stone Implements.
T. C. Hodson.	1906, April 26.	On the Hill Tribes of Assam.
R. Shelford.	1906, Oct. 18.	The Native of Sarawak.
T. C. Hodson.	1907, Feb. 28.	Manipur.
A. M. Bell.	1907, May 16.	Prehistoric Oxford: Neolithic Settlement at New Iffley.
B. R. Blakiston.	1907, June 13.	Tour round the East Coast of Africa.

Fig 6.4 Speakers in Anthropology section (Bellamy, 1908, 183-184).

After 1900, neither Tylor nor Underhill appear to have contributed to the Anthropology section. According to Museum records, and comments in his wife's diary (Manuscript Collections, Pitt Rivers Museum, Tylor Papers, Box 3, Diary of Anna Tylor), Tylor by then was experiencing various administration difficulties as Museum Keeper and was spending less time in Oxford. In 1902 and 1903, members of the society were invited to attend his lectures, but illness prevented him from

continuing (Bellamy, 1908, 183). By 1900, Henry Underhill was fully occupied with his High Street grocery business and by his own illness (see Scott Diaries in Chapter 7). In Bellamy's opinion, the amalgamation of the ONHS with the Ashmolean Society in 1901 may also have contributed to Underhill's 'interest dwindling to vanishing point' (Bellamy, 1908, 98).

Conversaziones and Field Trips

As discussed earlier in this chapter, a society's Conversazione was the high point of the annual programme (Alberti, 2003a). In 1895, for example, the ONHS hosted the 'Eighteenth Annual Meeting of Midland Union of Natural History and Scientific Societies' (Bellamy, 1908, 337). This forum for amateur societies had been founded by Druce in 1880 (Allen, 1994, 154). About 300 delegates attended the 2-day conference organized by Underhill and Druce and a Conversazione for this event was held in the University Museum (Bellamy, 1908, 337-345).

In order to legitimise these events, formality was extremely important. Invitations were issued to members of the 'town and gown,' evening dress was worn, light refreshments were served and music played. On 1 July 1895, members exhibited their collections of entomology, botany, geology and archaeology and over 400 people attended (Bellamy, 1908, 337). Underhill showed the delegates his lanternslides of Stonesfield and North Leigh Roman Villa in preparation for the field trip the following day (*Jackson's Oxford Journal*, July 1895, p5). The occasion was, as Alberti suggested, part of an ongoing tradition of interwoven discourses that were part of Victorian life (2003b, 211).

Excursions to local places of scientific interest were a regular feature of the ONHS. They usually included items that would be of interest to geologists, naturalists and historians. A suitable speaker or guide for each subject accompanied the group; these included Poulton speaking on zoology and geology, Druce on botany and Underhill on prehistory.

The first excursion of the revived ONHS was in June 1887, when 23 members visited the quarries at Stonesfield, which Professor Phillips had earlier explored for extinct fish and fossils (Bellamy, 1908, 340). Henry Underhill made all the arrangements for this excursion which concluded with a visit to the Roman Villa and tessellated pavement at Combe 'which has been disinterred for some sixty years and is still in a

fair state of preservation' (*Jackson's Oxford Journal*, 11 June 1887, p5).

Another excursion made nearly ten years later illustrates not only the advances in travel, but also the more focused element of the visit. In May 1896, Henry Underhill organised an excursion to The White Horse, Uffington, Wayland's Smithy, and Ashdown.

The instructions, printed on a postcard, were for the 'Train Party' to meet the President [Druce], at the G.W.R. to take the train at 8.42 (see Appendices 1 and 4) which would arrive in Uffington at 10.12. The cyclists were to meet Mr. H.M.J. Underhill at the Martyr's Memorial at 8.30am punctually' (Bellamy 1908 284). The distance to Uffington was 21 miles. The group then met to walk to the White Horse, Wayland's Smithy and Cave, the Sarsen Stones and back to Uffington, the total extent of the walk being about eight miles. Tea was to be taken at The 'White Horse' Inn, Uffington. The tea provided could have been better according to Bellamy (1908, 284).

In 1893, Henry Underhill became president of the ONHS (Bellamy 1908, 97). Between 1887 and 1900 he contributed eleven lectures as well as being responsible for organising many field trips, Conversaziones and children's events (Bellamy, 1908, 116). His resignation from the Society coincided with its amalgamation with the Ashmolean Society (see above).

The amalgamation of the two societies was finalised in 1901 by E.B.Poulton, Hope Professor of Zoology, and Henry Balfour, Curator of the Pitt Rivers Museum, who were members of both. Balfour wrote to the Secretary of the ONHS to say that he was personally in favour of an amalgamation, as by 1900 the Ashmolean Society was 'dying of atrophy' (Bellamy 1908 47-48). His letter pointed out the differences between the two societies from his own experience, as a member of both. In his opinion, the ONHS 'aimed at a more or less popular treatment of scientific subjects,' and he felt that 'with the death of the Ashmolean Society the more serious aspects of science could be taken over by numerous special Societies and Clubs devoted to different branches of science' (Bellamy, 1908, 48). According to his letter, Balfour was in favour of 'grafting upon a robustly living stem, a suspendedly animate organism, organization [sic] I should say' (Bellamy, 1908, 48).

Although these new societies were indeed being founded to support the 'more serious aspects of science', they were exclusively University societies such as the *Junior Scientific Club* (passim), founded in 1882, of which Henry Balfour had been an undergraduate member.

The amalgamation of the two societies in 1901 contributed fourteen new members from the Ashmolean Society. Its valuable library, with items dating back to its original foundation in 1823, went to the ONHS. The books were removed by volunteers, who included Druce and Bellamy, to 'the Glastonbury Kitchen' of the University Museum (Bellamy, 1908, 390); the majority of these books are now in the possession of the Ashmolean Society and still available for loan (Serena Marner, Librarian, personal communication).

Many called the nature of this amalgamation 'a man of threescore years and ten marrying a young lady' with the library, valued at over £300 in 1901, forming the dowry (Bellamy, 1908). The 'marriage feast' was later celebrated with a Conversazione at Oxford Town Hall on July 8 1901 when the Society Treasurer, George Claridge Druce, by then Mayor of Oxford (see Chapter 5), entertained the members of the newly created 'Ashmolean Natural History Society'. Druce was assisted by the first President of the new society, Henry Balfour, Curator of the Pitt Rivers Museum, who had suggested its new title (Bellamy, 1908, 55).

By 1901 the total membership of the new *Ashmolean Natural History Society* was 315. An analysis of the addresses of the membership shows that forty-one original members from the ONHS remained after the amalgamation. The majority of these were Oxford citizens, councillors, tradesmen and technical assistants such as George Druce, Henry Underhill, Frank Bellamy and Alfred Robinson (see Chapter 5). University members were Professors J.O.Westwood, H.Balfour, E.B.Poulton and E.B. Tylor.

In contrast, only 17 members of the Ashmolean Society at the time of the amalgamation were members of the University. The officers of the Ashmolean Society and the Oxfordshire Natural History Society and Field Club united to form a new committee, and its former egalitarian nature seemed, in the words of Bellamy, like Underhill's membership,' to have waned to vanishing point' (Bellamy, 1908, 98).

A rather acerbic review of Bellamy's publication appeared in the *Oxford Magazine* (March 11, 1909). Athough it acknowledged that the book was a 'labour of love, as it contained every document that ever belonged to the Ashmolean Society,' the reviewer believed that 'it is really inconceivable that much of this book should ever become interesting' (*Oxford Magazine* March 11, 1909, 254). The attitude of this un-named contributor reflects the Whiggish approach that was apparent in much of its reporting. Today, in contrast to his opinion, historians of science and natural history will find

much of value in Bellamy's reflection of the social and intellectual history of town and gown in nineteenth century Oxford. As current anthropological thought turns to how we view ourselves, Bellamy's book provides evidence of a particular social and cultural world seen through his own analytical lens.

Conclusion

The functions of these local scientific societies signified more to their members than merely a pastime. Membership was a vocation and a privilege and an opportunity for intellectual group activity. In Oxford, for the non-University member it was a declaration of middle class cultural sophistication, demonstrating their familiarity with polite forms of cultural entertainment alongside art, music, literature and history. The foundation of the Oxfordshire Natural History Society and Field Club in particular acted as a vehicle for the town to become associated with the gown, and provided far greater opportunities for social and scientific interaction. By being present at lectures, field trips and Conversaziones, one was also visibly participating in Society.

The opportunity of using University libraries and attending and giving lectures was an intellectually rewarding and enhancing social privilege. Membership and patronage of a local intellectual society was crucial for any civic budding grandee and this was particularly noticeable in the cases of Henry Taunt and George Druce who, between the 1880s and 1900, became prominent participators in Oxford city life; by 1901, Druce had become Mayor of Oxford.

A long-standing participant of the ONHS whose contributions to many areas of intellectual knowledge in Oxford has until now been overlooked, is H.M.J. Underhill. An examination of his life and work in the following two chapters forms the culmination of the research for this thesis.

Chapter 7 Case Study: Henry Underhill and Oxford

A photograph is only a photograph after all, and will never be a picture because it has no soul

H.M.J. Underhill 1892

Fig 7.1 Henry Underhill, (1855-1920)
Underhill Collection, Folklore Society

This chapter examines the social and intellectual background of Henry Underhill (1855–1920), who was an 'Oxford Antiquarian, Entomologist and Grocer' (National Record of Archives). He was a devoted member of the Oxfordshire Natural History Society and Field Club (ONHS), and supported its social and intellectual pursuits for over twenty years. During his lifetime, Underhill was locally renowned for the quality of his illustrated lectures that he gave regularly to various groups in Oxford and beyond. His unique contribution to the dissemination of significant discoveries in British prehistory and to scientific knowledge in general, is only now being recognised.

This exploration of the life and work of Henry Michael John Underhill presents a valuable case study of one of the forgotten amateur devotees of scientific knowledge in the late nineteenth century. As an Oxford citizen, Underhill contributed a great deal to the University through his support of the ONHS and to the city in his work with 'George Street Congregational Church', and the 'Band of Hope'. The only published

reference to his work, apart from Bellamy's unique account of the ONHS (1908), is in Robert Gunther's 'Early Science in Oxford' (1937, 321-322).

Since his death in 1920, Underhill's work has gone unrecognised in both civic and University circles, and by the societies that he helped to found. It is now crucial to redress this balance in the current histories of knowledge about the past, by raising the profile of overlooked individuals like Henry Underhill. This present lacuna of detail has made tracing references to his work more challenging.

An excavation of Mr Underhill

Methodology

This section presents an account of the influential events in Henry Underhill's social and educational life in nineteenth century Oxford, his family and business responsibilities and his various intellectual connections. The second section focuses on his collection of lantern slides, particularly those illustrating British prehistory.

The reorganisation of the basement at the Institute of Archaeology led to the discovery an overlooked collection of forty-one exquisitely hand-painted lanternslides stored in a plain wooden box. It was labelled 'Underhill Slides: The Great Stone Circles of Britain' and contained images of prehistoric sites. They included Wayland's Smithy (Fig. 7.2), the Rollright Stones, Stanton Drew and Avebury, as they must have appeared to the artist in the late nineteenth century. Each slide had the initials 'H.M.J.U.1895' painted on the glass and the date and details of the artist's sources written on the corner of each mount.

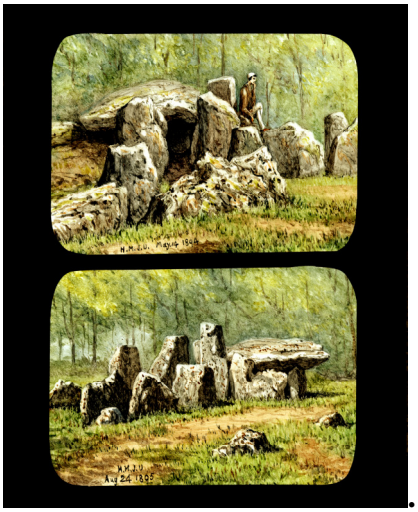


Fig 7.2 Wayland's Smithy H.M.J.U. 1895, Institute of Archaeology

It became apparent immediately that both the theme and the detail of Underhill's beautifully hand-painted lanternslides contained more than superficial entertainment value. Created by an artist and antiquarian, they provided a unique visual record of British prehistoric landscapes as they appeared in the late nineteenth century. One of the slides had been selected for the Institute website and the synthesis of nineteenth century images presented with the technology of the twenty-first century initiated further investigation into the life of the creator of the slides. Their discovery was to reveal further evidence for a network of social and intellectual relationships in late nineteenth century Oxford between people from both town and gown who shared a growing interest in British prehistory.

A search of census records at the Centre for Oxfordshire Studies, revealed 'H.M.J.U.' as Henry Michael John Underhill, an Oxford grocer and citizen. Further research indicated that he was also an enthusiastic antiquarian (see below for methodology).

The unfolding history of this unique collection of hand-painted glass lantern slides together with the discovery of the details of Underhill's lantern lectures, began to reveal evidence for a wide network of Oxford people among both 'town and gown' who shared scientific interests.

The essential elements in this research into the life of Henry Underhill have been achieved through information that emerged from primary sources. These include the weekly Oxford newspapers, Jackson's *Oxford Journal* and *Oxford Chronicle* and the *Berks and Bucks Gazette* which regularly reported in detail the events of various societies, and Underhill's obituary in *Jackson's Oxford Journal,* (October 8, 1920) mentioned his roles as a citizen and leading member of the Oxfordshire Natural History Society. Further 'buried' archives came from diaries, letters and annual proceedings of the Oxford scientific societies. Many University publications also provided valuable information on the dates and times of lectures and meetings of intellectual societies, as has *A Bibliography of Printed Works Relating to the City of Oxford* (Cordeaux and Merry, 1976).

Primary sources

The *National Register of Archives* contains one entry for Henry Underhill, describing him as an 'Oxford Grocer, Entomologist and Antiquarian'. This information had

recently been provided by the archivist at the Museum of the History of Science (Tony Simcock personal communication) where a collection of Underhill's natural history material was stored. A little more information came from web site of *The Magic Lantern Society*, where an entry for Henry Underhill had just been included in their newly published *Encyclopaedia of the Magic Lantern* (Robinson, Herbert, Crangle, 2001). Another search revealed that the Folklore Society website was displaying one of Underhill's hand-painted Irish folktale images (*Tale of Knockgrafton*) for its home page. The Folklore Society Archives show that over 200 of Underhill's folktale slides, had been donated by his sister (see below) after his death in 1920. This discovery completed the search for Underhill's scientific and archaeological slides and photograph albums.

This multi-faceted collection of primary sources provided evidence for Underhill's academic interests between 1870 and 1900. Firstly, there are the tangible and visual artefacts, the material culture of the lantern slide collections and photograph albums (see Chapter 8). Secondly, the unpublished records, handwritten diaries describing his activities while a student at Christ Church Cathedral School (The Underhill Archive, Museum of the History of Science) and observations of him as an Oxford citizen in the Scott diaries (see below). Thirdly, printed sources which contain accounts of his work include contributions to amateur scientific journals such as *Microscopy, The Magic Lantern* and *The Midland Naturalist*. Finally, the proceedings of amateur societies and local newspapers which reported his talks and various collections of ephemera, including posters advertising his activities, all serve to illustrate the breadth of his interests.

Fig 7.3 Poster advertising talk to the ONHS by Underhill on Artistic Japan, October 1890; designed by Underhill and printed on rice-paper

(Ashmolean Society Archives, Ms Top.Oxon.d.316, Bodleian Library).

Underhill's slide collections and his other works were dispersed after his death in 1920. It is probable that his sister, Annie Elizabeth Maud (1866-1946), with whom he shared a house at 231 Woodstock Road, distributed his lanternslides, photographs and technical equipment to relevant museums and societies in Oxford and beyond. For example, the note with the archive of his entomological notebooks at the Museum of the History of Science states 'lent by Miss Underhill, 1935', though fortunately they were never reclaimed. Recently they were re-discovered and catalogued by the Archivist.

The most straightforward, but most lengthy element of this research was to read the weekly editions of local Oxford newspapers, *Jackson's Oxford Journal* and the *Oxford Chronicle* beginning around 1869. For example, *The Oxford University Herald* (27 January 1870, page 8) contained a report from Christ Church School, where Underhill was a pupil and often a prize winner (see below).

The local press reveals valuable insights into the social and cultural life of nineteenth century Oxford. *Jackson's Oxford Journal* was politically conservative, and gave full reports of the events involving national royalty, titled families, and University appointments. The *Chronicle*, on the other hand, reported more about local events and has been a valuable source for the accounts of the activities of local societies: the Ashmolean Society, the Oxfordshire Natural History Society, and the meetings of the B.A.A.S. in 1860 and 1894.

The first collections of archives that contained references to Underhill by name were at the Bodleian Library. They were widely distributed among various classification schemes according to the subject, or the decision of the archivist. The comprehensive *List of Collections* by Cordeaux and Merry (1976) showed that the Bodleian held all the documents for the Ashmolean Society, which were deposited by Frank Bellamy (see Chapters 5 and 6 and Bellamy, 1908).

This preliminary research led to the discovery of further archives in Oxford, both in the Museum of the History of Science and the University Natural History Museum, though neither source was aware of the other's holdings. The formation of a

'Museums and Archives Group', which meets regularly in Oxford to share documentary information across the disciplines, has contributed to the location of many 'lost' archives.

Diaries of Mabel Scott, later Underhill (1860–1949)

A significant contribution to the various personal accounts of people discussed in this thesis from both the University and City are the diaries kept by Mabel Scott Underhill (1860-1949). In 1904, Mabel Scott became Henry Underhill's sister-in-law and her diaries provide details of life in Oxford between 1894 and 1924. Like Bellamy's account of the Oxfordshire Natural History Society, these diaries may provide a polarised view of many events, but they are, nevertheless, a valuable cultural archive.

The Scott diaries were encountered unexpectedly during investigations of the archives at Magdalen College, Oxford. Edward Underhill (1859–1924), Henry's younger brother, had been there as an undergraduate from 1878 to 1881 and became a Tutor and Senior Proctor from 1882 to 1919 (Magdalen College Alumni Record). It appeared possible, therefore that some mention of Edward Underhill's older brother, Henry, might appear in the archives. By chance, the following day, Scott's nephew, Martin Scott (1914–2001), was also tracing his Underhill connection. After seeing this enquiry in the library register, Martin contacted me with the news that he had inherited thirty-six volumes of her diaries which might be of interest for this research. Although Martin died shortly after this communication in 2001, his family allowed access to these diaries.

The Diaries provided information on many informal details of prominent University families of the time whom Scott met socially; the family of John Rhys (1840–1915), Principal of Jesus College, the Lucys, Oxford Iron Manufacturers, the (Gilbert) Murrays, the Gunthers, the Poultons, and her lessons with Charles Dodgson.

The diaries often reveal a rather superficial mind and indifferent education. Scott focused for the most part on people's external appearances and found conversations on politics or academic matters uninteresting (Vol XXXIX, 1907). Charles Dodgson's attempts to teach her logic, for example, were 'beyond her' (Vol X, February, 1894). However, the diaries provide a unique eyewitness account of the social confusions she

experienced, living between 'town and gown', with family connections in 'trade'. The Underhills' '*High Class Provision'* business in the High Street was central to the financial support of the family, but Scott found adjusting to this relationship after her marriage difficult (Vol XXVII October 1904).

Scott recorded her personal and honest recollections and therefore the diaries provide unique information about the social life of the Underhill family. She felt Henry was 'very dull, stiff and old-fashioned' (Vol XXVI, December 1904) and showed little interest in his social or intellectual activities, although they covered natural history, archaeology and philanthropic education. Nevertheless, these diaries are an exclusive source of social commentary and, like Butler (1912) (see Chapter 4), reflect the attitudes and lives of both the civic and academic communities the 'town and gown' of nineteenth century Oxford.

After much hesitation (1903, Vol. XXV, November 14), Scott agreed to marry Henry Underhill's younger brother, Edward, in 1904 and they bought a house in the new suburb of North Oxford for £700 (see Chapter 4). Her account of the role of a don's wife in pre-World War I Oxford provides new historical evidence for the social and cultural positions of the wives and families of academics at Oxford University, an aspect that has often been neglected in the official accounts (for example, Brock and Curthoys, 1997, 2000). Most narratives during the late Victorian era by Oxford dons would seem to cover the 'senior common room' aspect (for example, see Oman, 1941), nostalgia for Oxford (Tuckwell, 1907) or the political struggles between colleges and disciplines (Rothblatt 1968; Engel 1983b). However, the informal social contacts and alliances made during 'At Homes,' or Conversaziones (see Chapter 6), and garden parties provided in accounts by academic wives like Scott and Colvin, (1985), for example, had an influential, but unquantifiable, effect on official University opinions. This type of relational network should not be overlooked in the histories of knowledge.

Henry Underhill in Oxford

Henry Michael John Underhill was born at 7 High Street Oxford in 1855 (Census, 1861). That year marked a point halfway between two significant Victorian events,

the Great Exhibition of 1851 and the publication of Darwin's *The Origin of the Species* in 1859. These events promoted a great deal of public attention at the time and stimulated political, social, cultural and religious reactions, which affected both the immediate and the distant future. Though apparently intrinsically different, the Great Exhibition, on the one hand representing the foundations of Empire and the pursuit of consumerism, and Darwin's *Origin* on the other hand, that presented the culmination of recent scholarship concerning the discoveries and revelations of natural evolution. These two episodes were to have profound and lasting effects on the way in which existing social and cultural systems were ordered and accepted.

Today the effects of Darwin's *Origin* remain a persistent influence on scientific and religious scholarship (Brooke, 1991; Gould, 2002). For many, the latter half of the nineteenth century marked the beginning of a 'New World' of scientific and religious discovery and re-formation. Vestiges of the momentous question raised to public notice at the meeting of the British Association for the Advancement of Science in 1860, whether 'unfettered enquiry was compatible with the maintenance of a Christian faith' (Brock and Curthoys, 1997, vii), remained until the end of the century.

Many of these sociological and intellectual changes in perceptions of the past that occurred during the latter half of the nineteenth century are reflected in the evolution of Underhill's eclectic interests. His contributions to local societies and scientific journals appear to follow a pattern, as major discoveries and new disciplines evolved and combined. Consequently Underhill echoed the intellectual climate at a local level of an increasingly educated, articulate and socially mobile population. Evidence similar to Underhill's intellectual activities in the ONHS (see Chapters 6 and 8) is repeated in accounts of other members of scientific societies in county towns such as Chester, and Taunton, for example the accounts by Robinson (1971) and Williams (1973) of the Chester Society of Natural Science Literature and Art.

The Underhill family

By the nineteenth century, there was already an established elite of prosperous townsmen in Oxford (Brock and Curthoys, 1997, 470). The evidence that Henry Underhill's father was an Alderman (Paintin, 1911), suggests that this family had

some influential status. Handbills for the grocery trade in nineteenth century Oxford show that other branches of the Underhill family owned a well-established grocery property (Johnson, 1971, 6)

Fig 7.4 Underhill shop bill; John Johnson Collection Bodleian Library

Most of the civic community in nineteenth century Oxford was characterised by small traders, artisans and college servants. There appeared to be no great concentrations of labour and there was a wide gap between rich and poor (Brock and Curthoys 1997). The discontinuity in the demand for goods and services during University vacations caused chronic under-employment (Sephton, 2001; Brock and Curthoys, 1997, 181). It may be that, as many of the Underhills were members of the Congregational Church, they were only nominally elite, and not part of the recognised conventional middle-class Anglican society.

The Underhills had been a prominent trading family in Oxford since the first quarter of the century. Michael Underhill, Henry's grandfather, had founded the grocery business at 7 High Street and it remained *H.S Underhill & Sons* until 1920 (Paintin, *Jackson's Oxford Journal* October 18, 1920). The 1851 census shows that at these premises Michael Underhill employed twenty-three staff and, his wife, two children, a granddaughter, three servants, his married son Henry [Henry Scrivener Underhill, Henry Underhill's father], and his servant lived above the shop.

In 1891 the census shows that Henry Underhill senior still lived above the shop with his wife Annie and Henry and Maud, both unmarried adults, and two servants. In

1896, following the death of Henry Underhill senior the shop passed to Henry junior who became the proprietor and manager of the business until his own death in 1920. In 1921 the business was sold and became part of a multiple concern, the *International Stores* (Scott Diaries XXXIV). The shop in the High Street is now occupied by Ryman's Office Supplies.

Fig.7.5 Exterior of shop taken by Henry Underhill in the 1890s

Fig 7.6 Interior showing the new electric lighting
(Centre for Oxfordshire Studies, Underhill Photographic Collection)

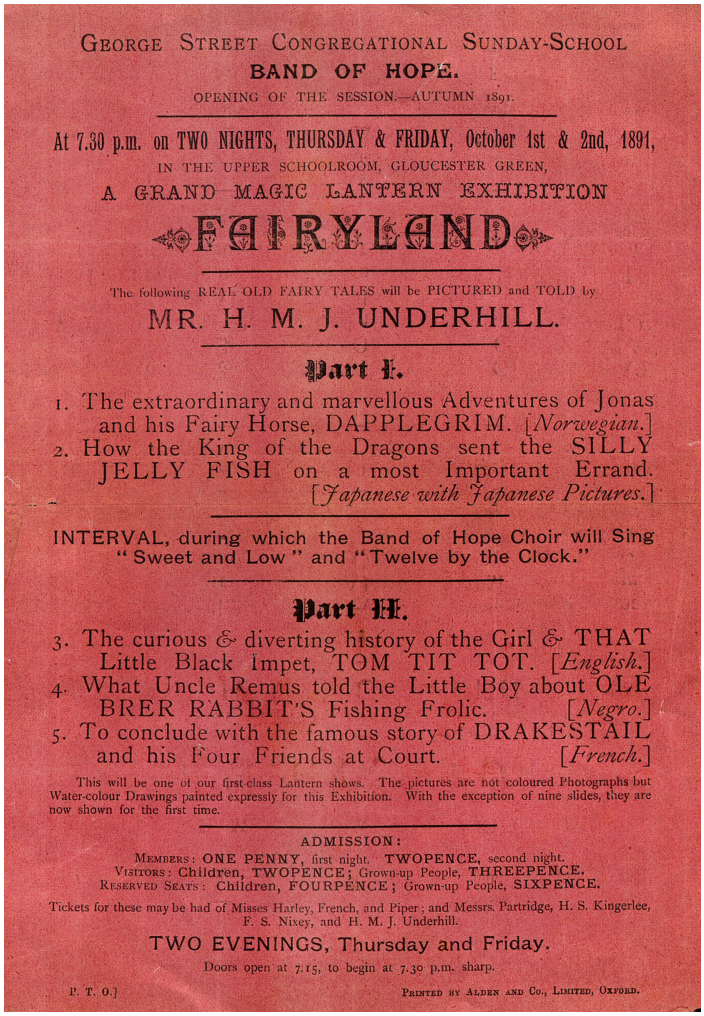
Although members of the Underhill family became Liberal Mayors and Aldermen (Paintin, *Oxford Chronicle* 16 September, 1911), Henry himself played little part in public politics. This may be because as the eldest son he had the traditional responsibility of overseeing the family business. He certainly supported his widowed mother and his unmarried sister after his father's death in 1896 (Scott Diaries).

Because of their Liberal and non-conformist background many of the Underhills participated in the Baptist and Congregational Churches and several educational and

charitable schemes. They were also involved in founding a Ragged School in Oxford for the non-sectarian education of the poorest children of the city (Paintin, 1911). Henry Underhill senior was one of the founders of the Oxford Boys' and Oxford Girls' High Schools (Obituary, *Jackson's Oxford Journal*, February 15, 1896). Henry's younger sister, Annie Elizabeth Maud (known as Maud) was the first girl to be enrolled on the register of Oxford Girls' High school in 1875 in the company of many of the daughters of University teachers and local businessmen (see Chapter 4). These pupils included Myfanwy and Olwen, the daughters of John Rhys, (q.v.) and Geraldine Lane Fox, one of the daughters of Colonel Lane Fox, later General Pitt Rivers, who was a boarder at Oxford High School until December 1879 (Schneller, 2004).

Although Henry Underhill had no active official political life himself, he participated in the social life of Oxford through the religious, philanthropic and intellectual organisations supported by his family. According to contemporary sources 'he was a quiet, unassuming man who disliked confrontations' (Paintin, 1911). He was deeply involved with the Oxford Temperance Society, especially the junior branch of the Band of Hope, and was President of the George Street Congregational Sunday School (Paintin, *Oxford Chronicle, 18 October, 1920*).

Between 1889 and 1894, Henry Underhill produced many finely painted lanternslides to show to local children at these societies. The slides, particularly those depicting folk or 'fairy' tales, were often shown during the entertainments put on by George Street Sunday School or the Band of Hope and one of his earliest magic lantern shows was for the Ragged Schools in January 1889 (*Jackson's Oxford Journal*, 12 January, 1889, p.5).



GEORGE STREET CONGREGATIONAL SUNDAY-SCHOOL

BAND OF HOPE.

OPENING OF THE SESSION.—AUTUMN 1891.

At 7.30 p.m. on TWO NIGHTS, THURSDAY & FRIDAY, October 1st & 2nd, 1891,

IN THE UPPER SCHOOLROOM, GLOUCESTER GREEN,

A GRAND MAGIC LANTERN EXHIBITION

FAIRYLAND

The following REAL OLD FAIRY TALES will be PICTURED and TOLD by

MR. H. M. J. UNDERHILL.

Part I.

1. The extraordinary and marvellous Adventures of Jonas and his Fairy Horse, DAPPLEGRIM. [*Norwegian.*]
2. How the King of the Dragons sent the SILLY JELLY FISH on a most Important Errand. [*Japanese with Japanese Pictures.*]

INTERVAL, during which the Band of Hope Choir will Sing "Sweet and Low" and "Twelve by the Clock."

Part II.

3. The curious & diverting history of the Girl & THAT Little Black Impet, TOM TIT TOT. [*English.*]
4. What Uncle Remus told the Little Boy about OLE BRER RABBIT'S Fishing Frolic. [*Negro.*]
5. To conclude with the famous story of DRAKESTAIL and his Four Friends at Court. [*French.*]

This will be one of our first-class Lantern shows. The pictures are not coloured Photographs but Water-colour Drawings painted expressly for this Exhibition. With the exception of nine slides, they are now shown for the first time.

ADMISSION:

MEMBERS: ONE PENNY, first night. TWOPENCE, second night.
VISITORS: Children, TWOPENCE; Grown-up People, THREEPENCE.
RESERVED SEATS: Children, FOURPENCE; Grown-up People, SIXPENCE.

Tickets for these may be had of Misses Harley, French, and Piper; and Messrs. Partridge, H. S. Kingerlee, F. S. Nixey, and H. M. J. Underhill.

TWO EVENINGS, Thursday and Friday.

Doors open at 7.15, to begin at 7.30 p.m. sharp.

P. T. O.]

PRINTED BY ALDEN AND CO., LIMITED, OXFORD.

Fig 7.7 Fairyland Poster designed by Underhill

(G.A.Oxon 4* 270, Bodleian Library).

Underhill the Shopkeeper

The starting date of 1850 was selected for this thesis as it marked an unofficial watershed in much of the literature on the social developments of the nineteenth century (Winstanley 1993, 3; McCleod, 1996; Newsome, 1997). Chapters 2 and 3 focused on significant social and cultural influences in Britain during the latter half of the nineteenth century; Chapter 4 presented the life of town and gown in Oxford. This section explores the occupational, social and cultural experiences of Henry Underhill.

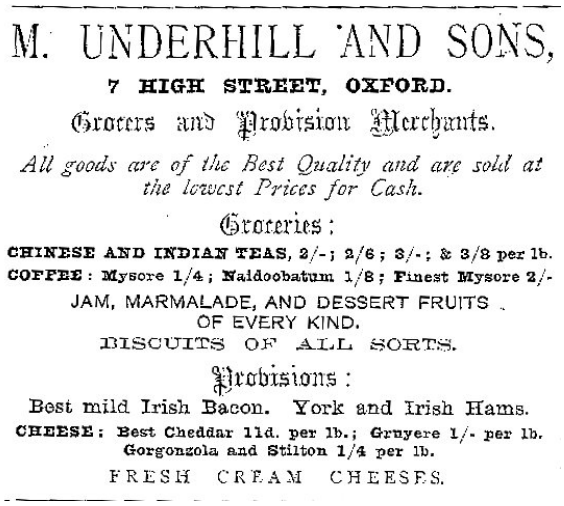


Fig 7:8 Advertisement.

Oxford Magazine, inside cover, March 11, 1909, Centre for Oxfordshire Studies

Apart from his wide intellectual interest in natural history, folklore and archaeology, for most of his adult life Henry Underhill was responsible for managing the family business in Oxford. He worked at the shop every day (Scott Diaries, 24 January 1904), and would have been very aware of his dual role of shop proprietor and amateur scientist.

The question of the social position of the nineteenth century shopkeeper has so far been neglected in academic studies of Victorian history. They are often relegated to the role of onlooker, or a dependant in the historical process. A shopkeeper could be 'the focus of resentment from below and mild scorn and condescension from above' (Winstanley, 1993, viii). Victorian literature contains many examples of how they were viewed by contemporary society (see for example, the works of Charles Dickens and H.G. Wells). In Oxford, the citizen of nineteenth-century novels and memoirs was conventionally 'the ingratiating and importunate tradesman, attending hat in hand at the side entrance of the college for the condescension of an order' (Brock and Curthoys 1997, 470).

In the case of the Underhill family, there is evidence to supports this observation. During the 1880s, the undergraduates of Magdalen College regarded Henry Underhill's younger brother Edward

> *…with mild scorn 'for his want of background, coming as he did from a family in 'trade'. He was christened 'Squish' from his kinship real or imaginary with a grocer of*

his name in the High Street, Underhill had all the spongy pliancy of the article in question without any of its pungency or flavour

(Simpson, 1916, Magdalen College Archives).

By then Edward Underhill was a classics tutor and there was frequent ridicule from College members as the family delivery van brought his weekly supply of groceries (ibid). Certainly, Mabel Scott's early impressions and opinions of Edward and the Underhill family also reflected this attitude:

25 January 1904

In the afternoon, Edward took me down to 'The Shop' to have tea with Harry. It was such a new experience, I felt as though it were a farce- play [sic]. I thought that if a year ago someone had said I should be sitting in the counting house having tea with a middle-aged grocer with his brother my fiancé sitting opposite I should never have believed it. Edward took me in through the front door in the High Street. We walked in between the counters biscuits and tea abounding and the assistants enjoying me with undisguised interest. We found Harry and a very nice little tea awaiting us at the end a little office full of cash and other books and ledgers. Before sitting down I was taken over the premises at the back store places and warehouses including a place for smoking bacon into which I put my head-then suddenly withdrew it thinking of my new hat

*(*Scott Diaries, Vol. XXVI 1903-1904*)*

At the same time there was a small elite of Oxford townsmen, some possibly University graduates, who could move more comfortably in the upper echelons of both worlds of town and gown (Brock and Curthoys, 1997, 470). However, families like the Morrells or the Lucys were unlikely to socialize with the local grocer.

In the late nineteenth century it was often considered difficult for 'outsiders' to get a foothold in University society. Despite the growth of suburban North Oxford, which began to make neighbours of tradesmen and dons, their social lives remained largely distinct (Colvin 1985, 267–278, and see Max Müller, 1901, Chapter 4). Following their marriage Edward and Mabel Underhill bought a house in Northmoor Road, North Oxford, and, because of his University status, they were able to join the academic social network (Scott Diaries).

After the death of his father in 1896, Henry Underhill moved to 20 Bardwell Road, Oxford with his mother and sister, and one servant (Census, 1901). This address was also in the new suburb of North Oxford, though it appears that Mabel still found them 'beyond the pale' socially, as Henry continued to work 'at the shop' (Diaries Vol XXVII 1904).

Although Winstanley suggested that nineteenth century shopkeepers were not 'academic theoreticians or philosophers' (1993, ix), such a distinction is over-simplistic. In Oxford, between 1870 and 1900, discoveries in natural history and prehistory were becoming part of the common intellectual ethos. The evidence for the life and work of Henry Underhill, and his associate, George Claridge Druce (Chapters 5 and 6), shows that both men made a significant contribution to the social and intellectual life of the University and the city.

The late nineteenth century witnessed a widening expansion of both academic and amateur expertise (see Chapter 2). The question of 'the autodidact' of that time is particularly significant, as science had become an integral part of Victorian culture among the lower middle classes (Lightman 1997; Freeman, 2004; Daunton,2005; Secord 2002; Alberti 2003b and Chapter 8).

From around 1910, Underhill's shop in the High Street appears to have been less prosperous (Scott Vol. XXXI, 20 March, 1911). This was possibly due to a number of local and national political and economic factors, but it does also coincide with a gap in the evidence for Underhill's public and intellectual activities. Scott noted that he had been ill for 15 months during 1908 and 1909 (Vol. XXX, 1909). The combination of his illness, and the pressure of business, may help to explain the diminishing of his local intellectual contributions and the evident absence of any further hand-painted slides from around 1900.

Early Education of Henry Michael John Underhill

Henry Underhill and his brother Edward were pupils at Christ Church Cathedral School in Oxford. Unfortunately, no nineteenth century records or documents of the school exist, as they were burnt during an outbreak of ringworm in the early twentieth century (Christ Church Archivist, personal communication) but the record of Alumni

for Magdalen College listed Edward Underhill as having attended Christ Church Cathedral School and the evidence from Henry Underhill's journal later confirmed this (The Underhill Archive, Notebook 7, Museum of the History of Science).

In 1871 Henry Underhill noted 'School began at 11 o'clock on Monday January 30 (The Underhill Archive, Notebook 4; Museum of the History of Science); this would be at a time far later than that the City Board Schools. He also writes about his schoolwork, commenting, 'we have a new Master at School, he puts us through our lessons better than Mr Price [The Headmaster], we did our Virgil badly'. He noted in his journal that at school he was 'top in Bible lessons, top in Virgil, too', and the following day 'second in Greek grammar' (Notebook 7, 6 February 1871, Underhill Archive; Museum of the History of Science).

In January 1870, a list of prizes awarded at Christ Church Cathedral School's annual prize-giving appeared in *The Oxford University Herald* (p. 8): 'Upper School Divinity: Underhill, Classics: Underhill, Mathematics: Underhill, History: Underhill and French: Underhill'. Though no initials are given, it is likely that this was Henry as he would have been fifteen at the time.

His journal for 1871 contains further comments about his progress at school and includes details of his visits to 'Mr Riviere's' which seem to take place twice weekly during the school day. On 3 February he noted that Mr Riviere 'expatiated on 'My System of National Education' (The Underhill Archive; Notebook 7, Museum of the History of Science).

William Riviere (1806–1876) was a professional artist and private teacher who took private pupils in Oxford at his studio in Park Town (Kelly's Directory 1865), and later at his house, 36 Beaumont Street [now the Institute of Archaeology], where he died in 1876 (Obituary *Jackson's Oxford Journal,* 2 Sept 1876).

Riviere's impact on Henry Underhill's artistic talent as a young scholar was probably very strong. His influence can also be seen in the visual representation of Underhill's later work (see next chapter). Underhill appears to be having regular drawing lessons with Riviere, at the University Galleries in Beaumont Street, now the Cast Gallery. He particularly mentions in his journal drawing classical figures such as Marcus Aurelius and Laocoön (The Underhill Archive Notebook 7; Museum of the History of Science).

Fig 7.9 Cast of Laocoön; Ashmolean Museum

Between 1850 and 1870, Riviere was a well-known genre artist, and, like Ruskin, held strong views about art 'as an important branch of science, and not as a mere polite amusement' (Obituary, *Jackson's Oxford Journal,* 2 Sept 1876). William and his son Briton worked on the frescoes in the Debating Hall of the Oxford Union, (now the library) by invitation of the Oxford Union Society of Murals, restoring and completing the work that had been started in 1857 by the Pre-Raphaelite painters in Oxford (Brock and Curthoys, 1997, xviii).

There are very few references to William Riviere's contribution to the art world of the nineteenth century, either in Oxford or London. According to this research, a small archive exists in the Cheltenham Art Gallery and another in the Frick Collection, New York. Like many other individuals in this thesis, since his death, William Riviere's work has been overlooked.

Henry Underhill's Notebooks

The only primary source giving details of Henry Underhill's early life is the collection of exquisite notebooks at the Museum of the History of Science (Underhill Archive; Museum of the History of Science). There are eight sketchbooks altogether and a small notebook, which began on 13 January 1871. Although they are listed in the Archives as 'Entomological Notebooks', notebook 7, a small 3 x 5 inches notebook, kept between January and March 1871, gives a detailed account of his daily life

during one term at Christ Church School. Not only does this notebook supply the details of his educational and artistic training discussed previously, it also provides valuable information about Underhill's early fascination with natural history, where observations and records of biological specimens are noted in minute detail. The accuracy of his notes suggested that he had access to a variety of scientific information in Oxford.

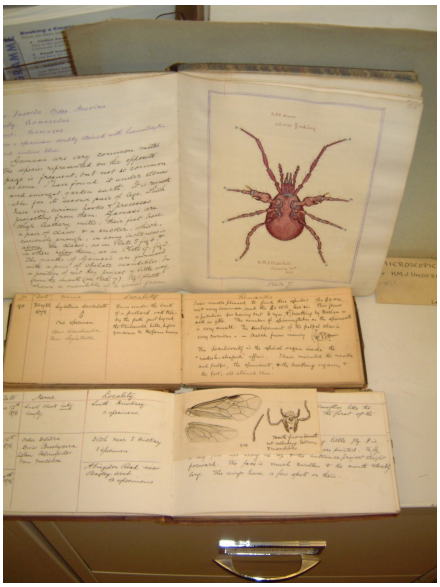


Fig 7:10 Underhill Archive, Notebook 4; Museum of the History of Science

For some time, the Underhill notebooks had not been available for research owing to the reorganisation of the Museum's archives. In October 2002, they finally became accessible, and have since proved to be a valuable primary source. They provide both written and pictorial records of Underhill's early interests and of his artistic ability. Two large sketchbooks reveal his early gifts and interests in microscopy, entomology and other natural history subjects, the journal contains meticulous notes on the botanical and entomological specimens observed in the Oxford area during expeditions with his brother, Edward, on half-day holidays from school.

In these notebooks (Underhill Archive, Notebooks 5–6; Museum of the History of Science), Underhill recorded the books on natural history that he had been reading at 'The Camera' or 'The Radcliffe,' the new Radcliffe Science Library opened at the University Museum in 1861 (Brock and Curthoys, 1997, 692). It is clear that Underhill had access to the library, and there he copied drawings and made notes of specimens, to research or collect later (MSS Underhill). The books he used in the library appear to be the standard reference materials of the day, often written by

clergymen-naturalists. They include, for example, *An Introduction to the Study of Microscopic Fungi* by Cooke and Sowerby (1865) and *Common Objects of the Microscope,* by J. G. Wood 1861 (for further discussion on the influence of this genre of literature see Lightman, 1997, 187–211, and Chapters 2 and 8 of this thesis).

From the evidence of his early representational work, it is clear that Underhill was an excellent draughtsman and had a gift for the observation of minute details. According to Harry Paintin (see Chapter 5), Underhill had won various prizes for his artistic skills (*Oxford Times*, Friday 8 October, 1920). R.T. Gunther (1869–1940) possibly drew on this information later for his entry on Underhill in *Early Science in Oxford* (1937, 321). Both accounts refer to a prize-winning painting in oils by Underhill at the age of twelve of *The Last Supper* although this picture has not been traced. Gunther also mentioned that Underhill had been trained to paint in watercolours and oils by the artist 'Adrian' Riviere and that he had been 'regarded as an infant prodigy' (1937, 321) but gave no further details or references. Scott also noted an oil painting of Magdalen College in her diary that was auctioned following Mrs Underhill's death in 1906, though its whereabouts today are probably untraceable (Vol XXXVIIIa, September, 1906).

Underhill and Amateur Science

Underhill noted in his diaries (Underhill MSS, Museum of the History of Science) that he regularly subscribed to two popular science journals, *Hardwicke's Science Gossip* and *The Journal of Postal Microscopy*. This journal consisted of a network of subscribers and contributors who maintained a frequent postal exchange of specimens of natural history. These could almost be called 'specimens of curiosity' as they were obtained from all over the world and exchanged to create microscopic slide collections at home. On 19 January 1871, for example, Underhill recorded in the journal 'Made three slides this morning, hair of South America Cactus, hair of woolly caterpillar and Fijian native cloth, (Underhill Archive, Notebook 7; Museum of the History of Science). This, and similar entries, illustrates the eclectic and often eccentric interests of the journal's subscribers, all of whom appeared to be interested amateurs (see below, amateur journals).

In his later work Underhill often collaborated with his cousin Frank J. Allen (1854–1942), a cousin from Somerset who was also a keen naturalist and the son of the editor of *The Journal of Postal Microscopy* (founded 1839). Allen later studied the Human Sciences at St John's College Cambridge and is recorded in their archives as a 'physiologist, musician and antiquarian' (St John Gray, 1942, 113-114). He became a physiology lecturer at Mason College, Birmingham (Obituary, Shepton Mallet Journal, January 1, 1943)

In 1875, the cousins contributed to a series of 'Notes on the Diptera' in *Hardwicke's Science Gossi,p* for example, 'Notes on the Diptera' (Underhill and Allen, 1875a, 147-150) and 'Spiders' Webs and Spinnerets' (1875b, 138, 195-198). The articles were illustrated by black-and-white prints taken from Underhill's watercolours in his sketchbooks. According to George McGavin, Curator of Entomology at the University Museum of Natural History, these printed reproductions can in no way do justice to Underhill's techniques or the accurate detail of the colour shading (personal communication, 2002).

Henry Underhill and Frank Allen continued to share their interests in natural history, archaeology and photography throughout their adult lives, collaborating intellectually from the 1880s and creating traditional fairy tale plays for Underhill's classes at the Band of Hope in George Street Oxford, in the 1900s (Scott Diaries, Vol XXVII, January 1905). For these, Underhill wrote the script and Allen composed the music (F.J. Allen Archive: St John's College Cambridge).

Fig 7.11 An example of *Hardwicke's Science Gossip.* (University Museum Archives)

Fig 7.12 Spider by Henry Underhill

(Underhill Archive Notebook 4; Museum of the History of Science)

Underhill's lectures

Underhill's lectures to the ONHS began in 1887. Bellamy (1908, 193–198), lists the topics he covered: *Spiders* (1887), *Insect Eyes* (1888) and *Microscopic Organisms from Ponds* (1889). Other lectures included *Artistic Japan* (1890), *Painting Lantern Slides* (1891) and *A Holiday in Norway* (1892). These were all illustrated with his hand-painted lanternslides. At present, no slides from his entomological lectures have been traced, but the subject matter coincides with the content of his early sketchbooks now in the Museum of the History of Science archive and his articles in *Hardwicke's Science Gossip*.

The transcript of his talk on '*Microscopic Organisms'* to the ONHS in 1888 appears in Bellamy (1908, 235). In this talk, Underhill discussed the problems experienced in classifying microscopic creature or animals when first discovered. He concluded with the question of the sources and origins of life where, although he indicated his acceptance of the implications of Darwin's theories, he continued to support the idea of a Divine Creator from within the background of natural theology.

> *Some people suppose that the theory of evolution is antagonistic to the idea of a Divine Creator. The truth of both ideas seems to rest on the same basis of argument'. Underhill felt that evolution was a solution to problems otherwise insoluble. He explained what he understood to be an organisation, the conscious adaptation of means to an end, as 'an arrangement'. He maintained that an organism was arranged in such a manner and implied an 'organiser.' He did not believe therefore, that these organisms could happen by chance and accepts evolution as an explanation of the inexplicable. As he said, 'the same idea could be said of the concept of God from a scientific viewpoint; explaining the inexplicable.*
>
> (Bellamy 1908, 235–238).

Underhill's observations suggest that, like many amateur investigators of science, he was still convinced of the role of 'Intelligent Design in nature' (see Chapters 2 and Chapter 8 for further discussion of these issues).

Underhill and Folktales

It is very likely that Underhill's interest in folktales was influenced by the publications of Andrew Lang (1844–1912). *The Blue Fairy Book* (1889) and *The Yellow Fairy Book* (1894), illustrated by H.J. Ford, (1860-1941) (below and Appendix 6), were popular with both adults and children and Lang's work promoted a vogue for exploring folk traditions as survivals of an ancient past.

In the 1890s these ideas became transformed into many cultural and academic forms, in literature, art, music and the theatre. They were also absorbed by archaeologists, anthropologists and folklorists, such as Edward Tylor (1871), Arthur Evans (1895) and MacRitchie (1893). In the late nineteenth century, many of the boundaries between academic disciplines were still fairly fluid, and to be interested in natural history, folklore, archaeology and anthropology was not considered unusual. As long as the study of these subjects was described as a science, then their investigation was a legitimate form of knowledge (Gomme, 1908; Bennett, 1994; 1997)

In his role as secretary of the ONHS, it is likely that Underhill became involved with the visit of the *International Folklore Congress* to Oxford and the Pitt Rivers Museum in 1891 (Jacobs and Nutt, 1892). The Congress was held at the Society of Antiquaries and members were invited to Oxford on the Saturday to 'Lunch at Merton College by invitation of the President Mr Andrew Lang, and at Jesus College at invitation of Professor Rhys, then to visit the Museums' (Jacobs and Nutt, 1892, 12).

The Organising Committee of this Congress consisted of a range of anthropologists, historians, classicists, linguists and archaeologists, including J.G. Frazer, Professor John Rhys, A.C. Haddon, S. Hartland, J. Lubbock, Alfred Nutt, General Pitt Rivers and E.B. Tylor; men whose individual interests illustrate the eclectic subject-matter covered by members of the Folklore Society.

In February 1893, possibly having been inspired by the work of Lang and the Folklore Society, Underhill adopted the folklore theme for his inaugural lecture as ONHS President on *The Age and Distribution of Folktales*. The lecture was given 'in the presence of the committee', which included prominent Oxford academics such as E.B. Tylor, E.B. Poulton and H. Balfour (Bellamy 1908, 98) and 'members of the Rhys family' (Rhys, 1893, 41).

The local press reported that Underhill's lecture was 'beautifully illustrated with magic lantern slides. He recited four tales from Russia, Japan, Ireland and England respectively, for each of which he had drawn between twenty and thirty pictures' (*Oxford Chronicle and Berks and Bucks Gazette* 11 February, 1893, p2). The use of the word 'recited' suggests that Underhill may simply have told the tales and did not attempt to analyse their content. Underhill had given the same lecture 'to a juvenile audience of nearly 400 children in the Large Lecture Room of the Natural History Museum' that afternoon (*Jackson's Oxford Journal,* 11 February 1893). This children's event may have been the precursor of the annual series of 'Lectures to Children' that are given in the Museum of Natural History to this day under the aegis of the present-day *Ashmolean Natural History Society.* These lectures were officially inaugurated in 1894 and it is very likely that the idea had originally been Underhill's.

Some of Underhill's illustrations for his folktales were based on those by the artist H. J. Ford (Simkin, 1987, 14). Ford illustrated all Andrew Lang's fairy tales and, like William Riviere, appears to have escaped the notice of modern scholarship, though during his lifetime he too was a prolific and popular illustrator of children's books and anthologies of poetry (Houfe, 1981).

Underhill only initialled slides that were entirely his own compositions although he referred to Ford's work (Simkin, 1987, 14). One of Lang's stories, *Drakestail Visits the King* (Lang, 1890), illustrates his intellectual integrity. The story is of a duck that travels to the king's palace, progressively gathering companions on the way. Ford illustrated this tale with one composite black-and-white illustration, but from this, using Ford's work, Underhill produced over 20 slides, extrapolating each character for a different scene and adding in his own background and ornamentation.

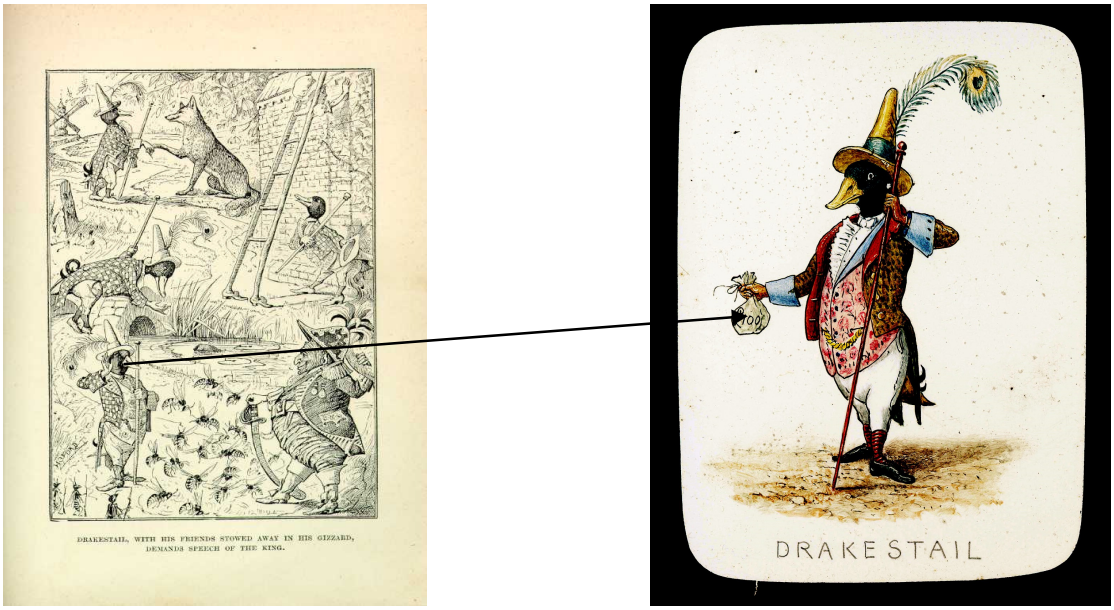


Fig 7.13 *Drakestail*, H.J.Ford in Lang, 1890 ***Drakestail*, Underhill c.1893**

(Underhill Collection, Folklore Society Archives)

This technique of extrapolation is particularly significant, as it is a precursor to Underhill's more academic studies of landscape (see chapter 8). In Underhill's later illustrations of fairy stories, *Dapplegrim* in 1891 and *Guleesh* in 1893 (Underhill Collection, Folklore Society Archives), it is possible to identify his references to local archaeological sites in the background. Some are merely 'quotations,' such as his use of megaliths and a suggestion of Silbury Hill, but the landscape used for the Irish tale of *Guleesh* is clearly the Romano-British earthwork at Ashdown, known as Alfred's Castle, on the Berkshire Ridgeway (see below).

Underhill's style of juxtaposing ancient landscapes and folktales was probably his own unique invention. He painted the site at Ashdown again for his collection of *Ancient Stone Circles of Britain* completed between 1894 and 1895.

Fig 7.14 Folktales and landscape (Underhill Collection, Folklore Society Archives)

Silbury Hill, Wiltshire

Guleesh: megaliths and Silbury Hill

Guleesh: Alfred's Castle Alfred's Castle, Berkshire Ridgeway

Underhill and landscape

Fig 7.15 Avebury, Underhill Collection (Institute of Archaeology, Oxford).

The lanternslides that first initiated this search for their creator were the forty-one hand-painted miniatures, illustrating the sites and in some cases the plans of the British megalithic monuments of Stonehenge, Avebury, the Rollright Stones and Stanton Drew. Later in this chapter their importance in the field of nineteenth century approaches to prehistory are discussed. Here, the focus is on their author, their creation and their social and their cultural reception in Oxford.

The preparation of the slides was a lengthy process. It seems to have taken about three months to complete each image, every one of which is a miniature landscape painting in its own right. They were painted during the winter using information from sketches and notes made the previous summer. Each slide carries the information of the date sketched, for example 'Aug 24th, 1895' and the date painted 'Nov. 4 to 6 1895.'

For these slides, Underhill scrupulously acknowledged references to information taken from earlier antiquarians such as William Stukeley at Stonehenge and Avebury (Gough Maps Collection, Bodleian Library) and C.W. Dymond (1877) as he had when referring to Ford's folk-tale illustrations.

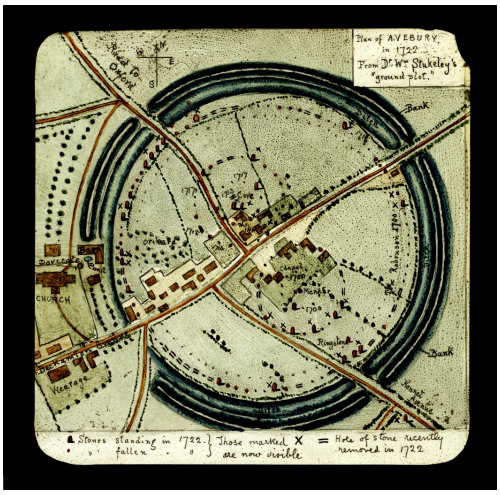


Fig 7.15 Plan of Avebury based on Stukeley
(Underhill Collection Institute of Archaeology, Oxford)

The lecture that accompanied these slides, *Great Stone Circles*, was given to the ONHS on 8 February 1896. According to the local press 'Mr Arthur Evans, Keeper of Antiquities at the Ashmolean Museum, and Professor Poulton, Hope Professor of Entomology, were both in attendance and a long and interesting discussion took place afterwards' (*Oxford Chronicle,* 12 February, 1896).

The circumstances of Underhill's lecture provide significant evidence for the flexible relationships between amateurs and professionals in Oxford and of their willingness to share their mutual interests in the 'discovery' of British prehistory. Many of these interests in the ancient past, the discovery of early human societies and their ritualised landscapes had been stimulated by the intellectual and religious debates from the middle of the nineteenth century. Indeed, coincidentally, the discussion in 1860 on human origins between Huxley and Wilberforce, and Underhill's talk on *Great Stone Circles* both occurred in the University Museum.

Underhill's talk to an interested group of both academic and lay people illustrates the fluidity of the status of research into British prehistory in the years just before it became an academic discipline (for discussion of intellectual identity see Chapter 3). By the end of the century, the emerging knowledge of the antiquity and the physical and social diversity of the human race made it a suitable subject for academic University scholarship. The broad nature of the audience at Underhill's talk suggests that in Oxford, at least, the subject of British prehistory had not by then become

completely professionalised and was of a general, rather than specialised, interest (see Chapter 3).

Bellamy classified Underhill's talk in the Anthropology section of the ONHS proceedings where it appeared with talks by University Professors such as Tylor and Balfour (Bellamy, 1908, 183; ONHS Chapter 6).

Similar lectures on British prehistory were also classified in the anthropology section at meetings of the British Association at that time (see Sillitoe, 2005, 8, for a discussion of the formation of section H in 1884).

Until 2004, it appeared that Underhill's slides of '*The Great Stone Circles'* were a unique find. Although records indicated that in 1895 and 1897 he gave a talk at the University Museum with 'exquisitely painted lantern illustrations of *Buried Roman Cities in England'*, to the Annual Conference of the Midland Union of Natural History Societies, (*Oxford Chronicle and Oxford Times,* 6 July, 1895 and Bellamy, 1908, 184 and 338), there was no evidence of this collection.

These slides have now been located following a further search in the basement of the Institute of Archaeology. The Archivist at the time, Deborah Harlan, unearthed a box containing another fourteen hand-painted and photographic slides showing the Roman mosaics at North Leigh and excavations at Silchester and Cirencester (see below).

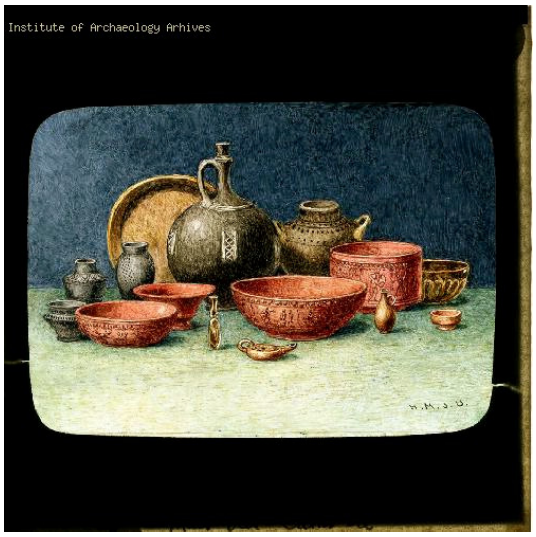


Fig 7.16 Roman pottery, possibly from Silchester (Underhill Collection Institute of Archaeology, Oxford)

After 1895, Underhill's office of President and his term of committee membership ceased. His father died suddenly in 1896, leaving the management of H.S. Underhill

& Sons to him. From then he appeared to concentrate more on photography, developing his own negatives and producing photographic lanternslides at home. He became involved in the Oxford Camera Club and was elected as a member in 1897. Underhill did not take on such a prominent role as he had in the Oxfordshire Natural History Society, and though he exhibited photographs for competitions, he did not gain full recognition for his talents (Paintin, *Oxford Times*, Friday 8 October 1920).

Underhill and photography

Fig 7. 17 The old windmill at Headington painted c1900, Underhill Collection

In 1907, Underhill completed a 'Photographic study of Windmills', most of them from Oxfordshire, Warwickshire, Berkshire and Buckinghamshire. It had been proposed at the Annual Congress of Archaeological Societies in 1894 (Chippindale 2004, 161) that local societies should organise and conduct the actual photography of their specific counties to 'record in a photographic archive categories of prehistoric, Roman and Anglo-Saxon remains; ecclesiastical architecture; domestic architecture; village scenes; ethnographic subjects; objects of natural history and portraits of historical significance.' In 1897, the OAHS set up a sub-committee with members from the Oxford Camera Club and the ONHS to coordinate the project for Oxfordshire.

Underhill became the Camera Club representative and individually completed a collection of over sixty-four lanternslides and photographs of windmills. Copies of these images are now kept at the Museum of the History of Science and the Centre for Oxfordshire Studies. The Underhill album of Windmills at the Museum of the History of Science includes his handwritten explanations of the working mechanisms. As many of these structures no longer exist today, this is a valuable archive for industrial archaeologists (personal communication, Tony Simcock, archivist).

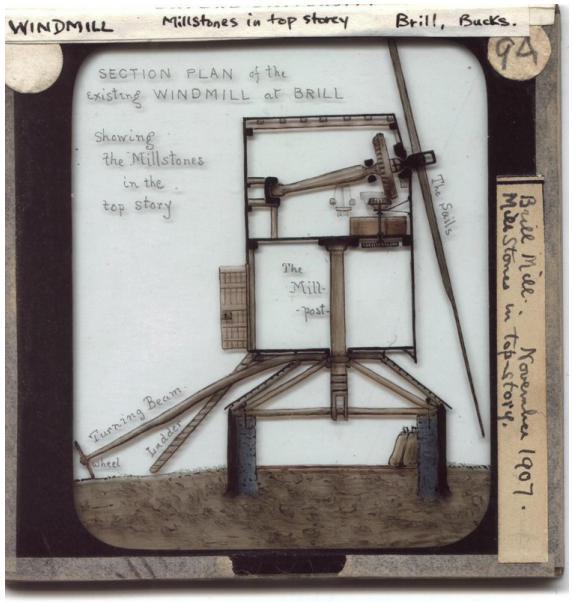


Fig 7.18 Section of windmill at Brill, Buckinghamshire (History of Art Archives, Oxford University)

From 1900, following his resignation from the ONHS, Underhill continued to lecture to the Oxford Camera Club but his topics were mainly on technical issues (*Jackson's Oxford Journal,* 6 February 1904). He entered his photographs and photographic lantern slides in local competitions and although some of his work 'achieved honourable mention' he never received one of the higher prizes (Paintin, *Oxford Chronicle*, 8 October 1920). It may be that the medium of photography did not, as he believed, 'have a soul' (Underhill 1892, 14). One photograph entitled 'Light and Shade' shows Wayland's Smithy before its restoration in the twentieth century.

Fig 7.19 Wayland's Smithy from Underhill Collection, Folklore Society Archives

At present, there is very little evidence for Underhill's intellectual activities after 1907. The photographic study of windmills seems to have been his last project until the end of the First World War. This may be due to personal difficulties, his health and increasing business responsibilities. On the other hand, he may have joined the local 'war effort': he and his sister had a family of Belgian refugees staying with them in 1914–1915 (Scott Diaries, Vol. XXXV 15 Jan 1915).

Underhill's last photographic slides were taken in 1918 and 1919, during outings to places around Oxford, recording a visit 'Along the Thames at Wolvercote', 'The River Dorn' and 'In Begbrook Woods' (Underhill Collection, Folklore Society Archive). He revisited places along the Ridgeway, Wayland's Smithy, Uffington, and the White Horse, possibly taking a short holiday as indicated by a group photograph outside a cottage.

The photographs of Wayland's Smithy, taken in 1919 (see above) and his earlier hand-painted slides created in 1894 illustrate the site as it was before 'restoration' in the 1920s (see for example, the work of R.J.C. Atkinson 1965). These images present a distinctive visual record of the 'past in the past' (Gosden and Lock 1998; Bradley 2000) and symbolise the work of a sensitive and dedicated unknown antiquarian, amateur naturalist and archaeologist.

Underhill and the Magic Lantern

Lanternslides were used exclusively by Henry Underhill to accompany his lectures on natural history, folklore and archaeology. In its role as a scientific instrument during the late nineteenth century, the lantern was able to move between the realms of literature, science, philosophy, the fine arts and entertainment. In this way the magic lantern embodied the multi-disciplinary approach of many antiquarians whose science was grounded in natural philosophy.

Possibly Underhill's involvement with the children of the Oxford branch of the *Band of Hope Temperance Movement* around the 1880s first encouraged him to produce his own lanternslides. Many commercial slides available for loan from the National Temperance Society must have appeared crude to his artistic temperament

Fig 7.20 Temperance Society Slide, *The curse of Drink,* by Bampton's of Yorkshire, c.1870

Magic Lantern Society Archive

A set of slides Underhill produced in 1889 already showed his capacity for fine detail ('The Pleasures of Tobacco', a Moral Tale, in The Daphne and Ian Mackley Private Collection; personal communication, 2003).

Underhill's techniques for painting lanternslides were influenced by his lessons with the artist William Riviere (see above) and through his practice of close observation of natural objects from studying microscopic creatures. According to his article on the techniques of creating lanternslides (1892, 14–15), it is probable that he presented exact replicas or perhaps slightly enhanced versions of natural knowledge, through his images, though his particular remit was accuracy of representation.

The earliest evidence for this is the archive of entomological notebooks at the Museum of the History of Science, (see above) .It consists of watercolours of insects

and pond-life drawn from the microscope and notebooks of 'Captures', field notes taken during walks around Oxford. Underhill then prepared these 'captures' for glass slides. Each entry in his book bears the record of the magnification and how the slide was prepared. By March 1871, one small notebook contained a record of the 200 slides and he notes that very few were damaged (Underhill Archive; Museum of the History of Science Notebook 5, 1871).

Crangle (2000, 16–24), a historian of the visual image, suggests that a serious study of the lantern as an educational tool would reveal a clearer picture of the extent to which this medium contributed to public education. It is now vital to incorporate the use of early visual material such as lanternslides (Underhill Chapter 7) and charts and pictures (Alfred Robinson, Chapters 5 and 7) into a history of the growth of scientific knowledge about the past. These categories of material culture illustrate the way that knowledge of the British past was created, presented and received.

The Underhill lanternslide Collection

The Great Stone Circles of Britain February 1896

Henry Underhill gave an illustrated lecture on *Great Stone Circles* on 12 February 1896 to the Oxfordshire Natural History Society (*Oxford Chronicle,* 26 February, 1896), and a long and interesting discussion followed in which Mr Arthur Evans and Professor Poulton took part' (*Jackson's Oxford Journal,* 7 March, 1896). These reports provide evidence for the fluidity of intellectual relationships between the mutual interests between both amateurs and professionals in British pre-history. Social and intellectual contacts such as these have received little attention in any history of nineteenth century Oxford. The lanternslides of *Great Stone Circles* represent the archaeological and historical phase of Underhill's work and form the nucleus of this chapter.

It has not been possible to trace the details of the content of Underhill's talk, but an examination of contemporary publications and talks that considered the meaning of the prehistoric landscape may suggest the direction that his research was taking (Appendix**).

The late 19th century saw an increased interest in megalithic monuments, both in academic and popular circles. Many theories about the stone circles persisted; earlier ideas of John Aubrey and William Stukeley, who had connected the building of the stone circles to the Druids, had not been entirely discounted (Chippindale, 2004, 239). Yet, because of the plethora of theories, some more rational than others, the academic world was again beginning to take the study of stone circles seriously, attempting to wean out the non-scientific ideas, possibly responding to the German and Danish scholarship (see Chapter 1). Towards the end of the century, this culminated in the British Association's 1899 Commission to 'formally study the Age of Stone Circles' (Chippindale 2004, 161). At the same time, the general public including popular 'friendly societies' such as the Ancient Order of Druids (Taunt, 1912; Chippindale, 2004, 172–4) were creating their own mythologies about the monuments.

Stonehenge

This case study of Stonehenge examines Underhill's investigations of the site and the processes he used in preparing his lanternslides. It also refers to another amateur scholar, Edgar Barclay(1842-1913) who became inspired by its landscape at the end of the nineteenth century and whose material Underhill used.

Stonehenge is not only the most prominent of British stone circles, it is also the one that has attracted the most attention in art and literature over the centuries a phenomenon that was recognised by Harrison in 1902 and in 2004 by Chippindale.

In December 1901 W. Jerome Harrison presented 'an exhaustive bibliography' of works relating to Stonehenge in The Wiltshire Archaeological and Natural History Magazine (Jerome Harrison, 1902, 1–169). It covered the 'dawn of actual research;' accounts from Greek, Early British, Mediaeval and seventeenth century literature and lastly, the period of 'Scientific Study of The Rude Stone Monuments: AD 1849–1902' (Jerome Harrison, 1902, 163). Jerome Harrison had traced 974 books and papers by 732 authors in total. His three main sources were the Birmingham Free Library, The Bodleian Library, and the Wiltshire Society's Library and Museum at Devizes. The final section, 'the Scientific Period, 1849–1902,' has been particularly relevant for this research as it contained works of various antiquarians and archaeologists whose case studies are presented in this thesis.

There were other megalithic possibilities, when considering a case study of early perceptions of prehistoric sites. Wayland's Smithy, for example, inspired both archaeological research and romantic literature in the late nineteenth century, particularly Kenilworth by Sir Walter Scott (Atkinson, 1965). The archaeology and folklore of the Rollright Stones were discussed by Arthur Evans in 1895, and Henry Taunt (Appendix) produced a guidebook in 1907. In 1991 Ucko compiled a social history of Avebury comparing the various editions of Stukeley's drawings and maps. Ucko's work on the interpretations of Avebury complements that by Chippendale on Stonehenge.

According to the catalogue of Haverfield and Underhill slides compiled in 1925 (Hogarth, 1925) the Underhill Collection originally contained sixty slides of Megalithic Monuments. Among those now missing are Underhill's illustrations of the Khasia monuments, which were often cited in the nineteenth century as non-European comparisons (Fergusson, 1872; Evans 1888). According to the catalogue Underhill created an image of menhirs in India from a picture given to him by Henry Balfour, Keeper of the Pitt Rivers Museum (Haverfield, 1925, 724), a fellow member of the Oxfordshire Natural History Society, but sadly this slide no longer exists.

Eleven images of Stonehenge remain in the Underhill collection from the original eighteen, in contrast to only two or three slides of Avebury and the Rollright Stones, therefore they offer more material for discussion. The following section will not add to the plethora of archaeological analysis of Stonehenge, as this topic has been, and continues to be, covered by many theoretical and historical aspects Chippindale, (2004) and W. Jerome Harrison (1902), to the end of the nineteenth century). However the nineteenth century illustrations and contemporary interpretations by individuals such as Underhill, Browne, and Barclay have to date, been unexplored in current scholarship.

Fig 7.21 Comparisons of Stonehenge

Top 'Henry Browne of Amesbury' Stonehenge c. 1830 Ashmolean Museum

Bottom Henry Underhill, Stonehenge 1895. Institute of Archaeology

There is no record that Henry Underhill's lectures on archaeology were ever published but their content can be inferred from contemporary press reports, Bellamy's account of Underhill's involvement with the ONHS and the list of his slides that were included in the 1925 Haverfield and Underhill Collection (see below).

According to the notes made on each frame, Underhill prepared the lanternslides for his lecture '*Great Stone Circles'* in 1896 from sketches and notes recorded on site the previous year. He visited Stonehenge, Avebury, the Rollright Stones and Stanton Drew during the summer of 1895 and during the winter of 1895–1896, as each slide was completed, he noted the date of sketching: 'Aug.24th, 1895 and the date of painting; 'Nov. 4 to 6 1895' (see Appendix 9).

Underhill acknowledged information taken from other sources, Stukeley's work on Stonehenge and Avebury (Gough Collection, Bodleian Library), as well as more recent details from others involved in similar research. According to his notes, he drew on the work of C.W. Dymond at Stanton Drew (1877) and Edgar Barclay (1895) at Stonehenge (see below and Appendix). The Underhill slides of Stonehenge are the most numerous in the Megalithic Monuments section of Haverfield and Underhill (1925). They show various aspects of the site, details of the time of day and compass direction.

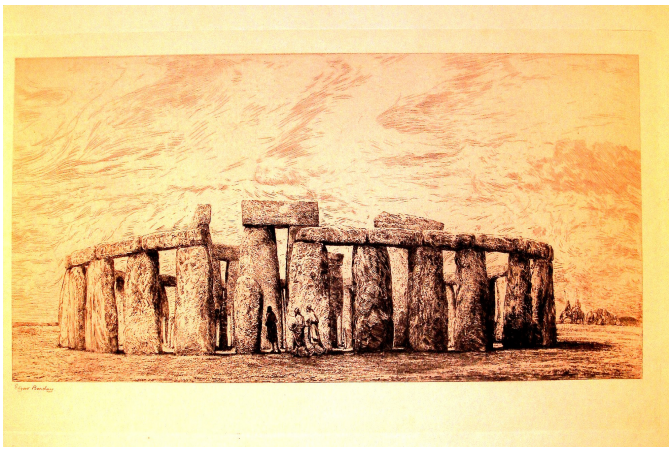
Various drawings of Stonehenge have been in existence since the twelfth century and surveys were carried out by Aubrey in 1666, Stukeley in 1740, Wood in 1747 and Flinders Petrie in 1880 (Chippindale, 2004). By the 1820s the site had become

dilapidated, stones had fallen or were being removed and a guardian was appointed to prevent further damage (Browne, 1823). It was in this state that Underhill recorded the stones in 1895, relying on the reconstructions, plans and drawings from the recently published work of Edgar Barclay (1895) whose book was published in the same year (see below). The representations of Browne, Underhill and Barclay appear similar, but not identical. This aspect of nineteenth century images of Stonehenge requires further study.

. The slides of Stonehenge are beautifully executed; the images of the megaliths and the surrounding landscape appear to be unique and accurate compositions. For example on the notes of the 'View of Stone over which the sun rises on midsummer morning; view to Friar's Heel from the interior' (Appendix 9, Great Stone Circles, 780), Underhill noted 'Morning April 13, 1895 and 'From the 'Altar' looking E.N.E'. H.M.J. Underhill April 27 to 28, 1895 [Note on back: E.N.E. is a mistake. The direction is really barely one point E of N.E.] (See Appendix, Underhill Collection, Figs 771-781, and Haverfield and Underhill Catalogue 1925).

Underhill used three images from Barclay's, *Stonehenge and its Earth-works* (1895). These are maps and reconstructions rather than illustrations of the landscape of Stonehenge (see below). It is interesting that Barclay and Underhill were producing landscapes of Stonehenge at the same time. Both artists, Barclay a trained professional, Underhill, nominally an amateur appear to have selected the most 'picturesque' or detailed viewpoints to record this monument but there is no evidence of plagiarism or personal contact.

Fig 7.22 Comparisons of illustrations by Barclay and Underhill



Barclay 1895 (Camden Library Archives)

Underhill 1895, Institute of Archaeology Archives

It is not possible in this thesis to assess the accuracy of these images without lengthy analysis, or to suggest why these images are so similar. Taking into account Underhill's training from his teacher, William Riviere (see previous chapter), it is most probable that Underhill was creating truthful images of Stonehenge. Where he

may have embellished the scene is by emphasising the contrasts between shades and texture, rather than the physical characteristics of the stones.

The slides in the Underhill Collection now provide a unique record of British megaliths as they appeared in the nineteenth century. The images of Stonehenge, Avebury, the Rollright Stones and Wayland's Smithy contain information that is available nowhere else and, as such, are an exceptional resource for their archaeological history. They are also a resource through which the social and cultural issues involved in the growth British prehistory can be examined.

At present, approximately sixty of Underhill's archaeological slides remain. Forty-seven are illustrations for *Great Stone Circles* and eleven for *Some Buried Roman Cities of Britain* (Appendix 9). Rather than giving a full description of every one, the context of slides with particular significance to this thesis are discussed. The focus is on their representative style, rather than their archaeological and topographical accuracy, which would require a separate analytic project.

The slides of Stonehenge, Avebury, the Rollright Stones and Stanton Drew sites and material for future discussion

Edgar Barclay (1842–1913)

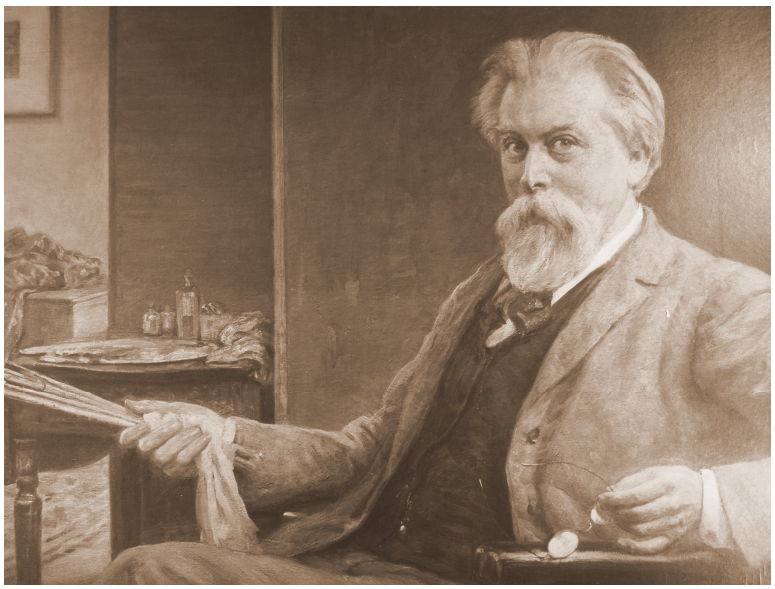


Fig 7.23 Self portrait (?) n.d. Barclay Archives Camden library

Edgar Barclay has been, like William Riviere, another overlooked artist and like Underhill had antiquarian interests. Barclay became fascinated by Stonehenge in 1895 he published *Stonehenge and its Earthworks,* using his own illustrations. A later edition was published in 1911 to correct and amend the original information. Barclay was a painter of genre scenes and landscapes in England during the 1880s; he travelled extensively and wrote an illustrated account of a journey to North Africa. Later he became interested in British prehistory (Graves, 1901). On a painting excursion to Wessex in 1889 Barclay encountered Stonehenge for the first time and wrote in his diary

> *Not only had the ruins really impressed me, but also the wild desolate plain with its shepherds pasturing their flocks where countless grave mounds, many in perfect preservation…unspoilt by modernism and miles beyond hearing of the whistle of the locomotives*
>
> (Barclay, Camden Library Archives, London; unpublished)

Fig 7.24 Stonehenge, 1895. Barclay Archive, Salisbury Museum and Library, (uncatalogued)

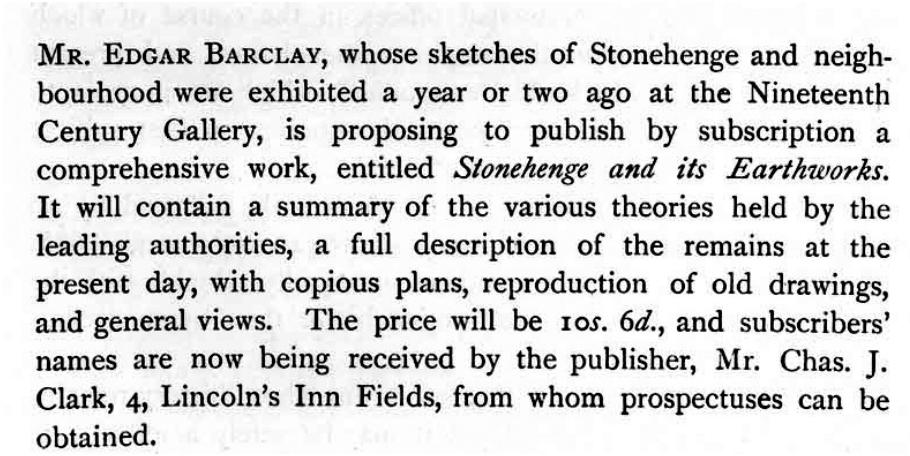
Between 1891 and 1892, Barclay painted over twenty landscapes from the sketches he made at Stonehenge. These were exhibited at the Grosvenor Galleries (Graves, 1901) but were not a success and all remained unsold. At the same time he issued a prospectus for an illustrated book on Stonehenge, but again very little public interest was shown at the time. He then tried unsuccessfully to exhibit the paintings in Salisbury. Following his death, a sale of his effects took place in June 1913 (*Times*, 13 June, 1913). Fortunately for this research, his pictures were eventually bequeathed to Salisbury Museum where they remain today in an uncatalogued archive.

Stimulated by his experiences of Stonehenge, Barclay visited the British Museum reading room for more information. He found the archives there 'greatly dispersed, there were some fine old books, but more modern studies were in the published proceedings of various societies' (Diary, Barclay Archives, Camden Library, London).

In June 1893, Barclay spoke on his research at Stonehenge at the *British Archaeological Association* ((Diary, Barclay Archives, Camden Library, London).) and in September 1893, wrote an article in the '*Illustrated Archaeologist'*, 'a publication for the interested amateur' (see below).

By 1895, after early difficulties, Barclay had found a publisher for his book, David Nutt, who was involved with the Folklore Society. Thirteen black and white copies of Barclay's paintings appear in '*Stonehenge and its Earthworks.*' though the reproductions do not do justice to the original watercolours or oils.

Fig 7.25 Advertisement for *Stonehenge and its Earthworks* (Camden Library Archives)



MR. EDGAR BARCLAY, whose sketches of Stonehenge and neighbourhood were exhibited a year or two ago at the Nineteenth Century Gallery, is proposing to publish by subscription a comprehensive work, entitled *Stonehenge and its Earthworks.* It will contain a summary of the various theories held by the leading authorities, a full description of the remains at the present day, with copious plans, reproduction of old drawings, and general views. The price will be 10*s.* 6*d.*, and subscribers' names are now being received by the publisher, Mr. Chas. J. Clark, 4, Lincoln's Inn Fields, from whom prospectuses can be obtained.

This evidence of the interest shown by Underhill and Barclay in Stonehenge requires further research. An examination of similar nineteenth century amateur publications would enhance current knowledge of the networks through which information was exchanged during the exploration of British prehistory.

Arthur Evans and Stonehenge

Underhill's antiquarian interests in the British past may have been encouraged by the regular field trips made by the ONHS which were often led by experts of the day (Bellamy, 1908). He may also have attended lectures on prehistory given by Arthur Evans to the Ashmolean Society in 1885. Although Evans' lectures remain unpublished, five handwritten manuscripts still exist (Arthur Evans Archive, Department of Antiquities, Ashmolean Museum, uncatalogued). These contain valuable research material for the historiography of prehistory. Although for the purposes of this research they were transcribed, it would be impossible to do justice to their full contents and only the lecture on Stonehenge is discussed here.

In Lecture V (Evans MSS Lecture V, p8), Evans suggested that megalithic stone circles were associated with the cult of the departed as an independent feature. They were not places of 'sepulture' but were often found in the immediate neighbourhood of ancient interment. He suggested that megalith building was ancestor worship displayed through 'an advanced representative of the sepulchral form of architecture.'

Later, in 1888, Evans connected this theory of 'The cult of departed spirits' to current ideas emanating from folklore and mythology. He suggested that these could explain the legends of 'warriors turned into stone' such as those at the Rollright Stones and Carnac (Evans, 1895)

Fig 7.26 Illustration of Stonehenge created by Alfred Robinson for Arthur Evans, possibly for the above lecture (see Chapter 5)
(Pitt Rivers Museum Archives: Photographic Collection: Stonehenge 1944.1.102)

Such legends of departed ancestors being translated into stone present interesting archaeological and anthropological theories. In the late nineteenth century, Evans' theories suggest the multi-disciplinary manner in which intellectual knowledge and interpretations of these sites was already being investigated. In the present century Parker Pearson and Thomas at their recent excavation of the wooden henges at Durrington Walls suggest that the original wooden structures were replaced at a later stage by stone pillars, possibly representing the permanent presence of the ancestors; humans turned into stone (Parker Pearson, et al, 2006).

Other prehistoric sites

Underhill was a frequent visitor to Somerset (Underhill Notebooks, Museum of the History of Science). His cousin Frank Allen was a member of '*Somersetshire Archaeological and Natural History Society'* (Chapter 6), and it is possible that through him, Underhill had regular intellectual contact with this society. In 1895 he painted slides of Stanton Drew, about six miles south of Bristol, drawing on information from C.W. Dymond, a civil engineer (1877). These prehistoric stone

circles have not received the same level of interest and exploration as Avebury and Stonehenge.

Underhill painted six slides of the Rollright Stones on the Oxfordshire and Warwickshire border showing that in 1895 they were on a bare heath. Though smaller than Avebury and Stonehenge, the sense of mystery at the Rollright Stones has been exaggerated by the folklore associated with them. In the late nineteenth century both Arthur Evans (1895) and Henry Taunt (1907) published accounts of their various legends. One of Underhill's slides featured the bicycle he used to reach these sites. This aspect is reminiscent of the custom of earlier antiquarians who included a rustic shepherd or ancient druid to their illustrations to create the required atmosphere. Here, the bike represents a late nineteenth century scientific researcher and his equipment.

Fig 7.27 The Rollright Stones by Underhill 1895 (Institute of Archaeology Archives)

Avebury

Avebury had been explored by Aubrey in 1648–1649 and Stukeley in the 1720s. However, it was not until the nineteenth century that a more 'scientific' examination of the site took place. Despite these nineteenth century investigations, most of Underhill's plans and maps of this site appear to have been taken from Stukeley's much earlier works that he was probably able to refer to in the Bodleian Library (Appendix 9, Cat.no. 744, p.2). Underhill drew at least eight slides from personal observation and it is likely that he also used his own photographs as an *aide memoire*.

Fig 7.28 Avebury slide and photograph, Underhill Collection, Institute of Archaeology

Some buried Roman cities of Britain July 1895, May 1897

Underhill was amongst the pioneers of late nineteenth century Oxford who showed an interest in Roman Britain. Romano-British remains were being uncovered through quarrying, building and more intensive farming methods; papers were given and excursions were made to these recently discovered sites (ONHS Chapter 6). During the 1860s and 70s George Rolleston had carried out excavations of a Romano-British and Saxon cemetery (Rolleston, 1870), and Arthur Evans excavated a Roman villa at Frilford in 1885. The report of this excavation was not published until Haverfield edited it for the Archaeological Journal and there were very few diagrams or illustrations (Evans 1897). After these excavations, the interests of both Rolleston and Evans moved to other matters.

Underhill's Romano-British slides appear to have been prepared later than the megalithic sites. According to the slides listed in the 'Haverfield Catalogue', he had created illustrations of Wroxeter (Uriconium), Silchester, Bath and North Leigh. Originally there were forty slides, but only nine are still in the collection, five of which are of Silchester.

Silchester was excavated between 1890 and 1909 by the Society of Antiquaries and the results published in *Archaeologia*. Underhill's slides are dated 1895, which suggests that he visited the site during the excavations. From the description of his slides (1925, Haverfield Collection), it is clear that many of his slides showed recently excavated monuments, the South and West Gates, the Forum and the round Temple, and artefacts, though many of these slides are now missing.

Underhill prepared slides for the Roman villa at North Leigh in Oxfordshire for the Midland Union of Natural History Societies in 1895. He showed them at a Conversazione in preparation for their excursion the following day to Stonesfield Quarry and North Leigh Roman villa (Bellamy, 1908, 339).

The arrangements for the day's excursion for the 'Midland Union of Naturalists' were supervised and carried out by Henry Underhill. This 'Outing to Stonesfield' provides a valuable eyewitness account of this Romano-British site, as it appeared in the late nineteenth century, a detail that may have been overlooked by subsequent historians and archaeologists.

> *…An interesting building which for ages had been entirely buried in the earth, and which appears to have originally formed a quadrangle of about 200 feet square. Close by is a large Roman bath, and this also is in a good state of preservation. The flues around the bath still remain, likewise the pillars of the Hypocaust under it, and as the date of the evacuation of Britain by the Romans is 448 the remains of these buildings must therefore be about 1400 years old, while the probability is that their antiquity is much greater* (Jackson's Oxford Journal, 6 July 1895).

North Leigh villa was first excavated in 1813 by Henry Hakewell and contained many preserved 'geometric' mosaics (Bellamy, 1908, 275). Underhill's hand-drawn plan of the villa is schematic and shows symmetrically placed rooms, which do not tally with a more exact plan. (Hogarth, 1925; Appendix 9, Roman Britain, 4, 715). This slide is signed by Underhill, which suggests that he did not copy it from published material, but drew it from his own observations, possibly using his own measurements. His contemporary photographs of the mosaic pavement have provided recently valuable evidence for the original design (see Chapter7).

Fig 7.29 Mosaic at North Leigh Roman Villa (n.d)

(Underhill Collection Institute of Archaeology)

In May 1897, Underhill repeated the lecture on *Buried Roman Cities in England*. 'The exquisitely painted slides met with universal admiration' (Bellamy, 1908, 185). *The Oxford Chronicle* reported that 'sixty four persons were present, and that questions and discussions followed, to which members contributed, by mentioning various other Roman remains known to them in this neighbourhood and elsewhere' (19 May 1897).

It would be valuable for this research and current archaeological excavations to find further information about the audience and the discussion and whether it included Arthur Evans' work at Frilford on the Roman Villa or Rolleston's earlier work at the Saxon Cemetery (now believed to be Romano-British, see Lock and Gosden, 2005).
By the 1920s, the slides of prehistoric sites produced by Underhill were evidently exceptional for archaeological research, as the conditions for borrowing set down in the Haverfield Catalogue by the Keeper of the Ashmolean Museum suggest:

> *Slides…can be lent to bona fide lecturers…who are known to the Keeper of the Ashmolean, or who submit to him an introduction from some person known to and approved by him.*

The hand-coloured slides from the Underhill Collection illustrative of Romano-British and prehistoric sites, cannot be lent except for use in Oxford itself, and must be taken out and returned by hand. (Hogarth, 1925, i)

Underhill's intellectual legacy

Although initially it might appear that Underhill and his circle were peripheral contributors to the history of intellectual knowledge, this investigation into their work reveals a micro-history of the 'pursuits and joys' (Sebire, 2006a, title page) of an amateur individual from nineteenth century Oxford. His lanternslides, illustrations and educational activities provided a foundation from which others were later able to benefit. This may be a reversal of Newton's remark on February 5, 1676 to Robert Hooke (see below) *If I have seen a little further it is by standing on the shoulders of Giants.*

Underhill's microscopic slides were used to illustrate E.B. Poulton's lecture on 'Caterpillars and Insect Eyes' at a Conversazione in Northampton in 1888 (Bellamy 1908, 329) and it would appear from the following examples that during the twentieth century Underhill's scientific presentations were still receiving recognition. In 1935 his natural history slides were lent to the Museum for the History of Science by his sister, Maud Underhill, for a small exhibition on microscopy to celebrate the tercentenary of the seventeenth century scientist Robert Hooke (1635–1703) (Gunther 1937, 477).

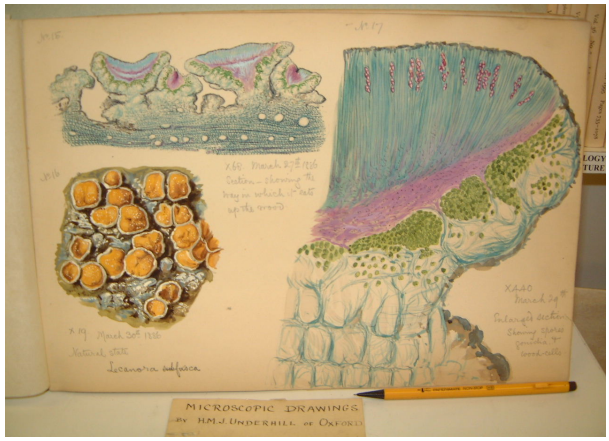


Fig 7.30 Microscopic Drawings, 1870–1880, Underhill Archive, Notebook 4; Museum of the History of Science

Hooke's '*Micrographia*' of 1665 contained his microscopical [sic] investigations, which included the first identification of biological cells. It is significant that Gunther, as a scientist and the curator of the exhibition, considered Underhill's slides to be comparable to those of Hooke himself. Fortunately the slides were never returned and the Underhill Archive at the Museum of the History of Science now offers a unique opportunity for further research into the many collections of natural history lanternslides.

Writing on the relationship between science and art, the art historian Kenneth Clark (1949, 141) noted the similarity between a pastel by Underhill of microscopic underwater creatures executed in 1885 and the work of Paul Klee. At that time his work was presumably intended as a scientific document and was located in Poulton's laboratory at the University Museum.

Fig 7.31 Underhill 1885, in Clark, 1941

Recently, evidence has revealed that Underhill's prehistoric and Roman slides were in use at the Institute of Archaeology until the middle of the twentieth century. They

were listed in the Ashmolean Museum's *Haverfield and Underhill Collection of Lantern Slides* (1925) and are discussed in Chapter 8.

Underhill and North Leigh Roman Villa

Underhill's photographs of the mosaic floor of North Leigh, possibly taken around 1895, are today of immense significance to Roman archaeology as they record the design before its reconstruction in the 1920s. According to Grahame Soffe 'the Underhill lantern slides of North Leigh villa provide unique and vital information about the survival of the design of the mosaic pavement in the principal dining room or triclinium (Room 1) before the mosaic was relaid in the early 1920s. It has been generally assumed that the mosaic as we see it today, is as originally discovered; thanks to Underhill that reconstruction can now be proved to be incorrect The Underhill photographs were taken sufficiently early in the 19th century to record (at very oblique angles) several elements since lost before the 1920s or completely changed during the relaying process at that time, (Grahame Soffe, personal communication, 2007). Underhill's photographs show different geometric motifs in each central circular device of the mosaic, whereas the reconstructed mosaic displays the same repeated pattern. This new evidence is to be included in a forthcoming publication on Romano-British mosaics (Cosh and Neal, forthcoming)

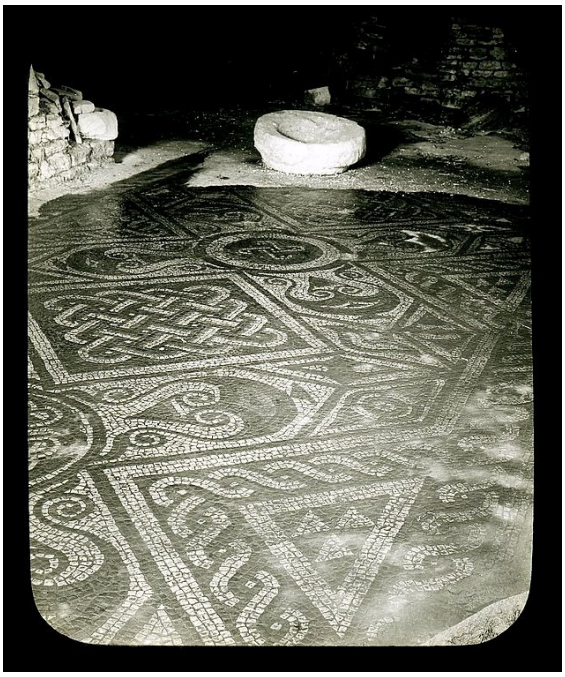


Fig 7.32 Photograph of the mosaic floor, North Leigh Roman Villa

Underhill c.1896, Institute of Archaeology.

North Leigh Roman Villa

Fig 7.33 Luigi Thompson's new detailed painting commissioned by the National Corpus of Roman Mosaics, 2006

Valediction

In October 1920, after a long illness from cancer, Henry Underhill died, aged 65, at his house at 231 Woodstock Road, North Oxford. He was buried in the family grave, at Wolvercote Cemetery in North Oxford and over 120 people attended his funeral.

> *For nearly forty years, Henry Underhill was an active and earnest worker for the George St Congregational Church Sunday School, where he was teacher, secretary, and superintendent. He also ran the Band of Hope, which under his management was the largest in the district. His long and useful career has left an indelible impress on the city which for many centuries his family had been intimately associated. He will be greatly missed by a wide circle of people.*
>
> (Paintin, *Oxford Times and Jackson's Oxford Journal,* 8 October 1920).

Throughout his adult life, Henry Underhill had been dedicated to education and the diffusion of scientific knowledge. Although he was without formal academic qualifications, he spoke to many scientific societies on natural history, folklore and ancient British sites using his hand-painted slides to display his knowledge of the past. In Oxford, he was well known for entertaining children with magic lantern slide tales and writing and producing plays. As the eldest son, it may be that his artistic, technical and scholarly interests had to be put second to the business of running the family shop.

A close examination of the material and evidence left by Underhill increases our awareness of the lives of individuals who were part of the historic classification of 'town and gown' 'amateur' or 'academic' in nineteenth century Oxford, though, as has been demonstrated in previous chapters, such binary divisions impose culturally determined identities.

Knowledge of the activities of Underhill, Bellamy and others, provides a poignant and often moving account of members of 'small-scale' societies grouped around the city of Oxford. It highlights the position of those who have today been overlooked, but who made valuable contributions to the growth of knowledge. During their lifetimes, significant national and international events occurred, and scientific discoveries enhanced their lives. They experienced greater social mobility, mass-communication and benefited from the intellectual and liberal movements that were beginning to

provide more egalitarian educational opportunities for different sections of the community.

The focus of this research has not been on the lives of the prominent or famous in nineteenth century Oxford, but on people like Henry Underhill who invested his talents and interests in the community and left a legacy to be unearthed. The chance discovery of his neglected archives brought this gifted illustrator, a Victorian 'grocer, entomologist and antiquarian' back into the academic limelight.

Fig 7.34 Stonehenge on midsummer morning, Underhill Collection;

Institute of Archaeology, Oxford

Conclusion

The history of prehistoric archaeology cannot be pursued in isolation from other histories of knowledge. This thesis has demonstrated the way in which the scientific evidence for prehistory emerged during the late nineteenth century from a fusion of geology, ethnology and anatomy to become in itself, a scientific discipline. Since then, in the course of constructing archaeology as an academic discipline, arbitrary categories have successively been imposed on this previously inter-connected scientific knowledge.

It is now time to examine the evolution of British prehistory as an academic discipline that emerged from its multidisciplinary origins. Since the late nineteenth century, the history, development and organization of British archaeology has been far more complex than a succession of achievements of recognized practitioners, although at present, it is in this area that most current attention is focussed. In order to establish British prehistory as a mature discipline, present practitioners must explore and disseminate its intellectual, cultural and philosophical roots.

Following the discovery of the work of Henry Underhill, this research aimed to find evidence for a hitherto neglected group of amateurs and their activities who contributed to the development of archaeological thought during the latter part of the nineteenth century. The results demonstrate that many individuals have so far been overlooked in conventional histories of archaeology; individuals who, in various ways, had a substantial influence on the concepts of today's discipline.

In Oxford, different categories of 'the overlooked' vary from academics to amateurs; from people within the institutional setting of the University, professors, museum keepers and their assistants, to citizens with personal interests in new scientific knowledge.

In the second half of the nineteenth century, the University Museums in Oxford played a significant role in the way in which scientific knowledge was interpreted and presented. Although histories record the activities of museum keepers and academics involved with their development (Ovenell, 1986; MacGregor 1997; Brock and Curthoys 1997), those in subordinate roles at these museums have received little attention.

By the 1850s it was obvious that the Ashmolean Museum premises could no longer

contain the increasing number of donations to its collections and a new University Museum for the study of science and natural history was planned (Morrell, 2005, 308). From 1860 the original Ashmolean Museum underwent a gradual, but irrevocable transformation; the natural history collections were slowly transferred to the new University Museum. In 1884, Arthur Evans began to divide the remaining collections from the original museum to its new premises in Beaumont Street, the University Museum and the Pitt Rivers Museum. During these transfers both Rowell and Robinson (Chapter 5) were actively involved.

From its completion in 1860, the University Museum became a dynamic element in the generation and dissemination of new scientific knowledge. It became a medium through which the human sciences were taught within the University and nationally, as the growing evidence for an evolutionary development of the natural world was accepted.

Those who worked within the institutional setting of the University; academics, such as Rolleston and Poulton and Museum Keepers such as Phillips, Parker, Evans and Tylor were predictably from a different social or economic class than their 'servants' and many Oxford citizens. Both Arthur Evans and Tylor supported the work of the Oxfordshire Natural History Society (ONHS) (*Jackson's Oxford Journal,* 7 March, 1896; Bellamy 1908). Their commitment was not as evident as that shown by Poulton, although this may have been due to other responsibilities.

Although Rolleston and Poulton's contributions to British archaeology may have been largely overlooked, they do feature in some historical accounts of nineteenth century Oxford University (Rolleston 1884; Poulton, 1911, Ovenell, 1986; MacGregor 1997; Brock and Curthoys 1997; Morrell, 2005). Rolleston's interest in the study of British prehistory was beginning to permeate academia until his death in 1881. His influence continued however and his intellectual legacies were many: he influenced Pitt Rivers' in his decision to donate his anthropological collection to Oxford University, thus preparing the way for the foundation of the academic discipline of anthropology. At the same time, the University created three scientific posts to fill Rolleston's original position. This indicated the increasing expectations and demands in the fields of the human sciences.

In many ways Poulton, Rolleston's pupil and assistant, became a 'bridge' between town and gown from the 1880s. His work with the ONHS brought together academics and lay people where new scientific ideas could be shared.

The work of those in subordinate roles within the museums, the 'servants,' Rowell and Robinson (Chapter 5), has received little attention in conventional histories and appear merely as a footnotes to the work of a superior. Rowell and Robinson's contribution to the history of the University Museums deserves more than this; it is evident that both played crucial roles in maintaining and preserving collections and preparing academic work for their superiors. Robinson provided, and probably presented, the visual material he prepared for lectures given by both Tylor and Evans (Alfred Robinson University Museum Archives Box 1 111/3; Penniman, 1953, 13). Without this visual provision the lectures may have had less intellectual impact on their particular audiences.

By the late nineteenth century, many societies specifically devoted to archaeology and anthropology consisted of networks of amateurs from within the intellectual aristocracy. These societies provided the background in which the evolution and growth of archaeology as an academic discipline could take place and acted as models for the growth of provincial city and county societies.

A contextual examination of these intellectual societies and academic institutions reveals the social, cultural and political influences and crosscurrents at play in effecting disciplinary changes. It also demonstrates the way in which the transformations in accepted scientific knowledge were initiated and maintained at national level. The power exerted for and against the existing scientific cosmology of academic Oxford was demonstrated during the debates on Darwinian ideas at the B.A.A.S. meeting in 1860. Some of those taking part not only questioned the meaning of science and its interpretations, but also the hegemony of the church at that time, over the control of academic and professional teaching.

The impact of lay people involved in the growth of knowledge in the late nineteenth century has been largely ignored. The case histories of Oxford citizens illustrate that they had their own relational intellectual networks and that these in turn were connected to the tissue of University knowledge. Although these 'neglected' individuals were from wide social, intellectual and cultural backgrounds, between 1870 and 1900 evidence shows that Bellamy, Druce, Paintin (Chapter 5) and Underhill (Chapter 7), who were tradesmen or employees from the lower middle classes were often intellectually, and occasionally socially, connected to the

intellectual aristocracy through their involvement in the Oxfordshire Natural History Society.

From the 1870s the University Museum became the base for a new outward-looking amateur scientific society, the Oxfordshire Natural History Society where participators from both town and gown were welcomed. The Ashmolean Society (Chapter 6), which continued to have a more elite clientelle continued to hold its meetings at the original museum in Broad Street until offered a room in the newly completed Ashmolean Museum building on Beaumont Street (Appendix, 1), and until its amalgamation with the Oxfordshire Natural History Society in1901.

The activities of the Oxfordshire Natural History Society, demonstrates that 'town and gown' became united to pursue new scientific knowledge (Chapter 5). Many members of the ONHS were on the margins of academia, but because of society membership, they gained an entrée into a different social milieu. This meant that they were not working in isolation and evidence shows frequent contact between town and gown and amateurs and academics (Bellamy 1908).

The value of examining the membership of particular intellectual societies is emphasised by the case of Henry Underhill (Chapter 7), whose archaeological lanternslides stimulated this research. The case of Underhill and his unique contributions to knowledge deserves a place in the social history of nineteenth century Oxford. Equally significant is the way that this research into his work offers a model for further exploration into other neglected individuals who were committed to their 'pursuits and joys.'

The collective and collaborative nature of these amateur archaeological pursuits in the presents a great deal of material for further examination. This research has shown the value of excavating the material culture of archaeology; the primary sources and archives deposited by various individuals and institutions. These 'artefacts' reveal evidence of concepts, expectations, prejudices and commonalities of language that were familiar to a wide cross-section of social and intellectual communities.

In order to understand the complex nature of the growth of British prehistory, it is now essential to recognise the work of the proto-professionals and amateurs. In the

early stages of archaeological practice, these individuals were the founding fathers of the discipline. Their contribution to scientific knowledge and the institutions to which they belonged has up to now been overlooked.

It is not difficult to trace the work of those who were to become national figures and whose accomplishments feature in current histories of archaeology. In late nineteenth century Oxford, the academic recognition of Arthur Evans and Edward Tylor is evident in accounts of the roles they played in both the growth of the University museums and their collections and their contributions to scholarly journals

On the other hand, amateurs from a different social and intellectual background who carried out research in the same city or worked in the museums, are only briefly mentioned. The contributions by technical assistants to British knowledge about the past often became absorbed into the corpus of the professionals. The work of George Rowell and Alfred Robinson, for example (Chapter 5), became absorbed into the general history of the University Museums. Furthermore, Underhill's lanternslides of ancient Britain created in 1895 later became part of the Haverfield teaching collection (1925), and continued to be used by many University lecturers until the 1980s (personal communication, Barry Cunliffe, 2003). Finally, Frank Bellamy, the self-appointed chronicler of all the activities of the Oxfordshire Natural History Society between 1870 and 1905, ensured through his meticulously catalogued work that that the activities of this society and the earlier Ashmolean Society survived both in his book and as an archive in the Bodleian Library.

Discourses concerning the structure and ownership of knowledge about the past continued to the end of the nineteenth century. One result was that the originally amateur-based interests in the British prehistoric past gradually became part of an academic archaeological language. As the role of the non-academic amateur became outmoded, the former intellectual pastime became a professionalised course of academic study.

Until recently in Oxford, the study of prehistory, as part of the undergraduate Degree in Archaeology and Anthropology, was included in Life and Environmental Sciences. At the beginning of 2006, the School of Archaeology was re-categorised and became part of the Division of Social Sciences. This continual fluidity of the identity of

archaeological thought suggests that as a discipline, it is still undergoing evolutionary change.

Since the 1980s, the history of archaeology began to gain more recognition as a valuable field of research. Rather than being a peripheral interest, it should now be accepted as an essential contribution to the standard practice of the discipline. It is, after all, vital to understand the roots of any system of knowledge in order to avoid any false assumptions. In the University, the early teaching of natural science was originally based on the acceptance of the antediluvian concepts of the earth's geography and the origins of humanity according to Genesis. The gradual acceptance of irrefutable evidence to the contrary transformed the paradigms of ideas and beliefs in intellectual and scientific knowledge into modern thought.

As scientific knowledge continues to make further discoveries about the antiquity of humanity, so our approach towards understanding the conceptualisation of these discoveries should increase. Our knowledge and interpretation of human origins and experiences are influenced today by post-modern emphases on self-reflection, subjectivity and relativity. These philosophical approaches must now be included in the historiography of the discipline.

Collingwood argued that 'no historical problem should be studied without studying the history of the historical thought about it' (1939, 132). Trigger (1994 and 2004) reaffirmed this idea, adding that it is also vital to consider the impact of major contemporary intellectual trends on archaeological thought. In the nineteenth century, the movements of nationalism and romanticism influenced the process of prehistoric archaeology. In the 1850s for example, the threat of Danish national security promoted Worsaae to formulate the Three Age chronology to justify political identity (Briggs, 2005, 8). Subsequently European prehistory has been founded on this theory of classification.

There now is a vital need for accounts of British prehistory to synthesise the evidence for its multifaceted philosophical and intellectual infrastructure. This broad spectrum of knowledge was constructed by the pioneers of archaeology and includes the work of many individuals, some familiar and some overlooked, who together were involved in its foundation.

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